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INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL DEVELOPMENT ASSOCIATION

OIL PALM AND COCONUT PROJECT

IVORY COAST

April 25, 1969

Agriculture Projects Department

CURRENCY EQUIVALENTS

Currency Unit	-	CFA Franc
US$	=	247 CFAF
1 CFAF	=	US$0.004
1 million CFAF	=	US$4,000

WEIGHTS AND MEASURES (Metric System)

1 Hectare (ha)	=	2.47 acres
1 kilometer (km)	=	0.624 miles
1 kilogram (kg)	=	2.204 pounds
1 Metric Ton	=	2,204.6 pounds

ABBREVIATIONS USED IN THIS REPORT

SODEPALM	-	Societe pour le Developpement et l'Exploitation du Palmier a Huile
FED	-	Fonds Europeen de Developpement (EEC)
CCCE	-	Caisse Centrale de Cooperation Economique (France)
BEI	-	Banque Europeenne d'Investissements (EEC)
FER	-	Fonds d'Extension et de Renouvellement (Ivory Coast)
FS	-	Fonds Social (Ivory Coast)
FDA	-	Fonds Developpement Agricole (Ivory Coast)
BSIE	-	Budget Special d'Investissement (Ivory Coast)
FAC	-	Fonds d'Aides et de Cooperation (France)
CSSPPA	-	Caisse de Stabilisation et de Soutien des Prix des Productions Agricoles (Ivory Coast)
SONAFI	-	Societe Nationale de Financement (Ivory Coast)
BIAO	-	Banque Internationale pour l'Afrique Occidentale
SGBCI	-	Societe General de Banques en Cote d'Ivoire
SIB	-	Societe Ivoirienne de Banque en Cote d'Ivoire
BICICI	-	Banque Internationale pour le Commerce et l'Industrie de la Cote d'Ivoire
CAA	-	Caisse Autonome d'Amortissement

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SUMMARY

i. The Government of the Ivory Coast has applied for a Bank loan to help finance an expansion of its oil palm development program and to initiate a similar program for coconuts.

ii. At present, the economy of the Ivory Coast is heavily dependent upon the export of coffee and cocoa. Oil palms and coconuts have been selected for the diversification of agricultural production in the forest zone.

iii. In 1963, Government established an autonomous agency, Societe pour le Developpement et l'Exploitation du Palmier a Huile (SODEPALM), and made it responsible for the development of oil palms and coconuts. Since 1964, SODEPALM has conducted a sizeable program of oil palm planting, both of estate and outgrower palms. By the end of 1968, about 40,000 ha of oil palms will have been planted by SODEPALM. This program has been financed largely by Fonds Europeen de Developpement (FED) on a grant basis. By completion of planting of the FED program and the proposed Bank project in 1971 some 39,000 ha of estate oil palms and 21,000 ha of outgrower palms will have been planted.

iv. The project for which Government has asked for Bank assistance consists of (a) the establishment of 12,000 ha of outgrower and 4,000 ha of estate oil palms; (b) the construction and commissioning of a palm oil mill to process the production of some 12,000 ha of estate and associated outgrower oil palms; and (c) the establishment of 3,500 ha of estate, and 3,000 ha of outgrower coconuts.

v. The project would produce increases in agricultural production valued at between US$8 million and US$9 million annually. Of this about 60% would be exported. Between 3,000 and 4,000 farm families would be provided with the means to shift to a more efficient and commercial type of agriculture, and in addition, employment opportunities would be provided for about 2,000 workers on the estates and in the mill. The average internal rate of return from investment in the project would vary for its separate parts. For the oil palm elements the range would be from 10% to 14%. For coconuts about 9%.

vi. Project costs total an estimated CFAF 7,186 million (US$29.1 million). Foreign exchange comprises about 59% of project costs. It is proposed to make Bank loans totalling US$17.1 million equivalent to 100% of the estimated foreign exchange component. Three individual loans would be made for administrative reasons discussed in the report. First, a loan to SODEPALM of US$3.3 million for 4,000 ha of estate palms. Second, a loan to SODEPALM of US$9.0 million for its oil palm outgrower and coconut programs. Third, a loan to a new company, PALMINDUSTRIE, of US$4.8 million for the palm oil mill. PALMINDUSTRIE would own all mills required for the

processing of oil palm produce from the Government's oil palm development program, and 27% of its equity would be held by private shareholders. A second new company, PALMIVOIRE, although not a recipient of the Bank loan, would be vested with powers to manage the SODEPALM oil palm estates (but not outgrowers or coconut estates) and the PALMINDUSTRIE mills. All three Bank loans would be disbursed in the period 1969 through 1974, and would be repaid in the 15 years, 1975 through 1989. Interest would be capitalized in the grace period.

vii. Caisse Centrale de Cooperation Economique of France (CCCE) would jointly finance the project, with the exception of the palm oil mill. Both CCCE and Banque Europeenne d'Investissements (BEI) would make loans to PALMINDUSTRIE for the other mills required for the oil palm development program.

viii. The Government requests retroactive financing for expenditures made on the project in 1968. It is recommended that this request is granted, since the time required to complete the complex administrative and financial arrangements between the Government and potential private shareholders in PALMINDUSTRIE and PALMIVOIRE could not have been foreseen by the Government at the time of Bank appraisal of the project in early 1967. It is probable that if this request were granted expenditures of between US$1.5 million and US$2.0 million would qualify for reimbursement.

IVORY COAST

OIL PALM AND COCONUT PROJECT

I. INTRODUCTION

1.01 The Government of the Ivory Coast has applied for Bank assistance to finance part of the costs of expanding ongoing programs for estate and outgrower development of oil palms and coconuts. The main purpose of these programs is to lessen the dependence of the economy on exports of coffee and cocoa, to introduce improved methods of crop cultivation, to improve rural living standards, and to increase foreign exchange earnings. An appreciable proportion of outgrower oil palms would replace robusta coffee produced in excess of International Coffee Agreement quotas.

1.02 The project for which assistance is sought includes the planting of 4,000 ha of estate oil palms; 12,000 ha of outgrower oil palms; establishment of an oil mill with a capacity to process the produce of some 12,000 ha of estate and outgrower plantings, (the balance of project oil palm production would be processed at existing and new mills not financed under the project), and the planting of 3,500 ha of plantation and 3,000 ha of outgrower coconuts.

1.03 This appraisal report is based on the findings of a Bank mission which visited the Ivory Coast in February-March 1967 consisting of Messrs. Rowe, Stoneham, Vigie (of the Bank), von Czernicki (consultant to the Bank) and Bishop (of the FAO). Project preparation assistance was provided by the Bank's permanent mission to Western Africa. The long delay in processing the project is due to the unforeseen amount of time required by the Government to complete reorganization of the management of its oil palm and coconut development program.

II. BACKGROUND

2.01 The Ivory Coast has a surface area of 322,000 km^2 and a population estimated at 4 million in 1966. The latter includes some 360,000 foreign agricultural workers, mostly from Upper Volta. Over 80% of the working population is engaged in agriculture, including fishing, forestry and livestock production. The overall growth of population is estimated at 3.0 to 3.5% per annum, of which 1% is attributed to immigration.

2.02 Bordering the Atlantic Ocean, a belt of tropical rainforest about 200 km deep produces the Ivory Coast's major crops: coffee, cocoa, bananas, and pineapples, and its timber, and in this belt oil palm development is taking place. Coconuts are grown along the coastal fringe of this zone. Further to the north the forest thins out into savannah where the agriculture is based on field crops such as cotton, maize, upland rice and rootcrops. In 1967, the Ivory Coast exported 149,000 tons of robusta coffee, 105,000 tons of cocoa, 142,000 tons of bananas, 34,000 tons of fresh and canned pineapple, and about 10,000 tons of palm kernels. In the

same year, timber exports totalled 1.8 million tons. The fob value of these amounted to CFAF 77 billion (US$312 million equivalent), or 96% of total exports. Cocoa and coffee together accounted for about 50% of exports in terms of value.

2.03 In 1966, agriculture, forestry and fishing contributed about 34% of Gross Domestic Product (GDP), and at the same time, most industrial activity was associated with the processing and transformation of agricultural products. The economy of the Ivory Coast is thus largely dependent upon agriculture and with no major sources of minerals identified, this situation is likely to continue. In 1968, per capita GDP including urban population averaged CFAF 54,500 (US$220). For the rich southern agricultural areas it was CFAF 46,000 (US$186) and of this three-quarters was monetary income.

2.04 In the early 1960's, Government embarked on a program of crop diversification. Oil palms, coconuts and rubber were selected initially for the forest zone, and cotton and rice for the savannah zone. So far, significant progress has been made in oil palms, cotton and rice.

2.05 At present, the Ivory Coast exports no palm oil and copra 1/ and its palm kernel exports of about 12,000 tons annually are negligible in terms of world trade. The bulk of palm oil and kernel production is still from wild palms which grow naturally in the forest zone. The Government estimates that the production of oil palm fresh fruit bunch (ffb) 2/ totals some 330,000 tons annually. Of this, about 145,000 tons are used by producers, about 110,000 tons processed by commercial operators using traditional methods and some 75,000 tons processed in modern mills. An estimated 31,000 tons of palm oil enters the local trade annually of which 10,000 tons are of refined oil.

2.06 A major expansion in oil palm development is now occurring as part of the Government's crop diversification program. The on-going program, for which financing has been obtained, should result in the planting of 44,000 ha by 1971, of which 35,000 ha would be estate and 9,000 ha outgrower palms. Fonds Europeen de Developpement (FED) is financing 36,700 ha of this total, and all plantings are in areas and on soils suitable for the crop.

2.07 The ongoing program of 44,000 ha, of which about 35,500 ha were planted by the end of 1968 (see para 3.03), together with two palm oil

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1/ Copra is the major product of the coconut palm and is prepared by drying the meat of the coconut. The meat is extracted after dehusking and splitting the nut.

2/ Fresh fruit bunch (ffb) is the product of the oil palm. Each ffb is a large cluster of fruits, and each fruit comprises a nut containing the palm kernel which is surrounded by oily flesh from which palm oil is extracted.

mills, will represent a total investment on completion of about CFAF 13.2 billion (US$53.4 million). These funds have been obtained from the following sources and would be fully disbursed by 1972. Total expenditure to end 1968 was CFAF 9.5 billion(US$ 38.5 million).

		CFAF millions	
Estates			
Equity			
	SODEPALM	200	
Grants			
	FED	8,551	
	BSIE 1/	535	
Loans			
	FED/BEI 2/ (special long-term loan)	900	
	BSIE (medium-term advance)	600	
	Sub-total Estates		10,786
Outgrowers			
Grants			
	FED	334	
	BSIE	373	
Loans			
	CCCE	386	
	Sub-total Outgrowers		1,093
Mills			
Grant			
	FED	350	
Loan			
	CAA 3/	1,013	
	Sub-total Mills		1,363
TOTAL			13,242

1/ BSIE: Budget Special d'Investissement (Ivory Coast)
2/ FED/BEI: Fonds Europeen de Developpement (EEC)/Banque Europeenne d'Investissements
3/ CAA: Caisse Autonome d'Amortissement (Ivory Coast)

2.08 The oil palm elements of the proposed Bank project are part of a development program for the Government and the private sector totalling 76,000 ha. Further expansion could possibly result in an overcommitment in the Ivory Coast in the production of oil palm products. Consequently, the Government has agreed to inform the Bank before authorizing or carrying out any oil palm extension beyond 76,000 ha.

2.09 Initially the FED grants were made on the condition that the estates created with these funds would be subdivided into smallholdings. Subsequently the Government argued that, for a variety of reasons, this was not feasible. FED agreed to drop this requirement, but insisted that in some way workers on the SODEPALM estates and people living in the program area, should benefit more directly from the use of the FED funds than from the general increase in economic activity that they would generate. The solution now agreed between FED and the Government is that the cost of SODEPALM estates established with FED grants and BSIE funds would be fully repaid to a special fund - Fonds d'Extension et de Renouvellement (FER), a separate Government agency, and also that part of the cost of outgrowers' plantations financed with FED and BSIE funds would be repaid to FER. Cash generated would be used during the first years to:

- establish modern houses and villages for estate workers under a program which has been approved by FED; and

- assist in financing the outgrower development of oil palms (see para 4.14).

Subsequently, FER funds would be employed for further investments in the oil palm development program, including renewal and extension of plantations.

2.10 Receipts by FER will take four forms:

- CFAF 0.8 for each kg of ffb produced on SODEPALM estates financed with FED and BSIE grant funds, except that after 1976 no such payments would be made if this resulted in a cash deficit for SODEPALM or its associated companies. Payments would be made by SODEPALM until the total amount of such funds invested in estates is recovered; consequently CFAF 9.1 billion (US$ 37 million) should be received by FER in a period of about 25 years beginning in 1968;

- CFAF 63,000 for each ha of outgrower palms financed with FED and BSIE grant funds. Receipts from this source, which involves approximately 7,100 ha, will total about CFAF 448 million (US$ 1.8 million), and be obtained in about a 16-year period commencing in 1970;

- CFAF 600 million (US$ 2.4 million), the amount of a short-term advance made by BSIE to SODEPALM, which will be repaid to FER in the three years 1973 through 1975;

- an annual rent of CFAF 90.2 million (US$ 365,000) which will be paid from 1977 onwards for the use of the modern houses built with FER funds for the oil palm estate workers.

2.11 Under its agreement with FED, the Government has established two other funds, Fonds Social (FS) and Fonds de Developpement Agricole (FDA). These funds will be financed permanently by profits earned by the Government from its shareholdings in SODEPALM and its associated companies, PALMINDUSTRIE and PALMIVOIRE, see para 2.14. However, with the exception of dividends payable by PALMIVOIRE in respect of management fees under the mandates granted to PALMIVOIRE by SODEPALM and PALMINDUSTRIE (see Annex 1), dividends, statutory and otherwise, would only be distributed by SODEPALM, PALMINDUSTRIE and PALMIVOIRE when cash requirements and long-term debt service on the proposed Bank, CCCE, BEI and FED/BEI special loans have been assured (see para 4.08). FS will be used to augment, as proves practical, the wages of oil palm estate workers and to improve social services on the estates and in surrounding areas; and FDA for general agricultural development apart from in oil palm areas. The above brief description illustrates the importance being paid by both Government and FED to ensuring maximum economic and social benefits from the oil palm development program.

2.12 Unlike the oil palm, coconuts are not indigenous to the Ivory Coast. Coconuts have been planted mostly by smallholders who presently own some 9,600 ha of an estimated total of 10,000 ha. The trade in coconut produce is either in the form of copra (1,700 tons were milled in 1965), fresh coconut oil extracted by traditional methods, or fresh nuts which are in demand in the interior and in countries to the north. The Government's program of coconut development started in 1967 with the planting of 520 ha of estate coconuts.

2.13 Both in its oil palm and coconut programs, Government favors a blend of estate and outgrower development. Estates are considered essential to the outgrower programs since they demonstrate the value of using modern cultural practices, provide the potential outgrower with confidence in the future of the crop, and assure a range of services essential to efficient production and high yields. Importantly, oil palm estates provide a guaranteed throughput for processing plants which insures economic operation.

2.14 SODEPALM, a statutory Corporation, was formed at the end of 1963 for the development of oil palms (subsequently coconuts were added to its responsibilities), including provision of managerial, technical and extension services, and for implementing development projects, either by direct participation, or in partnership with public and private organizations. Early in 1964, it took over some 2,300 ha of oil palm estates belonging to Government, and commenced the programs referred to earlier. In 1968 arrangements were concluded for the establishment of two associate companies, PALMINDUSTRIE to own the palm oil mills required to process the output from SODEPALM oil palm estate and outgrower programs, and PALMIVOIRE to manage the SODEPALM owned oil palm estates and PALMINDUSTRIE mills. Private interests would invest in the two new companies which would be controlled

by Government. Under these new arrangements SODEPALM would retain full executive responsibility for the implementation of the oil palm outgrower program, and both the estate and outgrower coconut programs. Details of the arrangements appear in Annex 1 and para 3.30.

III. THE PROJECT

A. Definition

3.01 The project forms part of the Government's crop diversification program and consists of:

(i) the establishment of 4,000 ha of estate oil palms at Ehania to complete an estate of 10,000 ha;

(ii) the construction of a palm oil mill to service the Ehania estate and some associated outgrowers;

(iii) assisting outgrowers to plant and bring into production 12,000 ha of oil palms adjacent to existing SODEPALM estates including that of Ehania;

(iv) the establishment of 3,500 of estate coconuts at four different sites, and assisting outgrowers to plant 3,000 ha of coconuts in the vicinity of the estates.

3.02 The project would be carried out by SODEPALM, PALMINDUSTRIE and PALMIVOIRE, see Annex 1. The main objectives of the project are to support the diversification and increase of agricultural production, to enhance the foreign exchange earning capacity of the agricultural sector, and to raise standards of living in rural areas.

B. Planting Program

3.03 The planting of oil palms and coconuts included in the project commenced in 1968 1/ and would be completed in 1971. All oil palm plantings would be in production by the end of 1975 and coconuts by the end of 1977. The anticipated life of oil palms and coconuts established under the project is at least 25 and 50 years respectively. The following table provides a schedule of project planting and demonstrates how this is to be integrated with plantings to be made under ongoing programs for which financing is already assured. Annex 2 contains fuller details of the project planting program by location. Locations are shown on the Map.

1/ Clearing and planting has commenced in advance of the Bank approving a loan.

SODEPALM PLANTING PROGRAM 1968-1971

	Planted end 1968	To be Planted 1969	1970	1971	Total end 1971
	Oil Palms, ha				
Estates					
BSIE 1/	1,006	-	-	-	1,006
FED 2/ Convention 183	2,200	-	-	-	2,200
FED Convention 331	23,176	4,730	3,276	818	32,000
IBRD Ehania Estate 3/	1,000	500	1,000	1,500	4,000
Total Estates	27,382	5,230	4,276	2,318	39,206
Outgrowers					
BSIE	3,617	-	-	-	3,617
FED Convention 183	2,500	-	-	-	2,500
CCCE 4/	3,000	-	-	-	3,000
IBRD 3/	3,500	4,000	4,500	-	12,000
Total Outgrowers	12,617	4,000	4,500	-	21,117
TOTAL OIL PALMS	39,999	9,230	8,776	2,318	60,323
	Coconuts, ha				
Estates					
CCCE	700	-	-	-	700
FAC 5/	300	-	-	-	300
IBRD 3/	1,310	1,190	1,000	-	3,500
Total Estates	2,310	1,190	1,000	-	4,500
IBRD 3/	-	1,000	2,000	-	3,000
Total Outgrowers	-	1,000	2,000	-	3,000
TOTAL COCONUTS	2,310	2,190	3,000	-	7,500

1/ BSIE: Budget Special d'Investissement (Ivory Coast).
2/ FED: Fonds Europeen de Developpement (EEC).
3/ Proposed Bank project. CCCE would participate in financing, see para 4.05.
4/ CCCE: Caisse Centrale de Cooperation Economique (France).
5/ FAC: Fonds d'Aide et de Cooperation (France).

3.04 The overall planting program reached its peak in 1968 when SODEPALM planted a total of 7,178 ha of estate oil palms and 1,866 ha of estate coconuts, and assisted outgrowers in planting more than 3,500 ha of oil palms. SODEPALM proved that this program, although considerable, was well within its capacity. In the case of plantings that form part of the Bank project, 1968 planting fell short of forecasts as follows, oil palm outgrowers, 158 ha; and coconut estates, 90 ha. From 1969 onwards, annual planting rates will decline with the phasing out of the FED financed program. Consequently, there would be no problem in making up the 1968 deficit in the Bank project plantings. The supply of planting material is sufficient to support these programs, see Annex 3.

C. The Project Areas

3.05 Oil palm and coconut projects would be implemented in the south-east of the country in a zone extending about 400 km west from the Ghana border and 100 km north from the coast (see Map). The soils and climate of the individual sub-project sites are satisfactory for the crops proposed, and are discussed in detail in Annex 3. Sub-project sites have been selected following detailed topographic and soil surveys and the analysis of all available climatic data. The coconut areas lie along the coast and have soils which are satisfactory for coconuts.

3.06 With the exception of state-owned land, largely forest reserves, and some agricultural land leased by commercial entrepreneurs, most land is held under "customary tenure". Under this system the community owns the land, and usufruct but not ownership of land is allocated to individuals by the village chiefs. This usufruct is retained by the individual, provided there is continuity of cultivation. The usufruct of land is not restricted to village members, except where land is in short supply.

3.07 Estate development of oil palms at Ehania, and the four coconut estates would be on state-owned land leased to SODEPALM. Outgrower oil palms and coconuts would be planted on land for which the participant already has the usufruct by right of cultivation or by allocation.

3.08 Main road communications in the project areas are satisfactory. In the case of three of the coconut areas, all major transportation would be by lagoon. The fourth is close to Abidjan and served by road.

D. Field Development

Estates

3.09 Field development techniques employed by SODEPALM follow normal plantation practice, with the exception of the use of mechanical forest clearing rather than hand clearing. Labor-days required for other opera-

tions are generally similar to, or lower than, those in oil palm and coconut producing countries elsewhere. The lower labor inputs are due to the high degree of mechanization of field operations that can be practiced following mechanical clearing.

3.10 Mechanical land clearing in the Ivory Coast is generally more expensive than the hand clearing normally used in tropical countries. Comparative costs, inclusive of taxes, for land clearing including the construction of access and estate roads are about CFAF 74,000 (US$300) per ha 1/ in the Ivory Coast, and about CFAF 54,000 (US$220) in Malaysia, where skilled labor is readily available. SODEPALM has used this technique since the inception of its oil palm development program. Its main justification is that insufficient skilled labor is available. The Bank agrees with this position since the large number of skilled men needed to complete the clearing program does not exist within the country and could not be obtained easily from outside. Details of the supply of agricultural labor and its costs are discussed in Annex 4.

3.11 Mechanical clearing for the Bank project would be carried out by contractors hired under international competitive bidding. These contracts have been let. In doing so SODEPALM has complied fully with Bank requirements for contract award procedures.

Outgrowers

3.12 Cultural techniques employed by both oil palm and coconut outgrowers would be similar to those used on SODEPALM estates. However, while the oil palm outgrower would be responsible for the physical development of his holding, including clearing, the initial clearing operations on the coconut outgrower's holding would be carried out mechanically by contractors hired by SODEPALM. The oil palm outgrowers' program has been operative since 1959 and good standards of establishment and management have been achieved by participants.

3.13 Coconuts are a traditional crop in the project area, and potential outgrowers are well aware of the long development period (six to seven years) before coconuts begin to yield. To obtain the yields of copra projected for project plantings it is essential that a full stand of coconuts is established under conditions favoring their vigorous growth. Pest attack must be controlled; in particular the rhinoceros beetle, and this requires the removal of all woody material from the planting site. SODEPALM would employ contractors for the initial mechanical clearing of coconut outgrowers' holdings, the felling and windrowing of the larger trees, because of the rigorous clearing that must be practiced.

1/ In the case of the proposed Bank project. Past contracts have been more expensive, but costs are declining with the build up in contracting capacity.

3.14 Participation in both outgrower schemes will be conditional upon the farmer's agreement to follow, throughout the development period of the crop, the technical advice provided by SODEPALM. Such an obligation forms part of the agreement that is signed between both oil palm and coconut outgrowers, and SODEPALM. These agreements are satisfactory to the Bank. Assurances have been obtained, from the Government and SODEPALM, that outgrower agreements would be changed from their present form only after consultation with the Bank.

E. Outgrower Selection and Size of Holdings

3.15 There is no shortage of applicants for participation in the oil palm outgrowers scheme and there are no formal criteria for their selection. Applicants apply to the local SODEPALM agent who inspects the applicant's farm, checks his standing in the local community and recommends approval or disapproval to headquarters. Participation is dependent upon the potential outgrower becoming associated with a group of at least five others. The group mutually guarantees the credits obtained by its individual members. No changes are proposed for plantings under the project. Outgrowers would obtain assistance for planting up to a maximum of 10 ha of oil palms. At present the average outgrower's planting is 3.75 ha, but the tendency is for individuals to plant more palms each year. The selection of coconut outgrowers follows a similar pattern. It would be excessively expensive, however, to mechanically clear small isolated lots. Consequently, the minimum size of a coconut outgrower holding would be five ha, with a subsequent permissible maximum development to 25 ha. Additionally, outgrowers would be required to group their land in order to provide a contiguous block for clearing. This grouping creates no serious difficulties in the project area, where much land is unused due to its unsuitability for cropping except with coconuts. Such consolidation has been very successfully practiced under much more difficult land tenure conditions in the course of the cotton program in the north. Selection of coconut outgrowers started in 1967, and sufficient land and individuals have been selected for at least the 1969 planting program.

F. Outgrower Credit and Grant Arrangements

Oil Palms

3.16 The ongoing outgrower scheme is not a credit scheme in which the outgrower borrows at commercial rates to develop his holding. Such schemes have failed with small farmers in the Ivory Coast, as they have generally throughout West Africa. This experience has led to the adoption of arrangements under which SODEPALM provides outgrowers with a highly intensive advisory and supervisory service, some inputs free of charge, credits in cash over the development period and credits in kind. More details appear in Annex 5. In return outgrowers contract with SODEPALM to sell to SODEPALM

all ffb produced on their holdings at a price of CFAF 5.0 per kg from which is deducted:

- CFAF 1.0 per kg to cover the cost of maintaining the SODEPALM advisory and supervisory service during the operational phase of holdings; actual costs are about CFAF 10,000 per ha and are expected to be lower in the future;

- appropriate amounts over the first 12 years of production to repay the credits together with 2% interest.

3.17 The above arrangements include initial interest subsidies to outgrowers. In practice, however, due to the pricing arrangements for outgrowers' ffb they result, over the lifetime of the project, in:

- a financial rate of return to the Government of about 10% on its investment in the outgrower scheme, Annex 5, Table 1;

- very satisfactory cash incomes for outgrowers, para 5.02 and Annex 5 1/; and

- a demonstrably successful program of commercializing peasant agriculture.

3.18 By the end of 1967, 8,982 ha of outgrower oil palms had been planted under the arrangements recorded above. The 12,000 ha that would be financed by the Bank, the planting of which started in 1968, would be admixed with existing outgrower plantings established under the current SODEPALM arrangements. It would be impractical therefore to introduce different arrangements for outgrower financing; and in particular any that would result in existing and Bank financed outgrowers having different financial commitments to SODEPALM. These would have to involve different prices for ffb, which would be administratively difficult to control where many growers would have palms established under both financing programs, and where ffb could be transferred easily from one grower to another.

3.19 The major disadvantage of the current SODEPALM program is its guarantee of a basic price for ffb of CFAF 5.0 per kg. This price was fixed in 1963 at a time when forecasts of palm produce prices were more optimistic than today. During negotiations, assurances were obtained from the Government and SODEPALM that reductions in palm produce prices below those required to insure a financial return of at least 7% on Governments investment in the outgrower program would be passed on to all outgrowers by appropriate reductions in the prices paid for outgrower ffb, and that the Bank would be consulted at the time of any proposed change in producer prices. An annual review of the financial results of the oil palm outgrower

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1/ For economic rates of return see para 5.04.

program and the trend in world prices for palm produce would be made by SODEPALM and the results of each review would be submitted for consideration by the Bank, BEI, FED and CCCE.

Coconuts

3.20 Different financing arrangements would be employed in the case of coconut outgrowers. This is possible since there is no ongoing program. The elements of the intensive advisory and supervisory service would be similar to those of the oil palm program, as would the contractual arrangements for outgrowers to sell their produce to SODEPALM. Outgrowers would repay cash loans, and the full cost of goods and services supplied to them for the establishment of their holdings, together with interest at 6%. Details of outgrowers' loan arrangements are contained in Annex 5.

3.21 In return the outgrower would contract to sell his production to SODEPALM, and allow the deduction of his loan repayments over a period of 24 years including seven years of grace. The outgrower would also agree to the deduction of CFAF 1,800 for each ton of copra produced to cover SODEPALM supervision during the operational phase. SODEPALM would not guarantee a price for coconut produce in advance, but would pay a price geared to the market price for copra less full SODEPALM expenses, including all overheads for collection, processing and shipment to market. The above arrangements are satisfactory. While the interest rate charged to outgrowers is less than 1% above SODEPALM's average cost of borrowing for the program, the full costs of advisory and supervisory services, which could be considered as a charge against the Government, are recovered, both in the development and operational phases. Importantly growers would receive satisfactory returns for their labor both in the period of loan repayments and subsequently, see para 5.02 and Annex 5.

G. Yields

3.22 At full maturity of plantings, it is estimated that the following yields per ha would be obtained from the components of the project; oil palm-estates, 15 tons of ffb, outgrowers, 10.5 tons; coconut-estates, 2.7 and 3.2 tons of copra 1/, outgrowers, 2.2 tons. The basis for, and details of, these estimates are given in Annex 3.

1/ Approximately 20% of the coconut estates would be planted with hybrid material yielding 3.2 tons of copra per ha.

H. Processing

Oil Palms

3.23 PALMINDUSTRIE would require eight palm oil mills for the overall oil palm development program including the oil palm elements of the Bank project. Two have been built and are operative, and will form part of Government's equity in PALMINDUSTRIE. A third will be the Ehania mill that would be financed by the proposed Bank loan. The remaining five would be financed by loans from BEI and CCCE, see para 4.07. Close contact has been maintained by the Bank with BEI and CCCE on this matter, under an agreement that no party would act without reference to the other and that effectiveness of the proposed Bank loans would be dependent upon the effectiveness of the proposed BEI and CCCE loans for the five mills. The BEI and CCCE loans have been successfully negotiated.

3.24 Initial work on the Ehania mill included in the project commenced in 1968 with engineering studies and subsequent orders for equipment. Capacity is expected to be increased by stages from ten tons of ffb/hour in 1970 to 50 tons in 1975. The mill has been designed for successive expansion, since the cost of additional capacity is relatively inexpensive once the basic facilities have been erected. Bank funds, however, would not be required to finance equipment for further extensions. Annex 6 contains estimates of processing costs for estate ffb, and the processing costs and fees that would be charged to SODEPALM for processing outgrower ffb.

Coconuts

3.25 The processing of coconuts into copra requires comparatively simple equipment. SODEPALM estates would use oil fired kilns. Outgrowers would have the choice of selling the production of their holdings to SODEPALM in one of three forms - copra, dehusked, and unhusked nuts. If outgrowers produced copra they would have to build their own kilns. Simple kilns, constructed with local materials, and fired with coconut shells are commonly in use in the Ivory Coast. Most outgrowers are likely to sell their production as dehusked nuts.1/ This form of production would require a moderately intensive labor input per ha, about 27 days annually, and would insure the outgrower against losses due to inefficient kiln operation. It would be to SODEPALM's advantage also, in that SODEPALM with its oil fired kilns would be able to guarantee a high copra quality. Coconut processing as well as processing fees, are discussed further in Annex 6.

1/ The assumption that outgrowers would sell their production as dehusked nuts is used in all calculations and estimates in this report.

I. Marketing and Prices

3.26 Annex 7, which was prepared by the Bank's Trade Policies and Export Projections Division, examines market prospects for palm oil and palm kernels on the world market. It concludes that during the life of the project the cif Europe prices for palm oil and palm kernels will be in the range of US$ 155-165 and US$ 134-138 per metric ton respectively. For the purposes of this report the following prices are assumed for palm produce exports: palm oil US$ 160 per metric ton cif Europe; palm kernels US$ 136 per metric ton cif Europe. These prices compare with average 1968 European market prices of US$ 170 for palm oil and US$ 155 for palm kernels. During 1968 the price of palm oil fell to a low of US$ 140 per metric ton, due to the supply of fish oil, soybean oil and sunflower seed oil in large quantities. While palm oil prices are currently improving, the price levels experienced during 1967 and previous years are unlikely to be achieved in the foreseeable future. The Trade Policies and Export Projections Division estimates that the cif Europe price for copra during the life of the project will be US$ 165 per metric ton. This price compares with an average 1968 cif Europe price of US$ 229 per metric ton. Annex 8 contains details of the unit price assumptions used to forecast project earnings from the sale of palm oil, palm kernels and copra.

3.27 Project production of palm oil and palm kernels would be marketed by PALMIVOIRE, both directly, and through contracts concluded through SOGESCOL as an intermediary (see Annex 1). The latter company, three of whose subsidiaries would be shareholders in both PALMIVOIRE and PALMINDUSTRIE, is a major trader in fats and oils on the European market; and obtains much of its supplies from its parent company SOCFIN, an international plantation company, which owns and operates oil palm estates. An undertaking has been obtained from SOGESCOL, which is satisfactory to the Bank, that Ivory Coast palm produce marketed by SOGESCOL at the request of PALMIVOIRE, would receive equal treatment with respect to volume and prices, as produce of equal quality emanating from other sources under the control of SOCFIN, or any of its affiliates or subsidiaries. The domestic market for palm oil, either in crude or refined forms, is increasing, see Annex 8. Under a draft agreement, the Blohorn Group, the only industrial processor of palm oil in the Ivory Coast and a shareholder in PALMIVOIRE and PALMINDUSTRIE, would be supplied with oil, to the extent of its processing capacity, at ruling cif European prices less export costs. Sales of crude palm oil would be made to wholesalers at prices probably slightly more attractive but no account has been taken of such prices in financial analyses since this market is limited and its growth unpredictable. In the financial projections, sales of crude oil for local industrial and domestic consumption during the life of the project have been valued at US$ 160 per ton (see para 3.26), less export costs including duties.

3.28 No arrangements have been made by SODEPALM for copra marketing. Project production will not start until 1976 and will represent an insignificant part of the world trade in this commodity. No formal arrangements are necessary at the present time.

3.29 Government has proposed that, in common with other agricultural exports, the Caisse de Stabilisation et de Soutien des Productions Agricoles (CSSPPA) should intervene to maintain a reasonable equilibrium in producer prices for palm oil, kernels and copra. For palm oil and kernels, a reference price will be fixed at the end of each year, in accordance with the average price for that year. CSSPPA would then either impose a levy or grant a subsidy at the end of each year, depending on the average selling prices received during the current year, related to the reference price for the previous year. It has been agreed that a separate account would be maintained for levies or subsidies on oil palm produce. CSSPPA would not intervene directly in sales of oil palm produce but contracts for the sale of lots of 5,000 tons or more would need the approval of CSSPPA before signature. As such contracts are unusual this should not handicap normal commercial operations. For copra sales, which are not managed by PALMIVOIRE, CSSPPA policies are expected to follow a similar pattern, but to date no regulations have been issued. During negotiations, assurances were obtained from the Government that the Bank would be kept fully informed of any CSSPPA policy proposals relating to copra prices and of any changes in the policy relating to oil palm produce. Assurances were also obtained that no changes would be made in the regulations governing the intervention of CSSPPA in the oil palm market which might adversely affect the carrying out of the proposed Bank project.

J. Organization and Management

3.30 SODEPALM, which to date has very successfully developed the Ivory Coast's oil palm and coconut programs, is essentially a technical organization well qualified for field development operations. It lacks, however, the commercial experience required for the future when its estates and mills will be in production, and when it will be engaged in large scale marketing operations. For this reason, and since it wishes to encourage private investment in the processing of oil palm produce, the Government has recently concluded, to the point of signature of a "protocole d'accord", (memorandum of agreement) arrangements with commercially experienced foreign private investors for the creation of two new companies, PALMINDUSTRIE and PALMIVOIRE.

- PALMINDUSTRIE, would own the eight palm oil mills required for the ongoing program and the Bank project. Its initial share capital would be CFAF 2.5 billion (US$10 million) of which the Government would subscribe 73%, and private interests 27%. 18% of the total equity would be provided by foreign private investors, and 9% by Societe Nationale de Financement (SONAFI) 1/ on behalf of potential Ivorian private investors.

1/ SONAFI: A Government owned investment institution which would take up shares in PALMINDUSTRIE and PALMIVOIRE and subsequently sell these to private Ivorian investors.

- PALMIVOIRE, would develop and manage the PALMINDUSTRIE mills and the SODEPALM oil palm estates, and be responsible for the collection, processing and marketing of production from these estates and oil palm outgrowers. PALMIVOIRE's initial capital would be CFAF 50 million (US$200,000) of which 40% would be subscribed by the Government, 40% by the same foreign shareholders as in PALMINDUSTRIE and 20% by SONAFI.

3.31 SODEPALM would be the owner of the oil palm estates and the Government would retain 100% of its share capital. Importantly, SODEPALM would retain full operational control of the oil palm outgrower and coconut estate and outgrower programs. The oil palm outgrower and coconut programs would be completely separate from those in which the private sector would be involved. The Government has agreed with the private shareholders that SODEPALM, PALMINDUSTRIE, and PALMIVOIRE, under the "protocole d'accord", would enter into a Contract of Association in Participation, a form of joint venture, which would have an initial life of 30 years, subject to termination after 15, 20 and 25 years; at which points in time the private foreign shareholders would be able to sell their interests in PALMINDUSTRIE and PALMIVOIRE under a formula for the repurchase of their shares by the Government which is to be established in the statutes of PALMINDUSTRIE, PALMIVOIRE and the Contract of Association in Participation. The "protocole d'accord", which includes technical and other commitments by the shareholders in addition to the above arrangements, is satisfactory to the Bank. Under the terms of the Contract of Association in Participation, PALMIVOIRE would manage and administer the Participation, and SODEPALM 1/ and PALMINDUSTRIE would execute separate mandates authorizing PALMIVOIRE to administer their assets and to carry on their respective operations. The overall profits (or losses) of the Participation would be shared between its three companies in accordance with a formula based on the investments of each company, after deducting a management fee payable to PALMIVOIRE which would be geared to results. During the first five years of development SODEPALM and PALMINDUSTRIE would pay a fixed fee to PALMIVOIRE. The Council of Administration of the Participation would consist of nine members drawn from the Councils of Administration of the three associated companies. Further details of the above arrangements, the organization of the companies and forecast profit and loss accounts for the Participation are given in Annex 1.

3.32 The Board representation and voting powers of PALMIVOIRE are so arranged that even if the local private shareholders vote with the Government a reasonable autonomy of PALMIVOIRE in operational matters is assured. Such

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1/ In respect of its oil palm estates only.

autonomy is desirable in view of the technical and commercial contributions that would be made by the private investors. The Director General of PALMIVOIRE, who would be appointed with the consent of the Bank, see para 3.36, would receive under PALMIVOIRE statutes, by delegation from its Board, the full powers necessary for the proper management of the affairs of PALMIVOIRE, and consequently for those of PALMINDUSTRIE and the SODEPALM oil palm estates. The present Director General of SODEPALM has been selected for the post. All managerial staff would be employees of PALMIVOIRE, with the exception of those responsible for the oil palm outgrower and coconut estate and outgrower programs who would be employees of SODEPALM.

3.33 Under the laws of the Ivory Coast a Government Commissioner would be appointed to PALMINDUSTRIE and PALMIVOIRE. SODEPALM has such a commissioner. Government Commissioners have the right to attend meetings, to investigate the affairs of the companies to which they are appointed, and to suspend decisions of their Boards pending reference to the Government. In practice Commissioners act as liaison officers for the Government. Assurances have been obtained from the Government, during negotiations, that the Commissioners will not intervene in the day-to-day management or act in a way detrimental to the efficient carrying out of the project.

3.34 The foreign private shareholders, or "technical group", would be three subsidiaries of the Belgian company SOGESCOL, which is itself a subsidiary of SOCFIN; the Blohorn Group, a company with considerable industrial and agricultural interests in the Ivory Coast and elsewhere in W. Africa; and the four commercial banks which operate in the Ivory Coast: Banque Internationale pour l'Afrique Occidentale (BIAO), Societe Generale de Banques en Cote d'Ivoire (SGBCI), Societe Ivoirienne de Banque en Cote d'Ivoire (SIB), and Banque Internationale pour le Commerce et l'Industrie de la Cote d'Ivoire (BICICI), see Annex 1.

3.35 The Bank has been kept fully informed of all developments leading to the creation of the new organization, as have the other financial institutions concerned with the Ivory Coast oil palm and coconut program - FED, BEI and CCCE. The four institutions, including the Bank, are mutually satisfied with the arrangements and their allied detailed documentation and draft statutes, and have proposed changes and improvements which have been accepted by all potential members of the Participation. The Government has undertaken to have PALMIVOIRE and PALMINDUSTRIE formally established and the Contract of Association in Participation signed prior to signature of the proposed Bank, BEI and CCCE loan agreements. Assurances have also been obtained that the "protocole d'accord", which includes the Contract of Association in Participation, the statutes of SODEPALM, PALMINDUSTRIE and PALMIVOIRE, and the mandates would not be changed without the prior approval of the Bank.

Staff

3.36 SODEPALM presently enjoys a large measure of freedom in recruiting staff, both locally and from abroad; and it and PALMIVOIRE should have little difficulty in filling satisfactorily the new posts created by the project. Nonetheless, it has been agreed with the Government, as guarantor of the proposed Bank loans and as principal shareholder in the three companies, that appointments to certain posts in SODEPALM and PALMIVOIRE would only be made after consultation with the Bank and that such appointments would be made on terms and conditions satisfactory to the Bank. These would be the Directors General of SODEPALM and PALMIVOIRE, and the Director of Accounts, the Director of Plantations, the Technical Director and the Chief Engineer - oil mills - of PALMIVOIRE. Appointments to key posts in the oil palm outgrowers and the coconut estates and outgrowers schemes requiring consultation with the Bank would be the Director, the Deputy Director and the Chief Loan Officer of SODEPALM. While SODEPALM operates training courses for Ivorians wishing to fill technical posts, there is no established scheme for potential management staff. Such a scheme is most desirable and assurances have been obtained from the Government, SODEPALM, PALMINDUSTRIE and PALMIVOIRE that satisfactory training facilities and policies would be established in keeping with staffing needs.

Operational Management

3.37 Under the proposed arrangements the oil palm estate and palm oil mill components of the project would be developed and managed by PALMIVOIRE in accordance with normal commercial plantation practice. The coconut estates would be operated directly by SODEPALM in the same manner.

3.38 For oil palm and coconut outgrowers SODEPALM has established a specialized service, Service des Plantations Villageoises (SPV). In the field, SPV works independently of the estates. At headquarter's level SPV has technical and administrative divisions. The latter is responsible for financial matters and for liaison with outgrowers, in particular on social and legal affairs. In the field SPV is organized in a system of areas and groups. Under the project there would be nine sectors for oil palm outgrowers, each within a 20 km radius of an existing mill or of the site where a mill would be built. SPV chiefs have received special training in oil palm work. All outgrower plantings in the group must be made within 200 m of a road passable by bunch collection vehicles. In a typical area there is at present one extension worker to 54 outgrowers and to 183 ha of palms. This is an intensive coverage and ensures the effective use of the funds provided for outgrowers. When group plantings come into production, a SODEPALM employee is appointed to coordinate and record the collection of ffb by the area's mill. The arrangements for coconut outgrowers are similar but the number of areas is only four.

3.39 In addition to its coconut outgrower program SODEPALM operates an assistance and advisory service for existing coconut growers, and for those establishing plantings outside the outgrower scheme. Services provided to such growers, which are not financed under the project, include credits for planting material and fertilizer, and a fee of CFAF 1,800 per ton of copra is deducted to reimburse SODEPALM supervision costs (see para 3.21).

IV. COSTS AND FINANCIAL ARRANGEMENTS

A. Project Costs

4.01 Total costs of the parts of the SODEPALM and PALMINDUSTRIE programs which form the project are estimated at CFAF 7,186 million (US$29.1 million). The following table gives a breakdown by broad category of expenditure (details of the cost estimates are given in Annexes 9 through 12).

Summarized Project Cost Estimates, 1968 through 1974

	CFAF					US$	
	Ehania Estate	Ehania Mill	Oil Palm Outgrowers	Coconut Program	Total	Total	Foreign Exchange
	millions					millions	
Vehicles, oil mill, and buildings	223	1,259	64	208	1,754	7.1	5.2
Administrative expenses	190	-	564	493	1,247	5.1	1.9
Field Development							
Estates	580	-	-	487	1,067	4.3	3.3
Outgrowers	-	-	190	277	467	1.9	-
Credits to Outgrowers							
Cash	-	-	240	25	265	1.1	0.2
Kind	-	-	432	-	432	1.7	0.4
Interest on proposed Bank loans	222	244	254	277	997	4.0	4.0
Sub-total	1,215	1,503	1,744	1,767	6,229	25.2	15.0
Extensions to mills for outgrower ffb	-	35	660	-	695	2.8	1.9
Outgrowers hired labor and tools	-	-	240	22	262	1.1	0.1
TOTAL PROJECT COSTS	1,215	1,538	2,644	1,789	7,186	29.1	17.0

The Government has confirmed that the project would be granted import duty free privileges during the development period and all estimated costs are free of import duty. The costs are in line with those experienced by SODEPALM to date. Ehania mill and land clearing costs are based on competitive quotations obtained by SODEPALM in 1968. Provision has been made in the cost estimates for a 15% increase in labor costs in 1972 and a further 15% in 1976.

Outgrowers' direct labor costs are based on the assumption that part of the labor required in the development period would be provided by the farm family at no financial cost to the outgrower (see Annex 5, Tables 2 and 3). The extensions to existing and planned mills, including Ehania, are essential for the oil palm outgrower element of the project. Some of these extensions would be required during the disbursement of the proposed Bank loan, others-later. Since it would not be possible to use international competitive bidding for the equipping and construction of these extensions - the original mill supplier would have to be employed, it is not proposed to finance mill extensions under the Bank loan.

B. Proposed Financing - Bank Project

4.02 In accordance with the recommendations of the latest economic mission to the Ivory Coast 1/, it is proposed to make Bank loans totalling US$17.1 million to the Ivory Coast. These would cover approximately 100% of the estimated foreign exchange cost of the project - US$17.0 million.

4.03 In view of the fact that the companies in the Participation would remain legally independent, particularly for their debt obligations, and also because it is essential to harmonize the lending operations of the Bank with those of CCCE and BEI, it is proposed that three separate loans should be made:

(i) US$4.8 million to PALMINDUSTRIE 2/ to finance the Ehania mill;

(ii) US$3.3 million to SODEPALM 2/ to finance 4,000 ha of estate palms at Ehania; and

(iii) US$9.0 million to SODEPALM to finance 12,000 ha of outgrower oil palms, 3,500 ha of estate coconuts, and 3,000 ha of outgrower coconuts.

4.04 The loans would bear interest at 6½%, would be disbursed over the six years 1969 through 1974, and would be repaid over the 15 years, 1975 through 1989. Interest would be capitalized during the grace periods and would be included in the loans.

4.05 CCCE would participate in the financing of the Ehania estate, outgrower oil palm, and estate and outgrower coconut programs. CCCE loans would bear interest at 4¼%, would be disbursed under a similar timetable to the

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1/ Economic Report AF-76A dated July 3, 1968.

2/ As part of investments falling within the scope of the Participation.

Bank loans, and would be repaid in the 15 years starting in 1975. Interest, however, would not be capitalized. In summary project costs would be met as follows:

PALMINDUSTRIE Ehania mill	SODEPALM Ehania Estates	SODEPALM Oil Palm Outgrowers and Coconut Programs	Total	
US$M				
4.8	3.3	9.0	17.1	by Bank loans
-	1.7	4.1	5.8	by CCCE
-	-	3.7	3.7	by Government
1.4	-	-	1.4	by Government and other shareholders in PALMINDUSTRIE
-	-	1.1	1.1	by outgrowers
6.2	5.0	17.9	29.1	

4.06 The interest repayments by SODEPALM on the CCCE loans during the development period of the project would amount to about CFAF 228 million (US$923,000). If these payments are included in total project costs, the percentage contribution of the different fianancial participants in the project would be as follows:

Bank	CCCE	Outgrowers	Government	Government and other PALMINDUSTRIE shareholders	Total
57.0	22.3	3.7	12.3	4.7	100.0

In view of the comparatively small financial participation of PALMINDUSTRIE's private shareholders in the Ehania mill, the Governments' overall contribution to project costs would amount to about 16%.

C. Financing the Overall Ivory Coast Oil Palm and Coconut Programs

4.07 The Bank project comprises only part of the appreciably larger Ivory Coast programs of oil palm and coconut development, see paras 2.07 and 3.03. In the course of development of the Bank project SODEPALM and PALMINDUSTRIE, through the agency of PALMIVOIRE, will complete the ongoing program of primarily FED financed oil palm estates, and construct the palm oil mills needed for the estate and outgrower oil palm programs. SODEPALM, directly, will complete the development of existing outgrower oil palm holdings which have not yet reached maturity and in addition the development of 1,000 ha of estate coconuts which were planted in 1967 and 1968 and which do not form part of the Bank project. While the Government is receiving external financial assistance for some of these purposes, and has negotiated loans from BEI and CCCE for the PALMINDUSTRIE program, the demand on Government

for funds, in the form of grants or loans to, or equity in, SODEPALM, PALMINDUSTRIE, and PALMIVOIRE, will be appreciable. The following table summarizes the sources and application of funds required for the Ivory Coast oil palm and coconut programs, including the Bank project, for the period 1968 through 1974. Further details are given in Annex 1, Tables 2, 3, 4 and 5.

Ivory Coast Oil Palm and Coconut Program excluding PALMIVOIRE

Summary of Sources and Applications of Funds, 1968 through 1974
(CFAF millions)

	PALMINDUSTRIE	SODEPALM			
	Oil Mills	Oil Palm Estates	Oil Palm Outgrowers	Coconut Program	Total
SOURCES OF FUNDS					
Non-Government					
Equity	690.0	-	-	-	690.0
Loans					
CCCE	750.0	420.0	745.5	610.3	2,525.8
FED a/	-	3,410.9	21.3	-	3,432.2
FED/BEI	-	899.6	-	-	899.6
BEI	2,250.0	-	-	-	2,250.0
IBRD	937.2	604.5	742.6	875.5	3,159.8
FAC	-	-	-	69.0	69.0
Outgrowers' loan repayments	-	-	206.5	-	206.5
Sub-total non-Government	4,627.2	5,335.0	1,715.9	1,554.8	13,232.9
Government-Committed or Earmarked					
Equity - cash	1,460.0	200.0 c/	-	-	1,660.0
- kind	350.0 b/	-	-	-	350.0
Grants					
BSIE	-	71.0	255.4	359.1	685.5
FER	-	-	9.1	-	9.1
Loans					
CAA	1,013.2	100.0	-	-	1,113.2
BSIE	200.0	770.0	-	-	970.0
Advances					
FER	-	-	555.9	-	555.9
Sub-total Government	3,023.2	1,141.0	820.4	359.1	5,343.7
Self-Generated Funds	1,366.9	684.7	273.2	6.7	2,331.5
Total Sources	9,017.3	7,160.7	2,809.5	1,920.6	20,908.1
Total Applications	9,277.3	8,233.4	2,809.5	1,787.2	22,107.4
Cash Deficit to be met by the Government	-260.0	-1,072.7	-	+133.4	-1,199.3
Total Required Government Cash Contribution d/	2,933.2	2,213.7	255.4	225.7	5,628.0
(US$ million equivalent)	(11.9)	(8.9)	(1.0)	(0.9)	(22.7)

a/ Shown as a loan in view of commitment by SODEPALM to pay CFAF 0.8/kg of ffb produced on its estates to FER.

b/ SODEPALM investment in existing mills.

c/ Augmentation of SODEPALM capital.

d/ Excludes funds for equity in kind contributed by FED (CFAF 350 million) and FER grants and advances (CFAF 565 million) paid from funds generated by estates or outgrowers financed by FED. During the period 1971 through 1973 additional funds totalling CFAF 165 million (US$0.7 million) may have to be provided by Government on oil palm outgrowers' account pending recovery from FER in 1974.

4.08 The table shows that the Ivory Coast would receive some CFAF 13 billion (US$52.6 million) from foreign loans and grants, and from private shareholdings in PALMINDUSTRIE and PALMIVOIRE, during the period 1968 through 1974. This would include the proposed Bank loans. During the seven-year period the Government itself would have to provide an additional CFAF 5.6 billion (US$22.7 million) in cash. This high requirement is a major justification for the relatively small cash contribution, 16%, of Government towards the costs of the Bank project. The Government has committed, or earmarked, a large proportion of the required funds as shown in the table above. The cash flows, however, on which the Government has based its commitments assume higher prices for program production than those forecast by the Bank. Consequently, on the basis of the Bank's forecast of commodity prices, the table shows a probable cash deficit which would have to be met from uncommitted Government sources. If prices obtained for program production fall below those estimated by the Bank the deficit would be larger. The probability of cash shortfalls beyond those that would be covered by committed Government funds is appreciated by both the Government and the private shareholders in PALMINDUSTRIE and PALMIVOIRE. The Government has given assurances that it would cover all cash deficits occuring at any time in the lifetimes of the Ivory Coast oil palm and coconut programs. Under the statutes of the companies, the private shareholders in PALMINDUSTRIE and PALMIVOIRE would not be responsible for meeting cash deficits relating to their companies. However, assurances have been obtained from the private shareholders that in the event of such deficits occuring, and Government having to provide funds in excess of its present commitments, they would forego all statutory and other dividends, with the exception of dividends payable by PALMIVOIRE in respect of management fees, unless funds are available in excess of agreed working capital requirements and long-term debt service on the proposed Bank, CCCE, BEI and FED/BEI special loans, para 2.11.

4.09 From 1976 onwards the financial status of the programs would improve rapidly. SODEPALM oil palm estates deficits would be fully covered by self-generated funds by 1979, and those of PALMINDUSTRIE by 1982. Due to the long gestation period of the crop, Government financial support would be required for the SODEPALM coconut program until the program became financially self-supporting in 1981. On the basis of the Bank's forecast prices, the SODEPALM oil palm outgrower program would incur small annual deficits at full production which would be met by FER, as would earlier direct Government contributions when FER funds are available, see para 4.14 and Annex 13.

D. Procurement, Disbursement, Accounts and Audit

Procurement and Disbursement

4.10 To ensure the maximum use of international competitive bidding procedures, and the most convenient administrative procedure for procurement and disbursement, the following arrangements have been agreed between CCCE, as co-financier, the borrowers and the Bank.

(a) Procurement of land-clearing services, Ehania oil mill equipment, machinery, building and agricultural materials, vehicles, fertilizer, and contracts for the erection of the Ehania mill would be on the basis of international competitive bidding.

(b) Disbursements of the Bank loans would cover: 100% of the CIF cost of all imported items, as certified by shipping documents; 100% of cash credits made to oil palm and coconut outgrowers, as substantiated by certified records; 100% of the cost of oil palm and coconut seedlings; and 80% of the costs of land clearing, as certified by approved completion certificates. Remaining disbursements would cover a percentage of all other eligible project costs. Annex 14 contains details of proposed disbursements.

Accounts

4.11 PALMIVOIRE would establish and maintain the accounts of the Participation. SODEPALM would be responsible for maintaining the accounts of its coconut estate operations, and oil palm and outgrower programs. The operation of the outgrower accounts is discussed further in paras 4.14 and 4.15.

Audit

4.12 At present, SODEPALM accounts are audited by two auditors appointed by the Minister of Economic Affairs and Finance; in practice one is from the Government Audit Department and the other a public auditor. Accounts remain provisional until approved by the Minister, and submitted to the National Assembly together with an annual report. During negotiations assurances were obtained from the Government that an independent accountant or accounting firm acceptable to the Bank would be appointed to audit the accounts of SODEPALM, PALMINDUSTRIE and PALMIVOIRE.

E. Retroactive Financing

4.13 The Bank appraised the project in early 1967. At that time Government had decided to obtain private investment in PALMINDUSTRIE and PALMIVOIRE. Negotiations with the private sector took longer than anticipated, particularly since the Government took care to insure than all proposals were discussed with, and cleared with, the potential foreign institutional financiers - FED, BEI, CCCE and the Bank. In recognition of this the other co-lenders have already agreed to retroactive financing. At the end of 1967 the Bank agreed that any expenditures incurred up to six months before the signature of loans between the Bank and PALMINDUSTRIE and SODEPALM would, where appropriate, be eligible for reimbursement. On this basis the project has proceeded. Following receipt of the six months waiver, other unforeseen delays occurred, and Government has stated that it seeks the retroactive financing of all eligible expenditures in 1968. Calculations in this report, including the size of the proposed Bank loan, have been made on the assumption that the Bank would approve this request. It is estimated that expenditures of between US$1.5 million and US$2.0 million would qualify for retroactive financing if this

were approved. All contracts awarded, and importations made by SODEPALM, either on its own account or on behalf of PALMINDUSTRIE, have been made in full accordance with the Bank's guidelines on procurement.

F. Financing Arrangements for Outgrowers

Oil Palms

4.14 The Bank loan for the outgrower program would be made directly to SODEPALM which is responsible to the Government for its execution. SODEPALM would be responsible for debt service and would retain all credit repayments made by outgrowers. Outgrowers do not reimburse all development costs and the difference in the SODEPALM outgrowers' account would be met by FER. In agreement with FED the prior charge on FER funds during the period 1969 through 1976 would be for the construction of modern houses for the estate workers, see para 2.09. The FER cash flow (see Annex 13) shows that after 1974 sufficient funds would be available to meet all FER obligations. During the period 1969 through 1973 there would be a maximum cumulative cash deficit of CFAF 165 million (US$670,000) which the Government would have to meet from other sources until FER funds became available.

Coconuts

4.15 FER will play no part in financing the coconut outgrower program; SODEPALM would recover its investments in the program in full, see para 3.21.

V. BENEFITS AND JUSTIFICATIONS

5.01 As part of the Government's crop diversification program the project would lessen the dependence of the economy on cocoa and coffee. It would accelerate the shift from traditional farming methods to commercial systems employing efficient cultivation and processing techniques. By containing a blend of estates and private outgrower development, outgrowers would benefit from the demonstration effect of the estates and the processing and marketing facilities that they would provide.

5.02 The project would yield substantial benefits to the participating rural population. The coconut and Ehania oil palm estates and the Ehania oil palm mill would provide permanent employment for about 2,000 workers. The outgrower programs for oil palms and coconuts would benefit some 3,000 to 4,000 farm families. These families would obtain substantially higher returns for their labor than from traditional crops. It is estimated that the return per manday employed in maintaining and harvesting outgrower oil palms would average between CFAF 500 and CFAF 600 after repayment of credits, and between CFAF 725 and CFAF 850 once credits have been repaid. This compares favorably with returns to labor presently obtainable from coffee production which average presently about CFAF 400, and a current estate cash

wage rate of about CFAF 230. The annual labor requirements per ha of oil palms and coffee farms typical of the project area are approximately the same, between 45 and 50 mandays. Coconut outgrowers will have to wait appreciably longer for their plantings to come into production, seven years instead of four for oil palms. Thereafter, as illustrated in Annex 5, the return per manday employed on a holding established under the credit and repayment arrangements proposed would average between CFAF 500 and CFAF 800 during the repayment period and between CFAF 1,250 and CFAF 1,550 subsequently. Coconuts in full production require about 27 mandays when production is sold as dehusked nuts.

5.03 When project plantings are in full bearing in the late 1970's their annual production will total about 39,000 tons of palm oil, 9,400 tons of palm kernels, and 16,500 tons of copra. The value of this production, in storage Abidjan, would be about CFAF 2.1 billion (US$8.5 million). Between 50 and 60% of the production would be exported, and the value of these exports would be equivalent to about three times the foreign exchange requirements for debt service and current operating costs.

5.04 The estimated economic rate of return on the overall project on the basis of conservative estimates of yields, costs free of identifiable taxes and price assumptions detailed in para 3.26 and Annex 7 is more than 11%. Individual rates of return on the constituent parts of the investment are as follows:

<u>Oil Palms</u>

Estates -	Between 10 and 11%
Outgrowers-	Between 13 and 14%

<u>Coconuts</u>

Estate and Outgrowers-	Approximately 9%

The lower rate of return on investment in the coconut element of the project is due to the long gestation period for coconuts. At the same time this crop provides growers with good returns once the palms are in production, and is the only crop that can be cultivated economically in the coastal belt of the Ivory Coast. Wages paid to estate labor by SODEPALM would be considerably higher than the contribution that estate labor would make to the economy if it were not employed by the Corporation. It is estimated that this "contribution to GDP in alternative employment" is 60% of the full wage costs. If estate labor is costed at 60% of the full cost the estimated economic rate of return on the overall project would increase to nearly 12% and the individual rates of return on the constituent parts of the project would increase as follows:

Oil Palms

Estates	-	12%
Outgrowers	-	No change

Coconuts

Estates and Outgrowers	-	Between 9 and 10%

An analysis of the sensitivity of the project's economic rate of return to alternative assumptions regarding yields, world prices for oil palm products and copra and the opportunity cost of labor is at Annex 15. The analysis shows that an increase or decrease of 10% in either the projected palm produce yields or palm oil prices would increase or reduce the overall rate of return by up to 2%. Assuming an economic cost for labor of 60% of cash costs, the price of palm oil could fall to about US$130 per ton before the overall rate of return fell to below 8%.

5.05 The estimated financial rate of return on the overall project is between 10 and 11%. Individual financial rates of return would be about 10% for the oil palm estates, 13% for the oil palm outgrowers, and 9% for coconut estates and outgrowers.

VI. CONCLUSIONS AND RECOMMENDATIONS

6.01 The project, as planned, is well conceived, technically and economically sound, and would be suitable for a Bank loan of US$17.1 million including capitalized interest. A number of assurances have been received from the Government and member companies of the Participation including the following:

(i) the Ivory Coast would not extend its oil palm development program beyond the presently planned 76,000 ha without informing the Bank, para 2.08;

(ii) prices paid to outgrowers for ffb would be adjusted to insure a financial return of at least 7% on Government's investments in the outgrower program; and these arrangements would apply both to existing and Bank financed outgrowers, para 3.19;

(iii) an agreement, satisfactory to the Bank, would be concluded between PALMIVOIRE and SOGESCOL to ensure that Ivory Coast palm produce marketed by SOGESCOL would receive equal treatment in terms of volumes and prices as palm produce supplied to SOGESCOL by SOCFIN and its subsidiaries and affiliates, para 3.27;

(iv) Government Commissioners appointed to SODEPALM, PALMINDUSTRIE and PALMIVOIRE would not intervene in the day-to-day management or act in a way detrimental to the efficient carrying out of the project, para 3.33;

(v) the Government would cover all cash deficits resulting from the operations of SODEPALM, PALMINDUSTRIE and PALMIVOIRE at any time in the lifetimes of the Ivory Coast oil palm and coconut development programs. In the event of such deficits the shareholders in SODEPALM, PALMINDUSTRIE and PALMIVOIRE would forego all dividends, statutory and otherwise, except those payable by PALMIVOIRE in respect of management fees, unless funds are available in excess of agreed working capital and long-term debt service requirements, paras 4.08 and 2.11; and

(vi) the first call on FER funds until 1976 would be for FER's obligations to construct housing for estate workers and thereafter to assist in financing the SODEPALM outgrower program, para 4.14.

6.02 Signature of the proposed Bank loans would be dependent on:

(i) Formal approval by FED of the arrangements required to adapt the terms of the original FED grants to the new oil palm development program of SODEPALM and its associated companies, para 2.09;

(ii) Signature of the "protocole d'accord" and the Contract of Association in Participation, the establishment of PALMINDUSTRIE and PALMIVOIRE and the execution of mandates by SODEPALM and PALMINDUSTRIE authorizing PALMIVOIRE to administer their assets and to carry on their respective operations, paras 3.30 and 3.35.

April 25, 1969

ANNEX 1

IVORY COAST

OIL PALM AND COCONUT PROJECT

Project Entities

A. SODEPALM

Constitution

1. SODEPALM (Societe pour le Developpement et l'Exploitation du Palmier a Huile) was created by Decree No. 63-467 of November 7, 1963 as a statutory corporation ("societe d'etat"). Its objectives are to investigate the problems of development of both coconut and oil palm, and to make proposals to the Government for the implementation of development projects, either by direct participation, or by coordination, direction or control of the various public and private bodies interested in oil palms. The original decree was amended in September 1966 to bring membership of its Council of Administration in line with ministerial regroupings.

2. SODEPALM's affairs are directed by a Council of Administration of ten members. These consist of two representatives each of the National Assembly and of the Minister of Agriculture, and one each from the Economic and Social Council, the Minister of the Armed Forces and the Civil Service, the Minister of Economic Affairs and Finance, the Minister of Planning, the Institut de Recherche pour les Huiles et Oleagineux (IRHO), and the private sector. Members are nominated for three years in the first instance, and this period can be extended. Members receive no fees but are entitled to expenses at fixed rates. Meetings are held as required, in practice generally twice a year. Alternates are allowed, and the President, who is elected from among the members, has a casting vote. The Council has powers to carry out all the usual business of a company, including the disposal of its funds. Minutes of each meeting have to be handed to the Minister of Agriculture within eight days of the meeting. The Council receives advice on technical matters from a small technical committee.

3. In common with all companies with a 40% or more Government shareholding, SODEPALM is subject to the control of a Government Commissioner appointed by the Minister of Planning. The Commissioner has the right to attend all Council meetings, to investigate SODEPALM's affairs, and to suspend any decision of the Council. In practice he acts as a liaison officer for the Government. Assurances have been obtained from the Government that the Commissioner would not intervene in the day-to-day management or act in a way detrimental to the efficient carrying out of the project. These assurances have also been given in connection with the Commissioners who would be appointed to PALMINDUSTRIE and PALMIVOIRE, see main report. The Bank has suggested amendments to the statutes of SODEPALM. These would restrict the ability of Ministers of the Government to unduly interfere in the day-to-day affairs of SODEPALM, and ensure that Ministers exercised their supervisory responsibilities indirectly through their representatives on the Council of SODEPALM. The SODEPALM statutes,

which are acceptable to the Bank in their revised form, have been submitted to the National Assembly for the necessary legislation. The statutes of PALMINDUSTRIE and PALMIVOIRE have been reviewed and revised with the Bank, FED, BEI and CCCE, and with the private investors in the two companies, and approved by all parties.

4. SODEPALM started with a fixed capital ("capital social") of CFAF 50 million which has since been raised to CFAF 400 million (US$1.6 million). SODEPALM is subject to the same laws as limited liability companies ("societe anonyme"), but any land required to carry out its objectives can be expropriated under the laws covering public utilities. Its head office is in Abidjan, and it is empowered to open branch offices as required. Accounts must be kept in accordance with sound commercial practice, and the fiscal year ends December 31. Two auditors are appointed by the Minister of Economic Affairs and Finance (in practice one is from the Government Audit Department and the other a public auditor). Accounts remain provisional until approved by the Minister, and submitted to the National Assembly together with an annual report. This must be within three months of the end of each fiscal year. Administration is in the hands of a Director General nominated by the Council.

Administration

5. The President is Mr. Joseph Anoma, a former Minister of Agriculture, and the Director General is Mr. Andre Fraisse, both of whom have held office since SODEPALM was created. Mr. Fraisse was formerly the Director of the IRHO Research Station at La Me. He is assisted by a professional staff of about 30 at head office, of which about ten are Ivorians.

Financial

6. Up to the end of 1967 SODEPALM derived its development funds from three main sources. First, its fixed capital, originally CFAF 50 million, which was increased during 1965 to CFAF 200 million, mainly on the insistence of FED, to provide for a new head office building and some staff quarters out of local funds. The fixed capital was further increased to CFAF 400 million during 1968. This capital has been provided wholly by the Government. Second, grants, partly from the Government and partly from FED. Government grants are provided through Budget Special d'Investissement (BSIE), that part of the annual Government budget which provides for capital expenditure. As at the end of 1967 the total amount received from this source was CFAF 1,148 million. FED grants have been made under Agreements 183 and 331, and the total amount received up to the end of 1967 was CFAF 4,365 million. Third, a long-term loan from Caisse Autonome d'Amortissement (CAA)[1/] which at the end of 1967 amounted to CFAF 380 million. SODEPALM also has accounts with four commercial banks, and is

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1/ CAA: Created by Government decree in 1959 as an autonomous public institution to administer and manage the public debt and to act as banker for other public institutions.

able to obtain short-term funds when required, usually at rates around 8%. It has no mortgages or other charges on its assets.

7. Balance sheets for the years ending December 31, 1964 through 1967 are at Table 1. To date no profit and loss statements have been issued as all expenditure to date has been on capital account. The main amounts are shown under "Agricultural Development"; the item "Unallocated Expenditure" refers to management and operation expenses which are to be allocated on an acreage basis as projects are completed and final areas known.

8. Over the next seven years SODEPALM's sources of funds will widen. External loans sought from CCCE and the Bank, are the subject of this report. The various anticipated sources of funds are shown in the cash flows for oil palm estates, coconut development, and oil palm outgrowers which are projected for the period 1968 through 1982 in appended Tables 2, 3 and 4.

9. The accounts section of SODEPALM is under the control of an Accounts Director well experienced in oil palm plantation finance and control. The cost accounting side is particularly good, and detailed accounts are submitted monthly for each estate and smallholder sector, from which it is possible to pinpoint quickly any over-expenditure or under-expenditure. A fully mechanized accounting system will be installed during the first half of 1969 to ensure maximum accounting efficiency and control for the ongoing program and the proposed Bank project.

10. Disbursement of FED funds is made according to agreed procedures. Unless FED agrees to the contrary, supplies of equipment, machinery, vehicles and other materials, and contracts for construction of roads and housing, must be obtained by international tender limited to EEC members. Disbursements are made directly to suppliers and contractors. Payment against field work executed by SODEPALM is made twice a year, after each planting season, on the basis of each hectare planted. Disbursement of grants from BSIE can be claimed at any time on the basis of work completed. For both FED and BSIE funds, claims have to be certified by the Government

Staff

11. Total staff is about 4,500 of which some 80 are professional and technical, and of these latter about 30 are Ivorians. Eight senior Ivorians are civil servants, seconded from the Government for an indefinite period. There is no specific training policy or program to enable Ivorians to take over at the higher levels of management, but suitably qualified Ivorians interested in joining the organization are encouraged to do so. Assurances have been obtained from the Government, SODEPALM, PALMINDUSTRIE and PALMIVOIRE that satisfactory training facilities and policies would be established in keeping with staffing needs.

Conclusion

12. SODEPALM has shown by its performance to date that it is capable and competent, with high quality management at field and headquarters' levels. The creation of PALMINDUSTRIE and PALMIVOIRE will reduce SODEPALM's direct responsibilities to the management of the coconut estate and coconut and oil palm outgrower programs. This will involve the transfer of professional staff concerned with the oil palm estate program to PALMIVOIRE. There is no evidence, however, that these changes will be detrimental to SODEPALM's capacity to discharge its changed responsibilities and, as stated in the main report, appointments to key posts in the new SODEPALM would be made after consultation with and on terms and conditions satisfactory to the Bank.

B. PALMINDUSTRIE

Constitution

13. PALMINDUSTRIE would be formed as a private limited liability company ("societe anonyme"). The objects of the company would be the processing and sale of oil palm products and by-products connected or derived therefrom. Consequently, it would own the eight palm oil mills required to process the production from SODEPALM estates and associated outgrowers.

Proposed Financing Arrangements

14. The initial share capital of the company would be CFAF 2.5 billion (approximately US$10 million), and this would be subscribed as follows:

			CFAF Millions	US$ Million Equivalent
A	Shares - Ivory Coast Government		1,810	7.3
B	Shares - Technical Group			
	SOGESCOL 1/	230		
	BLOHORN	144		
	PRIVATE BANKING INTERESTS	86	460	1.8
C	Shares - Ivorian Private Group			
	SONAFI 2/		230	0.9
			2,500	10.0

1/ The shareholders in PALMINDUSTRIE and PALMIVOIRE would be Plantations des Terres Rouges, Société Forestière Equatoriale and Société d'Etude et de Développement de la Culture Bananiere (SCB), which are West African subsidiary companies of SOGESCOL. SOGESCOL is a subsidiary of SOCFIN.

2/ Societe Nationale de Financement: A Government-owned investment institution which would take up shares and subsequently sell these to private investors.

Government would subscribe CFAF 350 million in kind, and CFAF 1,460 million in cash. For its programs PALMINDUSTRIE would seek loans from BEI, CCCE, IBRD and CAA. Details are provided in the cash flow at appended Table 5.

Council of Administration

15. The affairs of PALMINDUSTRIE would be under the direction of a Council of Administration consisting of nine members, six representing the Government and three representing the private shareholders. A simple majority of those present would be required. The President would be elected from among the members. A Government Commissioner would be appointed with similar rights as the Commissioner appointed to SODEPALM, see para 3.

C. PALMIVOIRE

Constitution

16. PALMIVOIRE would be formed as a private company in the same manner as PALMINDUSTRIE. The main objects of PALMIVOIRE would be:

(i) to provide all services required for the cultivation and processing of oil palms, and other oil producing crops, and the sale of oil and any by-products derived from such crops; and

(ii) to manage agricultural undertakings including processing installations.

Council of Administration

17. The Council of Administration of PALMIVOIRE would consist of twelve members,four representing the Government (A Shares) six representing the technical group (B Shares) and two representing the private Ivorian shareholders (C Shares). A simple majority would be required for resolutions passed by the Council. It would be mandatory for the President to be elected from the A Shareholders, but he would have no casting vote. However, the statutes provide for the delegation of powers necessary for technical, commercial and financial operations, under programs approved by the Council, to an executive committee ("Conseil restreint"), comprised of six members resident in the Ivory Coast. Of the six members of the executive committee two would represent the Government (A shares), three would represent the technical group (B shares), and one would represent the private Ivorian shareholders (C shares). Resolutions passed by the executive committee would require a majority of four votes which would ensure the degree of autonomy considered necessary for the efficient operation of PALMIVOIRE. As in the case of the other two companies a Government Commissioner would be appointed to PALMIVOIRE.

Proposed Financing Arrangements

18. The initial share capital of the company would be CFAF 50 million (approximately US$200,000), and would be subscribed as follows:

			CFAF Millions	US$'000 Equivalent
A Shares :	Ivory Coast Government		20	80
B Shares :	Technical Group			
	SOGESCOL	10		
	BLOHORN	6		
	PRIVATE BANKING INTERESTS	4	20	80
C Shares :	Ivorian Private Group			
	SONAFI		10	40
			50	200

As a management company PALMIVOIRE would not require additional funds, except the occasional use of bank overdraft facilities.

D. The Protocole d'Accord

19. Government has agreed to sign with the private shareholders a protocole d'accord (memorandum of understanding) which would be the basic document governing relations between SODEPALM, private investors and the Government. The protocole d'accord includes -

(i) A Contract of Association in Participation;

(ii) Mandates to be executed by SODEPALM and PALMINDUSTRIE authorizing PALMIVOIRE to execute their investment programs, to administer their assets and to carry on their respective operations; and

(iii) Statutes of PALMNDUSTRIE and PALMIVOIRE.

Additionally the protocole d'accord includes technical and other commitments by the shareholders which are satisfactory to the Bank. These include the arrangements for processing outgrowers fresh fruit bunch; undertakings by SOGESCOL, the Blohorn group and the private Banking interests to provide

technical, commercial, marketing and banking expertise and facilities; and the contractual arrangements to be made for the supply of palm oil to the Blohorn group.

E. The Association in Participation

20. SODEPALM, PALMINDUSTRIE and PALMIVOIRE would enter into a Contract of Association in Participation (a form of joint venture) for the development and operation of the industrial oil palm estates. PALMINDUSTRIE would collect, process and sell oil palm outgrowers production but development and supervision of oil palm outgrowers holdings would remain the responsibility of SODEPALM, as would the development and operation of the coconut programs.

21. The contract of association would have an initial life of 30 years, subject to termination after 15, 20 and 25 years. Under the terms of the contract PALMIVOIRE would manage and administer the Association in Participation. SODEPALM and PALMINDUSTRIE would execute separate mandates authorizing PALMIVOIRE to administer their assets and to carry on their respective operations. The mandates would specify the development programs for oil palm estate development and the construction of oil mills. The powers delegated to PALMIVOIRE would also be embodied in the mandates, including employment and removal of personnel, authority to purchase, leasing and hiring arrangements, execution of contracts, collection of debts and payment of dues, opening and operating bank accounts and preparation of accounts. However, each company would retain ownership of, and control of the ultimate disposition of its assets and be responsible individually for its debt service.

22. The accounts of the Participation would be kept by PALMIVOIRE, and a common operating account would be prepared annually and be made up as follows:

Credit:
- sales revenues,
- processing fees received from outgrowers.

Debit:
- all expenses and management charges, excluding:

  (a) investment costs,
  (b) interest on long and medium-term loans,
  (c) income and company taxes,
  (d) costs directly attributable to the individual companies -- for example Council members' fees.

23. Profits or losses of the Participation would be divided between the three companies on the basis of the relative contributions made by them in the way of assets, both fixed and current, placed at the disposal of the Participation.

24. PALMIVOIRE would be remunerated for management services under a sliding scale formula based on the positive results of the Participation. During the first five years of the Participation there would be no profits, and PALMIVOIRE would receive a management fee of CFAF 30 million annually from SODEPALM and PALMINDUSTRIE. This fee would be deducted from the profits of the Participation before the distribution of these to the three companies would be determined. The estimated operating accounts of the Participation appear in Table 6.

25. The Council of Administration, or Board of Directors, of the Participation would consist of nine members. The Government would be represented by five members (three from SODEPALM, one from PALMINDUSTRIE and one from PALMIVOIRE) the technical group by three members and private Ivorian shareholders by one member. Resolutions of the Council of Administration would require a majority of more than two-thirds of those present and voting. The principal function of the Council of Administration of the Participation would be to define general policy, and to approve the annual budget and accounts of the Participation.

E. The Technical Group

26. Financial participations by the "technical group" would be as follows:

	PALMINDUSTRIE	PALMIVOIRE
	--------CFAF million------	
SOGESCOL	230.00	10.00
Blohorn	143.75	6.25
B.I.A.O.	27.17	1.18
S.G.B.C.I.	27.17	1.18
S.I.B.	17.25	.75
B.I.C.I.C.I.	14.66	.64
	460.00	20.00

SOGESCOL

27. SOGESCOL is a trading company of the Societe Financiere des Caoutchoucs S.A. (SOCFIN) Group. SOCFIN controls about 50 companies in Europe, Africa and Southeast Asia. Relying mostly on the production of SOCFIN estates, SOGESCOL has handled about 30% of the world movement of palm oil in recent years. Importantly it markets about 50% of Malaysian Pool exports, 40% of Indonesian production, and some palm oil from Congo-Kinshasha. SOGESCOL, through its subsidiary companies, operates in the Ivory Coast where it has investments in timber and banana production. SOGESCOL, apart from its financial participation, and its contractual arrangements to market the

Participation's oil palm produce production, would make available to the Participation its technical know-how relating to the production, processing and marketing of oil palm produce.

Blohorn

28. The Blohorn Group consists of eight companies. The parent company, Huilerie et Savonnerie des Lagunes Blohorn was founded in Abidjan in 1930 by the father of the present president, Andre Blohorn. The group is engaged in refining vegetable oils, soap manufacture, oil palm plantation development, the manufacture of metal containers and chemicals, and engineering research and development. It has interests in Upper Volta, Niger and the Cameroons. In many of its enterprises the Bank of Worms is a shareholder. Blohorn is the only major group with both its head office and its holding company registered in the Ivory Coast. The group plays a key role in the economic life of the Ivory Coast, and the development of the group is closely related to the development of the country. The Blohorn group would be the sole Ivory Coast industrial purchaser of Participation produced palm oil. The Group would place at the Participation's disposal its full experience of Ivory Coast conditions.

The Banks

29. The four Banks, Banque Internationale pour l'Afrique Occidentale (B.I.A.O.); Société Générale de Banques en Cote d'Ivoire (S.G.B.C.I.); Société Ivorienne de Banques en Cote d'Ivoire (S.I.B.); and Banque Internationale pour le Commerce et l'Industrie de la Cote d'Ivoire (B.I.C.I.C.I.) are international banks with special interests in the Ivory Coast. In addition to normal services the Banks would undertake to provide overdraft facilities for working capital requirements of the Participation throughout the life of the Bank loan.

F. Conclusion

30. The arrangements described above for the management of the Ivory Coast's oil palm and coconut programs, of which the proposed Bank project would form part, are satisfactory. While the financial participation of the private shareholders in the Participation is not large, they are sufficient to allow the introduction of needed commercial and technical expertise. The organogram attached to this annex shows the proposed management structure.

IVORY COAST OIL PALM AND COCONUT PROJECT

SODEPALM

BALANCE SHEETS AS AT DECEMBER 31, 1964 THROUGH 1967

(CFAF Millions)

	1964		1965		1966		1967	
ASSETS								
Fixed Assets (Net)								
Vehicles, including Agricultural Machinery	24.0		78.0		114.0		189.0	
Installations, Furniture and Equipment	23.0		50.0		77.0		142.0	
Buildings and Bridges	6.0		90.0		214.0		457.0	
Oil Mills	-		-		-		165.0	
		53.0		218.0		405.0		953.0
Agricultural Development								
Plantations								
Oil Palm	427.0		1,475.0		2,453.0		4,098.0	
Coconut	-		-		-		56.0	
		427.0		1,475.0		2,453.0		4,154.0
Outgrowers								
Oil Palm	73.0		165.0		350.0		808.5	
Coconut	-		-		-		0.5	
		73.0		165.0		350.0		809.0
Unallocated Expenditure		82.0		245.0		539.0		426.0
Total Fixed Assets		635.0		2,103.0		3,747.0		6,342.0
Current Assets	170.0		331.0		438.0		547.0	
Less Current Liabilities	120.0		120.0		120.0		518.0	
		50.0		211.0		318.0		29.0
Total Assets		685.0		2,314.0		4,065.0		6,371.0
LIABILITIES								
Shareholders Funds								
Share Capital		50.0		87.0		162.0		200.0
Reserves		-		30.0		195.0		278.0
Total		50.0		117.0		357.0		478.0
Grants								
BSIE	55.0		305.0		324.0		1,148.0	
FED Agreement 183	83.0		525.0		708.0		814.0	
FED Agreement 331	-		951.0		2,260.0		3,551.0	
		138.0		1,781.0		3,292.0		5,513.0
Loan - CAA 1/		497.0		416.0		416.0		380.0
Total Liabilities		685.0		2,314.0		4,065.0		6,371.0

1/ Caisse Autonome D'Amortissement

ANNEX 1
Table 1

IVORY COAST OIL PALM AND COCONUT PROJECT

SODEPALM

Estimated Sources and Application of Funds 1968-1982, excluding outgrowers

(CFAF '000)

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
SOURCES OF FUNDS															
Government Equity	200.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Loans - Medium and Long-Term															
CCCE (Ehania Estate)	-	83.7	71.8	106.6	47.5	78.3	32.1	-	-	-	-	-	-	-	-
IBRD (Ehania Estate)	-	205.5	106.1	122.1	39.3	88.9	42.6	-	-	-	-	-	-	-	-
FED 331	1,723.1	1,231.1	264.3	57.4	7.8	-	-	-	-	-	-	-	-	-	-
FED/BEI 331	-	347.4	397.4	112.0	42.8	-	-	-	-	-	-	-	-	-	-
FED 183	64.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BSIE	153.0	224.5	124.7	145.5	122.3	-	-	-	-	-	-	-	-	-	-
	1,940.1	2,092.2	964.3	543.6	259.7	167.2	74.7	-	-	-	-	-	-	-	-
Loans - Short-term															
FED 331	-	-	-	63.2	-	-	-	-	-	-	-	-	-	-	-
CAA	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-
	-	-	-	63.2	100.0	-	-	-	-	-	-	-	-	-	-
Grants															
BSIE	71.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Self-Generated Funds															
Share of Participation Profits	-69.5	-129.0	-211.1	-223.3	-163.1	-63.1	+92.8	+264.9	+384.8	+437.6	+393.7	+395.9	+397.8	+396.8	+396.9
Depreciation	+20.9	+53.5	+106.9	+174.3	+269.2	+367.9	+458.3	+531.0	+575.4	+601.7	+611.7	+613.3	+613.3	+613.3	+613.3
	-48.6	-75.5	-104.2	- 49.0	+106.1	+304.8	+551.1	+795.9	+960.2	+1,039.3	+1,005.4	+1,009.2	+1,011.1	+1,010.1	+1,010.2
TOTAL SOURCES	2,162.5	2,016.7	860.1	557.8	465.8	472.0	625.8	795.9	960.2	1,039.3	1,005.4	1,009.2	1,011.1	1,010.1	1,010.2
APPLICATION OF FUNDS															
Cost of Development of industrial blocks (including 4,000 ha of Ehania Estate)	1,709.0	1,605.5	909.8	583.7	273.9	216.0	62.9	72.5	19.2	18.0	13.8	-	-	-	--
Renewals															
Vehicles and Agricultural Equipment	6.9	15.4	25.5	28.0	96.0	83.1	73.8	64.6	82.2	113.2	66.9	78.1	78.1	78.1	78.1
Working Capital	13.3	11.9	14.0	13.1	10.0	10.7	6.6	4.8	3.7	5.1	8.2	-	-	-	-
PALMIVOIRE Management Fee	-	18.0	18.0	18.0	18.0	18.0	-	-	-	-	-	-	-	-	-
Debt Service - Medium & Long-term Loans															
CCCE (Ehania Estate)	-	1.8	5.1	8.9	12.1	14.8	17.2	45.6	44.4	43.2	42.0	40.8	39.6	38.4	37.2
IBRD (Ehania Estate)	-	-	-	-	-	-	-	87.9	87.9	87.9	87.9	87.9	87.9	87.9	87.9
FED/BEI 331	-	3.5	10.9	16.0	17.5	18.0	81.7	81.7	81.7	81.7	81.7	81.7	81.7	81.7	81.7
FER (0.80 F/kg)	20.7	36.9	76.1	127.8	194.3	252.4	298.5	331.8	347.1	350.0	350.0	350.0	350.0	350.0	350.0
FER (Other)	-	-	-	-	-	-	300.0	300.0	-	-	-	-	-	-	-
	20.7	42.2	92.1	152.7	223.9	285.2	697.4	847.0	561.1	562.8	561.6	560.4	559.2	558.0	556.8
Debt Service - Short-Term Loans															
FED 331	43.4	64.0	258.1	-	139.6	-	-	-	-	-	-	-	-	-	-
CAA	255.0	-	-	-	-	100.0	-	-	-	-	-	-	-	-	--
	298.4	64.0	258.1	-	139.6	100.0	-	-	-	-	-	-	-	-	-
TOTAL APPLICATIONS	2,048.3	1,757.0	1,317.5	795.5	761.4	713.0	840.7	988.9	666.2	719.1	650.5	638.5	637.3	636.1	634.9
Annual Cash Surplus or Deficit	+114.2	+259.7	-457.4	-237.7	-295.6	-241.0	-214.9	-193.0	+294.0	+320.2	+354.9	+370.7	+373.8	+374.0	+375.3
Cumulative Cash Surplus or Deficit	+114.2	+373.9	- 83.5	-321.2	-616.8	-857.8	-1,072.7	-1,265.7	-971.7	-651.5	-296.6	• 74.1	+447.9	+821.9	+1,197.2

ANNEX
Table

IVORY COAST OIL PALM AND COCONUT PROJECT

SODEPALM

Cash Flow 1968-1982 - SODEPALM Coconut Program
(CFAF Millions)

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
SOURCES OF FUNDS															
Loans															
FAC (300 ha)	49.5	19.5	-	-	-	-	-	-	-	-	-	-	-	-	-
CCCE (700 ha)	67.9	12.0	8.8	6.6	6.5	6.7	1.8	-	-	-	-	-	-	-	-
CCCE (6,500 ha)	-	85.0	146.2	82.7	64.3	50.1	71.7	-	-	-	-	-	-	-	-
IBRD (6,500 ha)	-	367.4	227.3	66.5	57.3	69.9	87.1	-	-	-	-	-	-	-	-
Grants															
BSIE	30.0	305.2	10.8	-	-	-	13.1	142.6	143.0	156.4	-	-	-	-	-
Sales															
Copra Sales Proceeds	-	-	-	-	-	0.2	5.7	43.3	141.3	258.7	348.5	388.6	401.0	404.2	404.2
Reimbursement of Loans															
Outgrowers	-	-	-	-	-	-	-	-	-	10.0	41.4	64.2	64.2	64.2	64.2
Reimbursement Cost of Supversion															
Project Outgrowers	-	-	-	-	-	-	-	-	0.4	2.9	7.6	10.4	11.5	11.9	11.9
Other Outgrowers	-	-	-	-	-	-	22.5	23.4	24.3	25.2	25.2	25.2	25.2	25.2	25.2
Self-generated Funds															
Depreciation (less renewals)	-	-	-	-	-	-	69.8	42.0	38.6	43.1	46.8	44.3	52.8	49.9	49.9
TOTAL SOURCES	147.4	789.1	393.1	155.8	128.1	126.9	271.7	251.3	347.6	496.3	469.5	532.7	554.7	555.4	555.4
APPLICATION OF FUNDS															
Development Costs															
6,500 ha (excluding taxes)	236.0	326.2	351.5	138.5	125.1	134.1	172.6	160.2	114.6	15.7	31.4	31.4	47.1	-	-
1,000 ha (including taxes)	55.7	20.3	16.2	14.9	15.1	15.8	12.5	-	-	-	-	-	-	-	-
Maintenance of buildings	-	-	1.0	2.8	4.8	5.8	5.6	3.3	1.3	-	-	-	-	-	-
Exploitation Costs	-	-	-	-	-	-	91.5	120.8	186.3	267.9	297.0	312.4	318.6	321.9	321.9
Debt Service															
Loan Interest															
FAC (300 ha)	-	-	0.7	1.4	1.4	1.4	1.4	1.4	1.4	1.3	1.2	1.1	1.0	0.9	0.8
CCCE (700 ha)	4.2	5.6	5.9	6.2	6.4	6.7	6.7	6.3	5.8	5.4	4.9	4.5	4.0	3.5	3.1
CCCE (6,500 ha)	-	1.8	6.7	11.6	14.7	17.1	19.7	20.9	19.5	18.1	16.6	15.2	13.8	12.4	11.0
Short-term	-	-	-	-	-	-	-	-	0.1	0.4	0.8	1.1	1.1	1.2	1.2
Repayments of Principal															
FAC (300 ha)	-	-	-	-	-	-	-	-	4.9	4.9	4.9	4.9	4.9	4.9	4.9
CCCE (700 ha)	-	-	-	-	-	-	13.1	13.1	13.0	13.1	13.1	13.0	13.1	13.1	13.0
CCCE (6,500 ha)	-	-	-	-	-	-	-	33.3	33.3	33.4	33.3	33.3	33.4	33.3	33.3
Annuity															
IBRD	-	-	-	-	-	-	-	122.6	122.6	122.6	122.6	122.6	122.6	122.6	122.6
TOTAL APPLICATIONS	295.9	353.9	382.0	175.4	167.5	180.9	323.1	481.9	502.8	482.8	525.8	539.5	559.6	513.8	511.8
Annual Cash Surplus or Deficit	-(148.5)	+435.2	+11.1	-(19.6)	-(39.4)	-(54.0)	-(51.4)	-(230.6)	-(155.2)	+13.5	-(56.3)	-(6.8)	-(4.9)	+ 41.6	+43.6
Cumulative Cash Surplus or Deficit 1/	-(148.5)	+286.7	+297.8	+278.2	+238.8	+184.8	+133.4	-497.2)	-(252.4)	-(238.9)	-(295.2)	-(302.0)	-(306.9)	-(265.3)	-(221.7)

1/ Cumulative cash deficits would be recovered by 1987 and annual cash surplus would be substantial in 1990 and thereafter when debt service is completed.

ANNEX 1
Table 3

IVORY COAST OIL PALM AND COCONUT PROJECT

SODEPALM

Cash Flow 1968-1982, SODEPALM Oil Palm Outgrower Program

CFAF Million

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
SOURCES OF FUNDS															
Loans															
IBRD	-	321.1	191.5	109.5	71.7	48.8	-	-	-	-	-	-	-	-	-
CCCE (3,000 ha)	138.0	48.0	49.5	-	-	-	-	-	-	-	-	-	-	-	-
CCCE (12,000 ha)	-	188.2	181.3	78.7	43.8	18.0	-	-	-	-	-	-	-	-	-
Grants															
FED 183	19.2	2.1	-	-	-	-	-	-	-	-	-	-	-	-	-
BSIE	207.	23.0	25.4	-	-	-	-	-	-	-	-	-	-	-	-
Sales															
Palm Oil & Kernels	33.2	58.4	121.7	301.3	478.4	706.5	991.1	1,205.8	1,391.3	1,494.1	1,505.6	1,505.6	1,505.6	1,505.6	1,505.6
FFB 1/	43.3	72.4	115.5	109.2	153.6	206.2	266.0	306.4	340.8	363.3	374.2	374.2	374.2	374.2	374.2
Loan Repayments															
By outgrowers, including interest	2.0	4.9	10.6	20.3	34.7	54.4	79.6	104.2	127.4	147.8	162.6	169.7	165.4	153.2	131.6
FER - (63,800 CFA/ha)	-	-	--	-	-	-	9.1	20.4	43.9	70.2	89.1	102.3	106.8	106.8	106.9
Total Sources	442.7	718.1	695.5	619.0	782.2	1,033.9	1,345.8	1,636.8	1,901.4	2,075.4	2,131.5	2,151.8	2,152.0	2,139.8	2,118.3
APPLICATION OF FUNDS															
Management and Supervisory	20.4	32.8	58.8	90.9	129.6	171.1	218.1	218.1	218.1	218.1	218.1	218.1	218.1	218.1	218.1
Field Development	435.4	457.1	434.7	190.1	99.1	47.7	-	-	-	-	-	-	-	-	-
Purchase of ffb 2/	55.9	94.4	163.4	257.4	388.4	550.7	746.7	877.3	991.7	1,062.6	1,093.6	1,093.6	1,093.6	1,093.6	1,093.6
Processing Costs and fee	18.1	28.0	66.5	139.9	199.5	277.4	397.3	499.4	589.6	641.9	643.9	641.4	637.7	632.4	626.3
Debt Service															
IBRD	-	-	-	-	-	-	-	105.9	105.9	105.9	105.9	105.9	105.9	105.9	105.9
CCCE (3,000 ha)	8.8	10.5	11.6	13.5	13.5	13.5	51.8	50.4	49.1	47.7	46.4	45.0	43.7	42.3	41.0
CCCE (12,000 ha)	-	4.0	11.9	17.4	20.0	21.3	21.7	55.3	53.9	52.4	51.0	49.6	48.1	46.6	45.2
FER (or grants)	-	-	1.3	4.4	10.3	21.7	29.8	41.6	48.6	53.5	56.1	53.2	47.4	38.1	19.2
Short-term	0.3	0.4	0.8	1.7	2.7	3.7	6.3	7.6	9.0	9.8	10.0	10.0	10.0	10.0	10.0
Working Capital	9.0	7.4	13.4	17.2	20.1	28.2	25.5	16.2	11.8	5.2	1.3	-	-	-	-
Total Applications	547.9	634.6	762.4	732.5	883.2	1,135.3	1,497.2	1,871.8	2,077.7	2,197.1	2,226.3	2,216.8	2,204.5	2,187.0	2,159.3
Annual cash surplus or deficit	--105.2	+83.5	-66.9	-113.5	101.0	-101.4	-151.4	-235.0	-176.3	-121.7	-94.8	-65.0	-52.5	-47.2	-41.0
Cumulative cash surplus or deficit 3/	-105.2	-21.7	-88.6	-202.1	-303.1	-404.5	-555.9	-790.9	-967.2	-1,088.9	-1,183.7	-1,248.7	-1,301.2	-1,348.4	-1,389.4

1/ Sales to mills other than those operated by PALMINDUSTRIE.
2/ Purchase of ffb from outgrowers at present price of CFAF 5.0 kg of ffb equivalent results in annual deficits. If outgrowers' price is reduced to CFAF 4.50 kg of ffb surpluses would arise in 1977 and thereafter (see para 3.19 of main report and Annex 5).
3/ Annual deficits will be paid by FER if funds are available. During the period 1971 through 1973 additional funds totalling CFAF 165 million (US$0.7 million) may have to be provided by Government pending recovery from FER in 1974. Thereafter annual deficits would be fully covered by FER, see FER cash flow at Annex 13.

ANNEX 1
Table 4

IVORY COAST OIL PALM AND COCONUT PROJECT

PALMINDUSTRIE

Estimated Sources and Application of Funds 1968-1982 (CFAF Millions)

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
SOURCES OF FUNDS															
Equity															
Government															
- in kind 1/	350.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
- in cash	-	638.8	273.7	273.8	273.7	-	-	-	-	-	-	-	-	-	-
Private	-	301.9	129.4	129.3	129.4	-	-	-	-	-	-	-	-	-	-
	350.0	940.7	403.1	403.1	403.1	-	-	-	-	-	-	-	-	-	-
Loans															
BSIE	-	-	-	-	-	100.0	100.0	200.0	-	-	-	-	-	-	-
CAA (long-term)	367.2	107.0	-	-	89.0	-	-	-	-	-	-	-	-	-	-
CAA (medium-term)	125.0	125.0	100.0	-	100.0	-	-	-	-	-	-	-	-	-	-
BEI	-	678.0	567.1	400.3	379.6	225.0	-	-	-	-	-	-	-	-	-
CCCE	-	230.9	189.1	132.0	123.0	75.0	-	-	-	-	-	-	-	-	-
IBRD	-	415.7	5.1	35.5	201.5	49.2	230.2	-	-	-	-	-	-	-	-
	492.2	1,556.6	861.3	567.8	893.1	449.2	330.2	200.0	-	-	-	-	-	-	-
Self-Generated Funds															
- Share of participation profits	-16.0	-46.9	-94.2	-111.2	-96.3	-39.1.	+61.2	+184.5	+275.1	+301.9	+262.5	+251.8	+237.3	+218.5	+197.2
- Depreciation	+20.3	+47.4	+96.7	+205.2	+318.1	+443.9	+577.8	+685.9	+761.2	+806.2	+823.9	+825.5	+825.5	+825.5	+825.5
	+ 4.3	+ 0.5	+ 2.5	+ 94.0	+221.8	+404.8	+639.0	+870.4	+1,036.3	+1,108.1	+1,086.4	+1,077.3	+1,062.8	+1,044.0	+1,022.7
TOTAL SOURCES	846.5	2,497.8	1,266.9	1,064.9	1,518.0	854.0	969.2	1,070.4	1,036.3	1,108.1	1,086.4	1,077.3	1,062.8	1,044.0	1,022.7
APPLICATION OF FUNDS															
Fixed Assets															
All mills, including Ehania and including ancillary buildings and equipment and collection and evacuation of vehicles 1/	836.4	2,234.0	1,130.4	847.1	1,147.8	509.7	582.5	470.3	400.1	56.5	22.7	-	-	-	-
Renewals															
Collection and evacuation of vehicles and other items	-	-	3.0	15.0	66.8	72.9	151.5	211.8	164.8	245.6	296.5	318.9	289.7	289.7	289.7
Working Capital	-	19.7	17.5	19.1	19.7	9.0	10.1	5.7	4.2	0.8	0.7	-	-	-	-
PALMIVOIRE Management Fee	-	12.0	12.0	12.0	12.0	12.0	-	-	-	-	-	-	-	-	-
Debt Service															
BSIE	-	-	-	-	-	-	-	-	-	-	80.0	80.0	80.0	80.0	80.0
CAA (Long-term)	-	23.1	26.1	26.1	28.5	31.0.	104.4	127.0	121.6	160.6	152.8	-	-	-	-
CAA (Medium-term)	-	8.4	13.5	15.7	143.0	139.6	109.0	54.5	52.2	-	-	-	-	-	-
BEI	-	23.4	66.0	99.3	126.2	146.8	254.7	284.9	284.9	284.9	284.9	284.9	284.9	284.9	284.9
CCCE	-	6.9	19.6	29.2	36.8	42.8	45.0	94.3	91.2	88.3	85.2	82.3	79.2	76.3	73.2
IBRD	-	-	-	-	-	-	-	125.6	125.6	125.6	125.6	125.6	125.6	125.6	125.6
	-	61.8	125.2	170.3	334.5	360.2	513.1	686.3	675.5	659.4	728.5	572.8	569.7	566.8	563.7
TOTAL APPLICATIONS	836.4.	2,327.5	1,288.1	1,063.5	1,580.8	963.8.	1,217.2	1,374.1	1,244.6	962.3	1,048.4	891.7	859.4	856.5	853.4
Annual cash surplus or deficit	+10.1	+170.3	-21.2	+ 1.4	-62.8	-109.8	-248.0	-303.7	-208.3	+145.8	+38.0	+185.6	+203.4	+187.5	+169.3
Cumulative cash surplus or deficit	+10.1	+180.4	+159.2	+160.6	+97.8	- 12.0	-260.0	-563.7	-772.0	-626.2	-588.2	-402.6	-199.2	- 11.7	+157.6

1/ Equity in kind issued in respect of expenditure incurred on mills at Eloka and Toumanguie included under fixed assets in application of funds.

ANNEX 1
Table 5

IVORY COAST OIL PALM AND COCONUT PROJECT

Estimated Profit and Loss Account of the Association in Participation

CFAF Million

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Revenue															
Sale of Estate and Private Sector Oil (cif 160 US$/T) and kernel (cif 136 US$/T)	147.7	291.5	563.2	1,122.9	1,768.6	2,462.0	3,142.8	3,727.9	4,102.2	4,334.6	4,286.6	4,297.9	4,297.9	4,297.9	4,297.9
Surplus of sales of ffb	-	16.4	54.6	-	-	-	-	-	-	-	-	-	-	-	-
Processing charge to smallholders															
- Actual Processing cost	18.1	28.0	66.5	139.9	199.5	277.4	367.1	423.7	481.8	522.4	536.1	536.7	537.1	537.1	537.1
- Additional fee	-	-	-	-	-	-	30.2	75.7	107.8	119.5	107.8	104.7	100.6	95.3	89.2
Total Revenue	165.8	335.9	684.3	1,262.8	1,968.1	2,739.4	3,540.1	4,227.3	4,691.8	4,956.5	4,930.5	4,939.3	4,935.6	4,930.3	4,924.2
Expenditure															
Upkeep and Maintenance of Estates	140.8	301.9	532.9	785.1	1,061.9	1,299.8	1,443.8	1,518.5	1,548.9	1,583.3	1,600.5	1,610.7	1,618.7	1,633.9	1,649.5
Processing Costs	69.5	109.1	252.6	407.8	539.3	678.9	792.2	877.9	964.6	1,035.5	1,051.5	1,055.4	1,056.7	1,056.7	1,056.7
Depreciation - Estates	20.9	53.5	106.9	174.3	269.2	367.9	458.3	531.0	575.4	601.7	611.7	613.3	613.3	613.3	613.3
- Oil Mills	20.3	47.4	96.7	205.2	318.1	443.9	577.8	685.9	761.2	806.2	823.9	825.5	825.5	825.5	825.5
Deficit of sales of ffb	-	-	-	23.2	35.3	45.3	55.4	65.9	72.8	76.2	76.9	76.9	76.9	76.9	76.9
Short-term loan interest	-	0.2	1.2	2.6	4.4	6.1	7.3	8.2	8.6	9.0	9.2	9.4	9.5	9.6	9.8
Total Expenditure	251.5	512.1	990.3	1,598.2	2,228.2	2,841.9	3,334.8	3,687.4	3,931.5	4,111.9	4,173.7	4,191.2	4,200.6	4,215.9	4,231.7
ANNUAL SURPLUS OR DEFICIT	-(85.7)	-(176.2)	-(306.0)	-(335.4)	-(260.1)	-(102.5)	205.3	539.9	760.3	844.6	756.8	748.1	735.0	714.4	692.5
CUMULATIVE SURPLUS OR DEFICIT	-(85.7)	-(261.9)	-(567.9)	-(903.3)	-(1,163.4)	-(1,265.9)	-(1,060.6)	-(520.7)	239.6	1,084.2	1,841.0	2,589.1	3,324.7	4,038.5	4,731.0
DISTRIBUTION OF ANNUAL SURPLUS OR DEFICIT															
SODEPALM	-(69.5)	-(129.0)	-(211.1)	-(223.3)	-(163.1)	-(63.1)	+92.8	264.9	384.8	437.6	393.7	395.9	397.8	396.8	396.9
PALMINDUSTRIE	-(16.0)	-(46.9)	-(94.2)	-(111.2)	-(96.3)	-(39.1)	61.2	184.5	275.1	301.9	262.5	251.8	237.3	218.5	197.2
PALMIVOIRE/	-(0.2)	-(0.3)	-(0.7)	-(0.9)	-(0.7)	-(0.3)	51.3	90.5	100.4	105.1	100.6	100.4	99.9	99.1	98.4

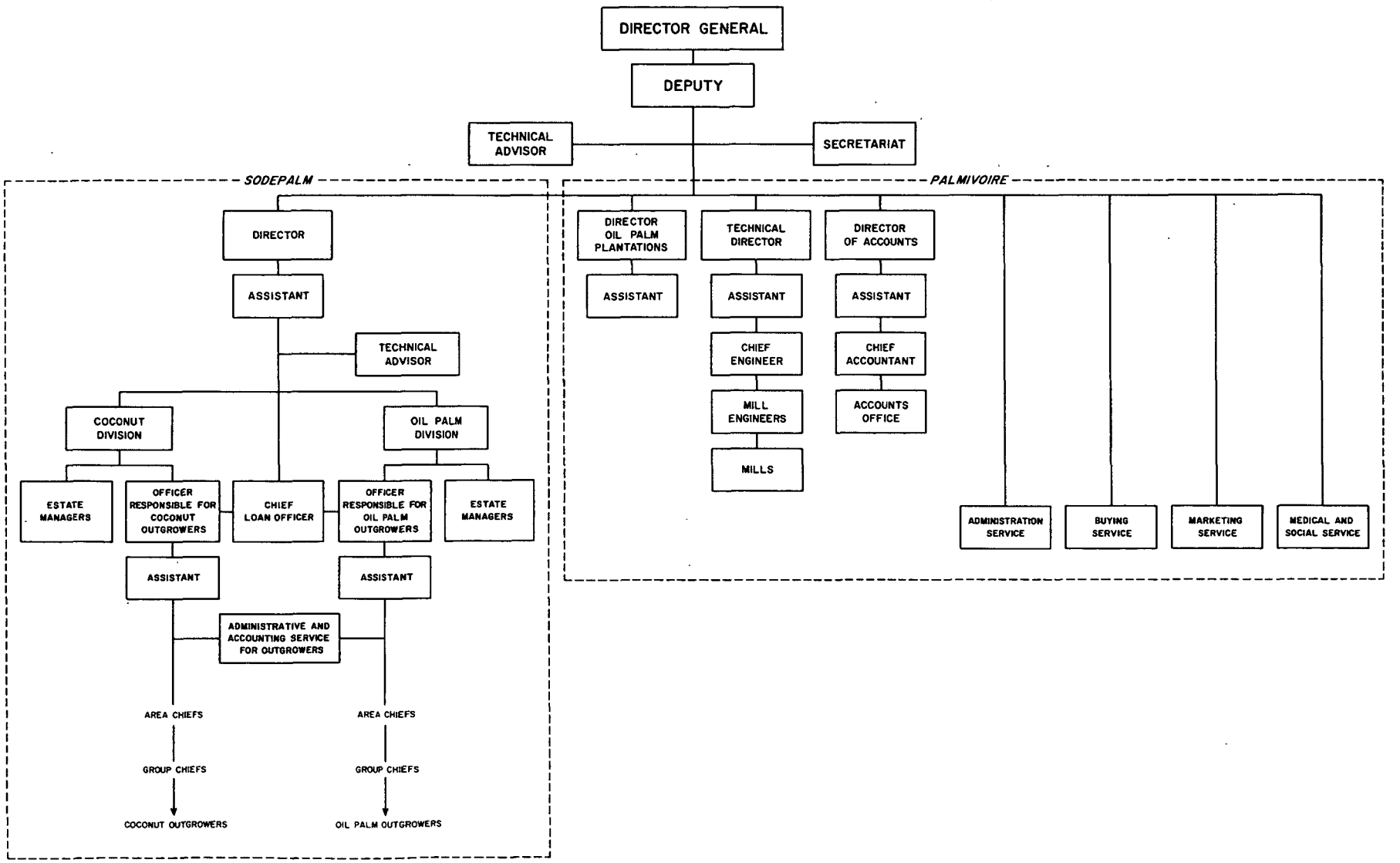
/ Annual surplus distributed to PALMIVOIRE represents management fees payable under the Participation Agreement, and dividends corresponding to the fees will be distributed. Consequently, a separate cash flow has not been prepared for PALMIVOIRE.

ANNEX 1
Table 9

IVORY COAST: OIL PALM AND COCONUT PROJECT

PROPOSED SODEPALM AND PALMIVOIRE MANAGEMENT STRUCTURE

ORGANIZATION CHART



April 1969

IBRD-4362

ANNEX I
CHART

IVORY COAST

OIL PALM AND COCONUT PROJECT

PROJECT PLANTING PROGRAM
(hectares by years)

	Site/Sector	1968	1969	1970	1971	Total	Average rainfall 1/ mm/annum	Factory
				OIL PALMS				
Ehania Estate	Ehania	1,000	500	1,000	1,500	4,000	2,031	Ehania 2/
Outgrowers	Toumanguie	500	600	700	-	1,800	1,931-2,116	Toumanguie
	Eloka	300	300	400	-	1,000	2,073	Eloka
	Anguededou	300	300	400	-	1,000	2,073	Anguededou 3/
	La Me	250	250	100	-	600	1,946	La Me 4/
	Dabou	650	700	1,000	-	2,350	1,910	Dabou 5/
	Cosrou	450	500	650	-	1,600	1,910	Cosrou 6/
	Ehania	300	350	400	-	1,050	2,831	Ehania 2/
	Yocoboue	150	200	-	-	350	1,910-2,023	Tiegba 3/
	√Boubo	350	500	500		1,350	2,023	Boubo 3/
	√ Soubre	250	300	350	-	900	1,640	Soubre 3/
Total-outgrowers		3,500	4,000	4,500	-	12,000		
				COCONUTS				
Estates	Assinie	1,000	-	-	-	1,000	Not available 7/	
	Port-Bouet	100	150	200	-	450	2,081	
	Alladian	300	300	300	-	900	Not available 7/	
	Grand Lahou	-	650	500	-	1,150	Not available 7/	
Total - estates		1,400	1,100	1,000	-	3,500		
Outgrowers	Assinie	-	250	500	-	750		
	Port-Bouet	-	190	380	-	570		
	Alladian	-	370	740	-	1,110		
	Grand Lahou	-	190	380	-	570		
Totals - outgrowers		-	1,000	2,000	-	3,000		

1/ Where two figures appear they are for the two weather stations nearest the site or sector.

2/ To be constructed under the IBRD project.

3/ To be financed with BEI and CCCE loans.

4/ IRHO mill.

5/ Government owned mill, privately managed.

6/ Joint public/privately owned mill.

7/ No detailed figures are available for coconut sites. However all sites lie in areas with a minimum of 1,800 mm/annum

ANNEX 3

IVORY COAST

OIL PALM AND COCONUT PROJECT

Research and Project Yields

A. Research

1. Research on both oil palms and coconuts in the Ivory Coast is conducted by the Institut de Recherche pour les Huiles et Oleagineux (IRHO), a French research institute. Its operations in the Ivory Coast are financed jointly by the Governments of the Ivory Coast and of France. The work of IRHO, both in oil palm and coconuts, is well known, and IRHO has research stations in other countries, particularly in West Africa.

2. The main oil palm research station of IRHO, at La Me in the Ivory Coast, and two experimental plantations, are located in the project area. Similarly IRHO's main coconut station, Port-Bouet, and a sub-station, are in the coconut project area.

3. Under present contracts with SODEPALM, IRHO provides all seeds for the oil palm and coconut programs. Oil palm seeds are of good quality and IRHO is able to produce five million seeds each year which are sufficient to plant 12,000 ha. In the case of coconuts, IRHO can supply sufficient seed nuts from yield recorded mother palms of the local tall variety to plant between 4,000 and 5,000 ha per year. It has also developed a program that over the next few years would be able to provide higher yielding hybrid seeds for 300-400 ha annually, which would be used for part of project plantings. IRHO would supply all seeds for Bank project plantings.

4. In addition to seed, IRHO provides SODEPALM with a full technical service. This includes the technical supervision of seedling nurseries, and advice on cultural methods, most importantly in the fields of fertilizer use and pest control. These arrangements have insured that the technical management of the SODEPALM plantations, and the advice that SODEPALM has provided to outgrowers, have been of a high standard. IRHO will provide SODEPALM and the Participation with similar services in the future.

B. Yields

Oil Palms

5. The following table gives the yield data used in report calculations:

Year from Planting:	4	5	6	7	8 to 25
	Metric tons per hectare				
	-------Ehania Estate----------				
ffb	5.0	8.5	11.5	14.0	15.0
Percent Oil content	16.0	18.0	20.0	21.0	21.0
Percent kernel content	4.0	4.5	5.0	5.0	5.0
Oil	0.80	1.53	2.30	2.94	3.15
Kernels	0.20	0.38	0.58	0.70	0.75
	--------Outgrowers----------				
ffb	2.5	5.0	7.0	9.5	10.5
Percent oil content	14.0	17.0	20.0	21.0	21.0
Percent kernel content	4.0	4.5	5.0	5.0	5.0
Oil	0.35	0.85	1.40	2.00	2.20
Kernels	0.10	0.22	0.35	0.48	0.53

6. Outgrowers' yields are projected as being significantly lower than those of the Ehania estate. There is no agronomic reason why an outgrower should not achieve estate yield levels, but it is most probable that outgrowers would achieve a wide range of yields, depending upon the amount of attention they are prepared to devote to their holdings. In practice, the key to good yields is a full stand of palms, good maintenance and adherence to the recommended fertilizer program. The type of supervision given by SODEPALM, and its powers of enforcement, should insure a satisfactory standard of maintenance by most outgrowers in the development period. Thereafter the revenues generated by the palms should induce most outgrowers to utilize fully the advice and services provided by SODEPALM during the operating phase. The mission checked its outgrower yield estimates against purchases of ffb made from outgrowers by SODEPALM in 1967, and this showed that about 100% of the theoretical yield from outgrowers plantings was purchased by SODEPALM. In 1968 purchases were greater than 100%. It is probable that actual production was higher than this, since most plantings were in their first or second year of bearing, and it would be unrealistic to expect that, of the comparatively small production per holding, a significant proportion was not harvested by outgrowers for their own use.

7. The yield potential of both outgrowers and estate oil palms is governed by the quality of the planting material used, and by soil and climatic conditions. IRHO seed is produced by a dura x pisifera cross, and its yield potential under Ivory Coast conditions is as good as that from any other material available. From its experience with this material IRHO estimates that 16 tons of ffb per hectare could be obtained under estate cultivation at Ehania.

8. Soils of the project area are tertiary clayey sands well suited to oil palms since their structure provides an unrestricted rooting medium. At the same time the mineral nutrient content of these heavily leached soils is low, and annual application of potassium fertilizers in development and production phases is essential for maximum ffb production. In some areas applications of nitrogen are beneficial in the early development years. In the case of the Ehania estate, detailed topographic and soil surveys have resulted in the exclusion of all unsuitable land. In that of outgrowers a condition of participation in the scheme is that soils and topography of the land to be planted with palms are suitable.

9. Within the project area rainfall is suitable for the cultivation of oil palms. With one exception all project sites receive an average minimum annual precipitation of 1,900 mm. The exception is an outgrower sector where 900 hectares would be planted and where the average minimum is 1,640 mm. Yields in this area will not reduce the overall estimated average yield of outgrower palms. Humidity and temperatures of the project area are satisfactory for oil palms, as are sunshine hours, which range between 1,850 and 2,000 annually.

Coconuts

10. The climate of the coconut project area is similar, and satisfactory for coconuts. Soils are quaternary sands with an even lower content of mineral nutrients, especially potash, and are deficient in organic matter. However, they are suitable for coconuts provided that a regular fertilizer program is employed. The project provides for such a program, both for estates and outgrowers.

11. The following table gives the yield estimates employed in report calculations:

		Metric tons of copra per hectare					
Year from Planting:		6	7	8	9	10	11 to 50
Tall Variety:	Estates	-	0.25	1.50	2.30	2.60	2.70
	Outgrowers	-	0.20	1.20	1.85	2.10	2.20
Hybrids:	Estates	0.20	1.00	2.30	2.90	3.10	3.20

12. Yield estimates are based on the actual performance of 14,000 palms on 80 ha at the IRHO station in the Ivory Coast. That yields used in the report can be achieved is substantiated by the performance of unselected palms in a smallholder planting which has been the subject of a fertilizer trial by IRHO. Fertilized at the recommended rate for the project, nuts per tree increased from 33 to 70 and yield per ha from 0.9 to 2.3 tons of copra. On the basis of this data and the agronomic standards set for seed selection, nursery work and maintenance, the estimated project yields should be attained.

ANNEX 4

IVORY COAST

OIL PALM AND COCONUT PROJECT

Labor Supply and Labor Costs

1. The agricultural economy of the forest zone of the Ivory Coast is heavily dependent upon migratory labor from the underdeveloped north of the country, and from countries to its north, in particular from Upper Volta and, to a lesser extent, Mali. This is because of the inter-dependence of the various regions of the former West African Federation and the fact that the relatively more productive and fertile areas of the former Federation lie in the forest zone of the Ivory Coast. It has been estimated that possibly as many as one million migratory workers are employed during the cropping season each year. Without this labor, present levels of production of coffee, cocoa, bananas and other forest zone crops could not be maintained. Most migrants move south from their homes prior to the beginning of the rains and return at the beginning of the dry season with their savings. Some of the migrants are settling in the south with Government encouragement. Between 25 to 30% of the annual increase in population is estimated to stem from this. There are no restrictions on the movement of labor between Upper Volta and Mali and the Ivory Coast, and in the foreseeable future the position is likely to remain unchanged. In practice, this movement of labor is of major economic importance to all three countries.

2. Migrant labor is employed both in the traditional and commercial sectors of agriculture. In the former, the two more common methods of labor payment are piece work and share cropping. Generally, it is estimated that for a 'traditional day' of five and a half hours, the laborer receives CFAF 124 plus an unspecified amount of food and lodging, and the right to cultivate some land on his own account. In commercial agriculture, labor is paid at the Government rate. Until September, 1968, after the employee had worked for one year this was CFAF 210 per day of eight hours. The rate has subsequently been increased to CFAF 231 (US$0.94). This legal minimum wage is sufficient to attract foreign workers to the Ivory Coast although not all of these are prepared to settle permanently.

3. Although commercial agriculture is generally able to obtain sufficient labor, its dependence to an appreciable degree on migrant labor does create problems. Even though good housing and social services are supplied by commercial employers, a large proportion of migrants insist on returning to their homes at the end of each wet season. In this way a large rubber estate has a turnover of 40% of its trained tappers each year. SODEPALM is insuring itself against labor shortages by increasingly mechanizing development and maintenance on its estates. This is facilitated by the mechanical land clearing which it practices. Additionally it is paying particular attention to labor housing and facilities. This is facilitated by its access to FER and FS finance for these purposes, see para. 2.09 of main report.

ANNEX 5

IVORY COAST

OIL PALM AND COCONUT PROJECT

Outgrower Programs

A. Oil Palm Outgrowers

Credits, Grants and Supervision

1. The following table shows the costs, and pattern of distribution of credits, grants and SODEPALM services over the four year period required to bring outgrower oil palms into production:

Distribution and Costs of Credits, Grants and Services
CFAF per ha

Credits	Cost	Grants	Cost	Cost of Supervisory & Advisory Services
Planting year, Year 0				
Seedlings and replacements	28,000	Lifting and transport of seedlings, and assistance in lining out	4,280	24,300
Cash to assist in land clearance	8,000	Cover Crop seed	3,500	
Cash to assist in maintenance	3,000	Fertilizer at planting	1,000	
		Wire collars and miscellaneous	2,780	
Years 1, 2 and 3				
Fertilizers and insecticides, annual average cost of CFAF 2,660	7,980			25,380
Cash to assist in maintenance, CFAF 3,000 annually	9,000			
Total for four year period	55,980		11,560	49,680

Total per ha cost of credits, grants and supervision: CFAF 117,220

2. Credits to outgrowers would be made by SODEPALM through its Compte Plantations Villageoises (CPV). Each participating outgrower would be debited with a total of CFAF 63,000 per ha; this has been established as a standard since inception of the outgrower program, and is rather more than the Bank's estimate of these costs - CFAF 55,980.

3. The credits would bear compound interest at 2%, and the outgrower would repay principal and interest over a period of 12 years beginning in the first year of production (the fourth year after planting). Interest would not be capitalized in the grace period, which would be a grace period for both capital and interest. SODEPALM would deduct credit repayments from its payments to outgrowers for ffb. Participating outgrowers would contract to sell all their ffb to SODEPALM, and in practice would have no other market except for small quantities of ffb for local oil production.1/ These arrangements work well currently. The costs of the grants, and supervisory and advisory services would be reimbursed to SODEPALM by Fonds d'Extension et de Renouvellement (FER). Details of the financing arrangements appear in the main report.

Government's Net Proceeds

4. At the projected prices for palm produce used in the financial analysis the proposed credit and grant arrangements for oil palm outgrowers would entail a degree of subsidization of the outgrower production of oil palms. At the present time SODEPALM guarantees a price of CFAF 5.0 per kg, which was fixed in 1963 at a time when forecasts of palm produce prices were more optimistic than today. Of this, CFAF 1.0 per kg would be retained by SODEPALM to cover its expenses, during the operational phase, of supervising the outgrower program and providing technical assistance, leaving the outgrower with CFAF 4.0 per kg before other deductions.

5. The following table shows the estimated annual average allocation of the value of one kg of outgrower bunch for the period 1972 through 1982, using the Bank's forecast of palm produce prices, and assuming retention of the guaranteed price to outgrowers of CFAF 5.0 per kg.

1/ In the case of outgrowers in the La Me, Dabou and Cosrou sectors SODEPALM would sell outgrowers' ffb to existing mills not owned by PALMINDUSTRIE.

	Average Values and Costs for One Kg of Outgrower ffb 1972 through 1982 (CFAF)	
Value kg of oil (Annex 7)	32.65	
Value kg of kernels (Annex 7)	23.51	
Value kg ffb: oil 21%, kernels 5%		8.04
SODEPALM supervision costs	1.00	
Processing costs to Participation	2.82	
Processing fee to Participation	0.47	
		4.29
Available for distribution to outgrowers		3.75
SODEPALM guaranteed price[1]		4.00
Deficit per kg of ffb		0.25

6. Attached Table 1 shows the net proceeds from all sources that would accrue to Government and SODEPALM from investment in the Bank assisted outgrower project of 12,000 ha. The discounted financial rate of return on the Government's investment would be about 10%. During negotiations, assurances were obtained from the Government and SODEPALM, that reductions in palm produce prices below those required to insure a financial return of at least 7% on Government's investment in the outgrower program would be passed on to all outgrowers by appropriate reductions in the prices paid for outgrower ffb, and that the Bank would be consulted at the time of any proposed change in producer prices. An annual review of the financial results of the oil palm outgrower program and the trend in world prices for palm produce would be made by SODEPALM and the results of each review would be submitted for consideration by the Bank and the co-lenders.

Returns to Outgrowers

7. Attached Table 2 shows returns to a typical outgrower expressed in terms of net income per manday employed. It shows that outgrowers would receive favorable incomes in comparison to the wages paid to estate workers, even if it was necessary to reduce the price paid to outgrowers to CFAF 4.5 per kg. The fee of CFAF 1.0 per kg charged to outgrowers by SODEPALM for services in the operational phase is high, and equivalent to US$42 per ha annually. It is probable, however, that when extensive areas of outgrowers' palms are in production, and outgrowers are used to the discipline of regular and timely harvesting, the intensity of the services could be reduced. Such savings could be transferred to outgrowers.

1/ After deduction of CFAF 1.0 to cover SODEPALM supervision costs.

B. Coconut Outgrowers

Credits and Supervision

8. The following table shows the costs, and pattern of distribution of credits and SODEPALM services over the seven year period required to bring outgrower coconuts into production:

Distribution and Costs of Credits, and Services
CFAF per ha

Credits	Cost	Cost of Supervisory and Advisory Services
Planting Year, Year 0		
Land Clearing	56,000	
Coconut seedlings	8,830	
Cover crop seed	3,750	
Labor to assist in lining out	5,040	
Fertilizers	800	
Wirenetting and tools	4,500	
Transport	1,335	
Cash advance	3,000	
Sub-total	83,255	10,800
Year 1		
Coconut seedlings	500	
Fertilizer and pesticides	2,000	
Cash advance	2,000	
Sub-total	4,500	5,400
Year 2		
Fertilizer and pesticides	2,400	
Cash advance	1,000	
Sub-total	3,400	5,400
Yearly average, years 3 through 6		
Fertilizer and pesticides	3,550	
Cash advance	1,000	
annual sub-total	4,550	3,600
Total Years 0 through 6	109,355	36,000

Total per ha cost of credits and services: CFAF 145,355

Outgrowers would repay their credits, together with interest at 6%, over the 15 years - 10 through 24. In years 8 and 9 outgrowers would repay interest capitalized in the grace period. The interest rate of 6% corresponds to the maximum charged in the past by the Caisse Nationale de Credit Agricole, and the rate that the new Banque Nationale pour le Developpement Agricole proposes to use. Table 3 shows the returns to a typical outgrower expressed in terms of net income per manday employed.

IVORY COAST OIL PALM AND COCONUT PROJECT

Cash Flow and Financial Return to Government from 12,000 ha Oil Palm Outgrower Scheme

(CFAF Million)

Year	Expenditure Development Costs 1/	Outgrowers Loan Repayments	Export Duties 2/	Govt. share of Processing Fee	Surplus or Deficits Sale of Outgrowers FFB 3/	Annual Cash Surplus or Deficit	Loan Withdrawals and Repayments: Withdrawals IBRD	Withdrawals CCCE	Repayments IBRD	Repayments CCCE	Cumulative Cash Surplus or Deficit	Cumulative Cash Surplus or Deficit
1968	191.9	-	-	-	-	-(191.9)	-	-	-	-	-(191.9)	-(191.9)
1969	248.8	-	-	-	-	-(248.8)	321.1	188.2	-	4.0	+ 256.5	+ 64.6
1970	288.3	-	-	-	-	-(288.3)	191.5	181.3	-	11.9	+ 72.6	+ 137.2
1971	117.8	-	-	-	-	-(117.8)	109.5	78.7	-	17.4	+ 53.0	+ 190.2
1972	51.7	4.2	1.2	-	-(23.3)	-(69.6)	71.7	43.8	-	20.0	+ 25.9	+ 216.1
1973	27.3	13.6	4.2	-	-(46.9)	-(56.4)	48.8	18.0	-	21.3	-(10.9)	+ 205.2
1974	-	28.0	9.5	23.2	-(54.4)	+ 6.3	-	-	-	21.7	-(15.4)	+ 189.8
1975	-	43.4	15.6	60.8	-(33.5)	+ 86.3	-	-	105.9	55.3	-(74.9)	+ 114.9
1976	-	58.3	20.8	88.4	+ 0.8	+ 168.3	-	-	105.9	53.9	+ 8.5	+ 123.4
1977	-	76.1	24.0	98.7	-(4.5)	+ 194.3	-	-	105.9	52.4	+ 36.0	+ 159.4
1978	-	89.7	24.9	88.7	+ 7.8	+ 211.1	-	-	105.9	51.0	+ 54.2	+ 213.6
1979	-	99.5	24.9	86.4	+ 9.9	+ 220.7	-	-	105.9	49.6	+ 65.2	+ 278.8
1980	-	100.8	24.9	83.3	+ 12.4	+ 221.4	-	-	105.9	48.1	+ 67.4	+ 346.2
1981	-	100.8	24.9	79.2	+ 15.9	+ 220.8	-	-	105.9	46.6	+ 68.3	+ 414.5
1982	-	100.8	24.9	74.5	+ 19.9	+ 220.1	-	-	105.9	45.2	+ 69.0	+ 483.5
1983	-	100.8	24.9	74.5	+ 19.9	+ 220.1	-	-	105.9	43.8	+ 70.4	+ 553.9
1984	-	71.4	24.9	74.5	+ 19.9	+ 190.7	-	-	105.9	42.3	+ 42.5	+ 596.4
1985	-	37.8	24.9	74.5	+ 19.9	+ 157.1	-	-	105.9	40.9	+ 10.3	+ 606.7
1986	-	-	24.9	74.5	+ 19.9	+ 119.3	-	-	105.9	39.4	-(26.0)	+ 580.7
1987	-	-	24.9	74.5	+ 19.9	+ 119.3	-	-	105.9	38.0	-(24.6)	+ 556.7
1988	-	-	24.9	74.5	+ 19.9	+ 119.3	-	-	105.9	36.5	-(23.1)	+ 533.0
1989	-	-	24.9	74.5	+ 19.9	+ 119.3	-	-	105.9	35.1	-(21.7)	+ 511.3
1990	-	-	24.9	74.5	+ 19.9	+ 119.3	-	-	-	-	+ 119.3	+ 630.6
1991	-	-	24.9	74.5	+ 19.9	+ 119.3	-	-	-	-	+ 119.3	+ 749.9
1992	-	-	24.9	74.5	+ 19.9	+ 119.3	-	-	-	-	+ 119.3	+ 869.2
1993	-	-	17.6	52.8	+ 13.4	+ 83.8	-	-	-	-	+ 83.8	+ 953.0
1994	-	-	9.3	28.0	+ 7.1	+ 44.4	-	-	-	-	+ 44.4	+ 997.4
TOTAL	925.8	925.2	475.7	1,509.0	+123.6	+2,107.7	742.6	510.0	1,588.5	774.4	+ 997.4	

Financial Rate of Return 9.8%

1/ Development costs less staff salaries and overheads.

2/ Assumes export duties remain unchanged at 1968 levels throughout project life.

3/ Assumes payment of CFAF 4.0/kg.

ANNEX 5
Table 1

IVORY COAST OIL PALM AND COCONUT PROJECT

Oil Palm Outgrowers

Costs and Returns per ha planted in 1969

Year	-1	0	1	2	3	4	5	6	7	8	9	10 thru 15	16 thru 25
Production													
ffb, kg. 1/						2,500	5,000	7,000	9,500	10,500	10,500	10,500	10,500
Financial Results													
Income													
A. CFAF 5.0/kg. throughout CFAF						12,500	25,000	35,000	47,500	52,500	52,500	52,500	52,500
B. CFAF 4.5/kg. throughout CFAF						11,250	22,500	31,500	42,750	47,250	47,250	47,250	47,250
Cash credits, CFAF		8,000	3,000	3,000	3,000	3,000	-	-	-	-	-	-	-
Gross Income (A)		8,000	3,000	3,000	3,000	15,500	25,000	35,000	47,500	52,500	52,500	52,500	52,500
(B)		8,000	3,000	3,000	3,000	14,250	22,500	31,500	42,750	47,250	47,250	47,250	47,250
Outgoings 2/													
Labor Requirements, mandays	80	45	51	30	25	34	36	43	44	47	47	47	47
Hired Labor, mandays (development phase only)	60	25	31	10	5	-	-	-	-	-	-	-	-
Hired Labor costs, CFAF 3/	7,500	3,125	3,875	1,250	613	-	-	-	-	-	-	-	-
Tools, CFAF	2,000	1,000	215	215	215	215	215	215	215	215	215	215	215
Fertilizers and Insecticides, CFAF	-	-	-	-	-	2,500	3,000	2,320	2,320	2,320	2,320	2,320	2,320
SODEPALM Service charges CFAF 1.0/kg	-	-	-	-	-	2,500	5,000	7,000	9,500	10,500	10,500	10,500	10,500
Repayment of credits, CFAF	-	-	-	-	-	1,200	2,500	3,600	5,090	6,200	8,100	8,560	-
Gross Outgoings	9,500	4,125	4,090	1,465	828	6,415	10,715	13,135	17,125	19,235	21,135	21,595	13,035
Net Income (Or Outgoing)													
A. (see above)	(9,500)	3,875	(1,090)	1,535	2,172	9,085	14,285	21,865	30,375	33,265	31,365	30,905	39,465
B. (see above)	(9,500)	3,875	(1,090)	1,535	2,172	7,835	11,785	18,365	25,625	28,015	26,115	25,655	34,215
Return Per Labor Day													
Operating Phase													
A.						267	397	508	690	708	667	658	840
B.						230	327	427	582	596	556	546	728
Labor Rate at Ehania Estate 4/													
Per Labor Day, CFAF						322	322	322	364	364	364	364	364

1/ From Annex 3

2/ Outgoings exclude grants and credits made in kind.

3/ Part labor requirements hired under the traditional system at about CFAF 125 per manday.

4/ From Annex 9, that includes sick pay, social charges and allowances for headmen, amounting to about 20% of total rate.

IVORY COST

OIL PALM AND COCONUT PROJECT
COCONUT OUTGROWERS

COST AND RETURNS PER HA

Year	0	1	2	3	4	5	6	7	8	9	10	11-24	25-56
Production													
Coconut, number (1)								1,000	6,000	9,250	10,500	11,000	11,000
Copra equivalent, metric tons (2)								0.2	1.2	1.85	2.10	2.2	2.2
Financial Results													
Income													
Sale of dehusked nuts (3)													
A. at 4,702/1,000								4,702	28,212	43,494	49,371	51,722	51,722
B. at 4,006/1,000								4,006	24,036	37,056	42,063	44,066	44,066
Cash Credit, CFAF	3,000	2,000	1,000	1,000	1,000	1,000	1,000						
Gross Income, CFAF													
A. at 4,702/1,000	3,000	2,000	1,000	1,000	1,000	1,000	1,000	4,902	28,212	43,494	49,371	51,722	51,722
B. at 4,006/1,000	3,000	2,000	1,000	1,000	1,000	1,000	1,000	4,006	24,036	37,056	42,063	44,066	44,066
Outgoing (4)													
Labor requirement, man days	38	24	17	12	7	5	5	8	17	23	25	27	27
Hired labor, man days (development phase only)	23	9	2										
Hired labor cost, CFAF (5)	2,875	1,125	250										
Tools, CFAF	500	500	500	500	400	400	400	100	100	100	100	100	100
Fertilizers and insecticids, CFAF								6,000	6,000	6,000	6,000	6,000	6,000
Sodepalm service charges, CFAF 1,800/ton of copra equivalent, CFAF								360	2,160	3,330	3,780	3,960	3,960
Repayment of credit, CFAF									10,000	19,400	19,400	19,400	-
Gross Outgoing, CFAF	3,375	1,625	750	500	400	400	400	6,460	18,260	28,830	29,280	29,460	10,060
Net Income (or outgoing)													
A. at 4,702/1,000	-(375)	+ 375	+ 250	+ 500	+ 600	+ 600	+ 600	-(1,758)	+9,952	+14,664	+20,091	+22,262	+41,662
B. at 4,006/1,000	-(375)	+ 375	+ 250	+ 500	+ 600	+ 600	+ 600	-(2,454)	+5,776	+ 8,226	+12,783	+14,606	+34,006
Return per labor day, operating phase, CFAF													
A. at 4,702/1,000									585	638	804	825	1,543
B. at 4,006/1,000									340	358	511	541	1,259
Labor rate at Ehania Estate, CFAF (6)									364	364	364	364	364

(1) 5,000 nuts are required for one metric ton of copra.
(2) See Annex 3.
(3) Copra price from Annex 8. A equivalent to copra at US$165/ton cif Europe, B equivalent to copra at US$ 150/ton cif Europe, less copra processing costs from Annex 6 (15% has been added to processing costs as a contingency).
(4) Excluding credits made in kind.
(5) Part labor requirements hired under the treditional system at about CFAF 125 per manday.
(6) From Annex 9 that includes sick pay, social charges and allowances to headmen amounting to about 20% of total cost.

ANNEX 6

IVORY COAST

OIL PALM AND COCONUT PROJECT

Processing Project Production Costs and Fees

A. Oil Palms

Processing Costs

1. Three different processing costs are used in report calculations.

(a) The costs per ton of processing all estate and outgrower ffb in the eight PALMINDUSTRIE mills. These are used in the analysis of the Participation's investment program.

(b) The costs per ton of processing the production from outgrowers that would be financed under the Bank project. These costs are higher, in equivalent years, than those in (a) due to the higher cost of collecting outgrower ffb. These costs are used in the financial and economic analyses of the outgrower program.

(c) The costs per ton of processing Ehania estate ffb. These are lower than either (a) or (b), since while due to distance from port Ehania would have greater expenses in evacuating oil and kernels than the average mill, these would be outweighed by cheaper milling enabled by the greater economies of scale of the Ehania mill. These costs are used in the financial and economic analyses of the Ehania estate and mill programs.

2. The table below shows the breakdown into broad categories of the estimated average processing costs of all PALMINDUSTRIE mills from 1980 onwards. Processing costs include all operations from collection of ffb from estate or outgrower to storage of oil and kernels at port of shipment. Depreciation allowances follow acceptable commercial practice and are based on the anticipated life of fixed and other assets. The life of major mill equipment is conservatively assumed at 12½ years, and that of other items of mill and ancillary equipment from three to 20 years. Vehicles are depreciated on a suitable mileage basis. Estimates of processing costs compare satisfactorily with actual processing costs in West Africa, and those projected by other oil palm development agencies in West Africa for new mills which they intend to build in the next two to three years. The risk of processing costs rising above estimates is slight, and probably could only occur as a result of excessively poor management and

the commissioning of excess mill capacity. The construction of the individual mills is phased, however, and new phases would not be constructed if planting programs slipped behind schedule or if yields proved not to develop as envisaged.

Estimate of Processing Costs 1980

Average for all 8 PALMINDUSTRIE Mills Processing Outgrower and Estate ffb

	CFAF/metric ton		
	Direct costs	Depreciation	Total
Collection of ffb	182	178	360
Milling	655	422	1,077
Operation of Ancillary Mill Installations 1/	96	157	253
Evacuation of oil and kernels	195	118	313
Port Storage 2/	65	32	97
General Services	202	29	231
Miscellaneous	-	59	59
	1,395	995	2,390

1/ Electricity and water, tanks and pumps, maintenance of buildings, etc.
2/ At Abidjan and San Pedro.

3. Processing costs would decline progressively between 1968 and 1979 as milling capacity moved towards optimum. The first phase of any mill is the most expensive to commission on a per ton of ffb capacity basis. Costs decline as comparatively small new capital investment allows large increases in capacity. The following table shows estimated processing costs, 1968 through 1980, for the three categories of operation enumerated in para. 1.

Estimated Processing Costs 1968-1980
CFAF per metric ton

	(a) PALMINDUSTRIE mills estates and outgrowers			(b) Bank Project outgrowers			(c) Bank Project Ehania Estate		
Year	Direct	Depreciation	Total	Direct	Depre-ciation	Total	Direct	Depre-ciation	Total
1968	2,711	1,685	4,396						
1969	2,242	1,786	4,028						
1970	2,658	2,239	4,897						
1971	2,084	1,684	3,768						
1972	1,775	1,356	3,131	1,914	1,526	3,440	1,688	1,326	3,014
1973	1,613	1,256	2,869	1,762	1,427	3,189	1,463	1,136	2,599
1974	1,467	1,112	2,579	1,611	1,280	2,891	1,318	1,014	2,332
1975	1,381	1,037	2,418	1,526	1,205	2,731	1,271	948	2,219
1976	1,375	910	2,285	1,520	1,077	2,597	1,261	900	2,161
1977	1,399	1,009	2,408	1,544	1,175	2,719	1,294	902	2,196
1978	1,391	997	2,388	1,536	1,163	2,699	1,290	887	2,177
1979	1,394	994	2,388	1,539	1,160	2,699	1,289	887	2,176
1980	1,395	995	2,390	1,540	1,160	2,700	1,293	887	2,180
and subsequent years									

Outgrower Processing Fees

5. SODEPALM would purchase ffb from outgrowers and pay the Participation a fee for processing this. The value of the outturn of oil and kernels would be credited to SODEPALM.

6. The fee, x, will be calculated on the basis of the following formula:

$$x = FPV + Ro \times Cp \frac{(CI + CV)}{100 - Cp}$$

when: FPV = the cost (including depreciation) of collecting and processing outgrower ffb;

Ro = the profits obtained by the Participation without processing outgrower ffb;

$\frac{Cp}{100-Cp}$ = proportion between the tonnage of processed outgrower ffb and the tonnage of processed estate ffb (including some purchases from the private sector);

CI = the share of PALMINDUSTRIE in Ro;

CV = the share of PALMIVOIRE in Ro.

7. The formula provides the Participation with the same return on capital for each ton of ffb, whether produced by outgrowers or estates. The formula is fair, particularly since the fee would be affected by changes in the selling price for oil and kernels, thus causing producers and processors to bear equitably any fall in selling prices. In the event

of Ro not being positive the Participation would receive the cost of processing only.

8. At the projected prices for palm produce forecast by the Bank, the processing fees from 1972 through 1982 would be as follows:

Year	CFAF/ton ffb	Percent of fee accruing to Government 1/
1972 2/	-	-
1973 2/	-	-
1974	234	76.8
1975	496	80.5
1976	620	82.1
1977	640	82.7
1978	561	82.5
1979	545	82.7
1980	524	82.9
1981	496	83.2
1982 and subsequent years	464	83.6

1/ As a shareholder in the Participation.
2/ Operating losses would be incurred by the Participation until 1974.

B. Coconuts

Processing Costs

9. The processing of copra entails three basic operations: dehusking the nut, splitting the nut and removing its meat, and drying the meat into copra. Dehusking, splitting, and removal of the meat are hand operations; there is no economical mechanical method. Drying methods range from sun drying to the use of oil fired kilns. SODEPALM would employ the latter both for its estate copra and for processing nuts produced by its outgrowers. Following is the estimated average cost to SODEPALM of processing outgrowers' dehusked coconuts into copra:

Average Cost of Processing Copra

	CFAF/metric ton
Collection of dehusked nuts (5,000 per ton of copra)	1,000
Splitting and removal of coconut meat, 7 mandays at an average of CFAF 310 per manday	2,170
Operation of kiln	2,000
Depreciation of kiln	400
Transport of copra to Abidjan	1,000
	6,570

Estates would have slightly lower collection costs, and would conduct their own dehusking; the latter would require an additional five mandays per ton of copra produced.

Outgrower Processing Fees

10. The outgrower would be required to sell the production of his holding to SODEPALM. For each unit equivalent to one ton of copra he would be charged CFAF 1,800 to cover the cost of SODEPALM advisory and supervisory services. This would be equivalent to approximately CFAF 4,000 per ha. This is appreciably less than the service charge levied by SODEPALM on oil palm outgrowers, CFAF 10,500 per ha, who also have to pay a processing fee. While the service charge to oil palm outgrowers is high, and probably could be reduced, the amount of attention required by coconut outgrowers is considerably less since harvesting is easier and coconuts can be stored for relatively long periods before processing. Annex 5 shows that coconut outgrowers could afford to pay a higher fee if this became necessary.

IVORY COAST

OIL PALM AND COCONUT PROJECT

Market Prospects for Palm Oil and Palm Kernels

1. A paper on the fats and oils situation is currently under preparation within the Bank,[1] and will deal in detail, inter alia, with the market prospects for palm oil and palm kernels. Progress on the paper has reached the stage where it is possible to draw some conclusions about palm oil and palm kernels, which are set out below; while these conclusions must be considered tentative pending the publication of the more general paper, no major changes are anticipated.

Palm Oil

2. Trends in supply and demand for individual fats and oils are far more difficult to judge than those for the total market, particularly since most of the major oil products are produced either as joint products or by-products. Thus, as in the case for soybeans, the production of specific oils may be determined, not only be trends in the oils and fats market, but also by the demand for the joint or related products. Another feature which also has to be considered in reviewing the market for a particular oil product is the amount of substitution possible between different fats and oils. Within a broad range, on technical considerations, one oil can be substituted for another. Currently, the bulk of palm oil is used in the food industry. Here it meets its strongest competition from soybean, groundnut and sunflower seed oils. Fish oils are also used for edible purposes, but they are at a disadvantage compared with palm oil, owing to the high processing costs involved in making them usable for this purpose.

3. Usually, the associated product of the marine and vegetable oils is a protein-rich cake or meal. The oil palm, however, compared with some of its competitors, produces a very low proportion of protein cake to oil, and the cake is the by-product of palm kernel oil, rather than palm oil. The overall ratio of palm and palm kernel oils to cake is about 9:1. In comparison, the soybean produces oil to meal in the ratio of 1:4 in terms of weight.

4. Palm oil is produced almost entirely in four developing countries: Nigeria, Democratic Republic of the Congo, Indonesia and Malaysia. Table 1 indicates the production situation in these and other countries in recent years. Compared with other major fats and oils (Table 2) the growth rate for world palm oil production has been low, up to recent years amounting to only 1.3% per annum. The only really significant expansion took place in Malaysia. However, in a number of countries, particularly Malaysia, a considerable further

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1/ By the Trade Policies and Export Projections Division.

expansion in production is planned for the future. Some of these plans have already been put into operation. If these developments go according to schedule, total world production will amount to approximately 2.5 million tons between 1975 and 1980. This would represent a growth rate of slightly more than 5% between 1965-67 and 1980, compared with a yearly rate of increase of 1.3% between 1954-56 and 1965-67. The share of palm oil production on total fats and oils production would increase to approximately 5%, compared with 3% in 1965-67.

5. Many of the developments are export-oriented and a considerable share of the additional supplies will have to be absorbed by the international market. Oil palm exports increased very slowly during the last decade, largely owing to the slow growth in production rather than marketing difficulties. Actually, in the period from 1954-56 to 1965-67, palm oil exports declined slightly (Table 3). It is estimated that by 1975 palm oil exports will amount to approximately 1.2 million tons, compared with 550,000 tons in 1965-67. Consequently, the share of palm oil exports on total trade will probably increase to 9% in 1975, compared with 5.4% in the earlier period.

6. The palm oil economy thus faces two major problems in the future. Firstly, it will have to face declining world market prices, a phenomenon that is shared by nearly all major fats and oils. Secondly, it will have to increase its share as an ingredient in the total usage of fats and oils. Considering the fact that palm oil does not have all the quality characteristics enjoyed by some of the other oils (e.g. coconut oil), this could only be achieved through price declines larger than those expected for some other oils.

7. It is in food uses where palm oil will have to increase its market share. In the past, this was only possible to a certain degree, mainly because of limitation in availabilities. Among other factors, this apparently prevented processors from undertaking the necessary research into the technical and economic difficulties which would have to be overcome if palm oil is to be incorporated as a major ingredient in food products. One major difficulty, particularly at the relatively high palm oil prices of the past, appears to have been the disposal at remunerative prices of the inedible portion resulting from palm oil processing, which would make large-scale processing feasible.

8. The Chart (IBRD-4199) indicates that palm oil prices have generally followed the trend of all fats and oils prices, declining to a low level in 1962 and experiencing a sharp fall after the high 1965 prices. Of particular importance is the narrowing of the large price difference between soybean oil and palm oil which prevailed in the 1950's. Since 1963, prices for both products have moved closely together, which indicates that their future fortunes will also be tightly knit.

9. In the second half of 1968, palm oil prices dropped sharply to approximately $140 per ton, compared with $222 per ton in 1967. This steep decline was caused by large shipments of soybeans and soybean oil and unusually large exports of sunflower seed and fish oil. It is believed that this is a short-term situation and that palmoil prices will recover to a higher level. In view of the large anticipated exports and the technical difficulties mentioned previously, however, it is unlikely that they will reach the 1967 levels. Future prices have been estimated to fall by the mid-1970's into a price range between $155-165 per m ton c.i.f. Europe.

10. These projections have to be seen in the light of the uncertainties which surround any price forecast and of fats and oils in particular. For example, if soybean exports under P.L. 480 are reduced or cease altogether without compensating changes in U.S. production policy, the above price forecast may prove to be optimistic. On the other hand, if only part of the large requirements that would be needed to meet the needs of fat deficit countries could be turned into effective demand, the forecast may be pessimistic.

Palm Kernels

11. The fruits of the oil palm contain two separate sources of oil: the fleshy and fibrous exocarp (pulp) from which palm oil is obtained and a nut kernel in a hard shell from which palm kernel is extracted. The pulp of the fruits deteriorates rapidly after harvest and extraction has to be carried out in producing areas. Palm kernels, in contrast, deteriorate very slowly. Also, their processing into oils is a relatively more complex operation. Extraction is, therefore, usually performed in large crushing mills, mainly in the importing industrialized countries. Only in the Democratic Republic of the Congo have palm kernels been crushed on a large scale and the country's exports consist almost entirely of oil, rather than kernels.

12. Wild palm fruits have a low proportion of pulp and a high proportion of kernels. In plantations now in the process of development, however, the ratio of pulp to kernel is expected to increase. Thus, the future expansion in palm oil output will not be matched by a commensurate increase in palm kernel oil output.

13. Palm kernel oil, unlike palm oil, is a lauric oil and as such closely resembles coconut oil. These types of oils are regarded in many countries as a desirable ingredient of margarine and shortening, and for use in confectionary and bakery products. Lauric oils also possess

special qualities which make them an essential constituent up to a certain minimum in soap manufacture; they also have a wide variety of other industrial uses, such as in the manufacture of synthetic detergents.

14. All these factors account for a more inelastic demand than for most other fats and oils. This became very apparent in 1967-68 when prices of nearly all major fats and oils decreased. Prices of lauric oils, including palm kernel oil, remained high, mostly because of short supplies, but also because of the limited degree of substitutability. Presently, there are some indications that new industrial processes will make it possible to produce synthetically the special component of the lauric acid oils which are the cause of the inelastic demand. This, of course, would limit the special role these oils play in the market. However, so far no definite information is available which indicates that industrial manufacture of lauric oils will be undertaken on a large scale.

15. The price, production and trade situation for palm kernels and palm kernel oil are indicated in the Chart and Table 4. It is assumed that palm kernel oil, in line with other fats and oils, will follow a downward trend in the future. Since palm kernel oil will not increase in output at the same rate as palm oil, however, it is unlikely that its price will decline as much as has been projected for palm oil. It is estimated that a price range of $134-138 per m ton for palm kernels will prevail in the mid-1970's.

Table 1: WORLD PRODUCTION, EXPORTS AND IMPORTS OF PALM OIL BY MAJOR PRODUCING, EXPORTING AND IMPORTING COUNTRIES AVERAGE 1955-59, ANNUALLY 1963-67

(thousand metric tons)

	Average 1955-59	1963	1964	1965	1966	1967 1/
Production						
Nigeria	200	151	150	167	132	33
Congo, Dem. Rep.	224	224	209	162	168	200 2/
Indonesia	155	148	160	163	185 2/	163 2/
Malaysia	64	130	128	155	194	231
Others 2/	49	54	61	62	57	57
World Total	692	707	708	709	736	684
Exports						
Nigeria	180	128	136	152	146	17
Congo, Dem. Rep.	160	143	124	79	85	116
Indonesia	121	110	133	126	153	125
Malaysia	62 3/	115	125	143	184	188
Others	33	48	48	48	38	38
World Total	556	544	566	548	606	484
Retained Imports						
EEC	226	247	279	249	267	252
United Kingdom	198	114	116	117	150	98
United States	13	11	3	3	34	29
Japan	20	17	18	16	20	22
Iraq	4	28	29	50	36	47
Others	92	118	107	76	91	72
World Total	553	535	552	511	598	520

1/ Preliminary.

2/ Unofficial estimates based on import returns.

3/ Excluding trade with Singapore.

Source: FAO

February 3, 1969

Table 2: WORLD PRODUCTION BY TYPE OF OIL OR FAT
AVERAGE 1954-56 AND 1965-67, OIL EQUIVALENT

Type of Oil	Average 1954-56 Output (1,000 m. tons)	Average 1954-56 Output as Percent of Total Output	Average 1965-67 Output (1,000 m. tons)	Average 1965-67 Output as Percent of Total Output	Percent Change P.A. in Output 1954-56 to 1965-67
Edible soft oils	10,889	40.3	17,421	45.8	4.4
Cottonseed	1,906	7.1	2,507	6.6	2.5
Groundnut	2,084	7.7	3,037	8.0	3.5
Soybean	2,451	9.1	5,200	13.7	7.1
Sunflower	1,118	4.1	2,860	7.5	8.9
Olive	1,044	3.9	1,238	3.3	1.5
Sesame	541	2.0	582	1.5	0.7
Rapeseed	1,601	5.9	1,562	4.1	0.2
Others 1/	144	0.5	435	1.1	10.6
Industrial soft oils	1,521	5.6	1,868	4.9	1.9
Linseed	955	3.5	1,042	2.7	0.8
Castor bean	213	0.8	307	0.8	3.4
Tung	103	0.4	112	0.3	0.8
Others	250	0.9	407	1.1	4.5
Hard oils	3,479	12.9	3,922	10.3	1.1
Coconut	2,014	7.4	2,252	5.9	1.0
Palm kernel	422	1.6	455	1.2	0.7
Palm oil	1,001	3.7	1,157	3.0	1.3
Babassu	42	0.2	58	0.2	3.0
Animal fats	10,298	38.0	13,638	35.8	2.6
Butter	3,893	14.4	5,063	13.3	2.4
Lard	3,549	13.1	4,163	10.9	1.5
Tallow	2,856	10.5	4,412	11.6	4.0
Marine oils	857	3.2	1,186	3.2	3.0
Whale	484	1.8	288	0.8	- 4.6
Fish	373	1.4	898	2.4	8.3
World Total	27,044	100.0	38,035	100.0	3.2

1/ Mainly safflower and maize oils.

Source: Based on Unilever statistics.

Table 3: WORLD EXPORTS OF FATS AND OILS
BY GROUPS AND TYPE OF OIL,
AVERAGE 1954-56 AND 1965-67, OIL EQUIVALENT

Groups & Type of Oil	Average 1954-56 Exports (1,000 m. tons)	Average 1954-56 Exports as Percent of Total Exports	Average 1965-67 Exports (1,000 m. tons)	Average 1965-67 Exports as Percent of Total Exports	Percent Change Per Annum in Exports 1954-56 to 1965-67
Soft oils	2,570	37.4	5,081	50.0	6.4
Edible	1,841	26.9	4,219	41.5	7.9
Cottonseed	367 1/	5.3	263 1/	2.6	- 3.0
Groundnut	754	11.0	1,029	10.1	2.9
Soybeans	506 1/	7.4	1,845 1/	18.1	12.5
Sunflower	26	0.4	509	5.0	31.0
Olive	101	1.5	158	1.6	4.2
Sesame	40	0.6	74	0.7	5.8
Rapeseed	47	0.7	341	3.4	19.7
Industrial	623	9.0	674	6.6	0.7
Linseed	470	6.8	446	4.4	- 0.5
Castor bean	108	1.6	183	1.8	4.9
Tung	45	0.6	45	0.4	-
Others, n.e.s.	106	1.5	188 2/	1.9	3.5
Hard oils	2,164	31.4	2,183	21.4	0.1
Coconut	1,209	17.6	1,281	12.5	0.5
Palm kernel	394	5.7	345	3.4	- 1.2
Palm oil	558	8.1	550	5.4	- 0.1
Babassu	3	-	7	0.1	8.0
Total vegetable	4,734	68.8	7,264	71.4	4.0
Animal fats	1,473	21.4	2,093	20.6	3.3
Butter	430	6.2	529 1/	5.2	1.9
Lard	320	4.7	288	2.8	- 1.0
Tallow	723	10.5	1,276	12.6	5.3
Marine oils	674	9.8	821	8.0	1.8
Whale	484	7.0	288	2.8	- 4.7
Fish	190	2.8	533	5.2	9.8
Total animal	2,147	31.2	2,914	28.6	2.8
World Total	6,881	100.0	10,178	100.0	3.6

1/ Includes U.S. donations.

2/ Of which 63,000 tons safflower oil.

Source: Based on Unilever statistics.

Table 4: WORLD PRODUCTION, EXPORTS AND IMPORTS OF PALM KERNEL AND PALM KERNEL OIL BY MAJOR PRODUCING, EXPORTING AND IMPORTING COUNTRIES, AVERAGE 1955-59, ANNUALLY 1963-66

(thousand metric tons)

	Average 1955-59	1963	1964	1965	1966
Production 1/					
Nigeria	442	420	407	450	422
Sierra Leone	57	54	54	51	56
Congo, Dem. Rep.	142	91	122	97	102
Dahomey	53	51	55	66	49
Indonesia	38	33	35	36	36
Malaysia	17	31	31	35	42
Others	157	159	144	158	152
World Total	906	839	848	893	859
Palm Kernel Exports					
Nigeria	439	404	400	420	400
Sierra Leone	57	54	53	50	56
Congo, Dem. Rep.	41	3	1		
Dahomey	50	51	55	25	6
Indonesia	38	31	32	30	32
Malaysia	16	16	12	13	23
Others	129	120	109	117	155
World Total	770	679	662	655	622
Palm Kernel Oil Exports					
Congo, Dem. Rep.	50	32	44	34	32
Others	2	10	5	22	28
World Total	52	42	49	56	60
Retained Imports of Palm Kernel					
EEC	371	356	381	336	331
United Kingdom	301	211	194	207	168
Japan	28	26	25	22	23
Others	57	71	77	80	6
World Total	757	664	677	645	528
Retained Imports of Palm Kernel Oil					
EEC	13	7	-	3	32
United States	23	38	39	38	50
Others	14	8	8	10	7
World Total	50	53	47	51	89

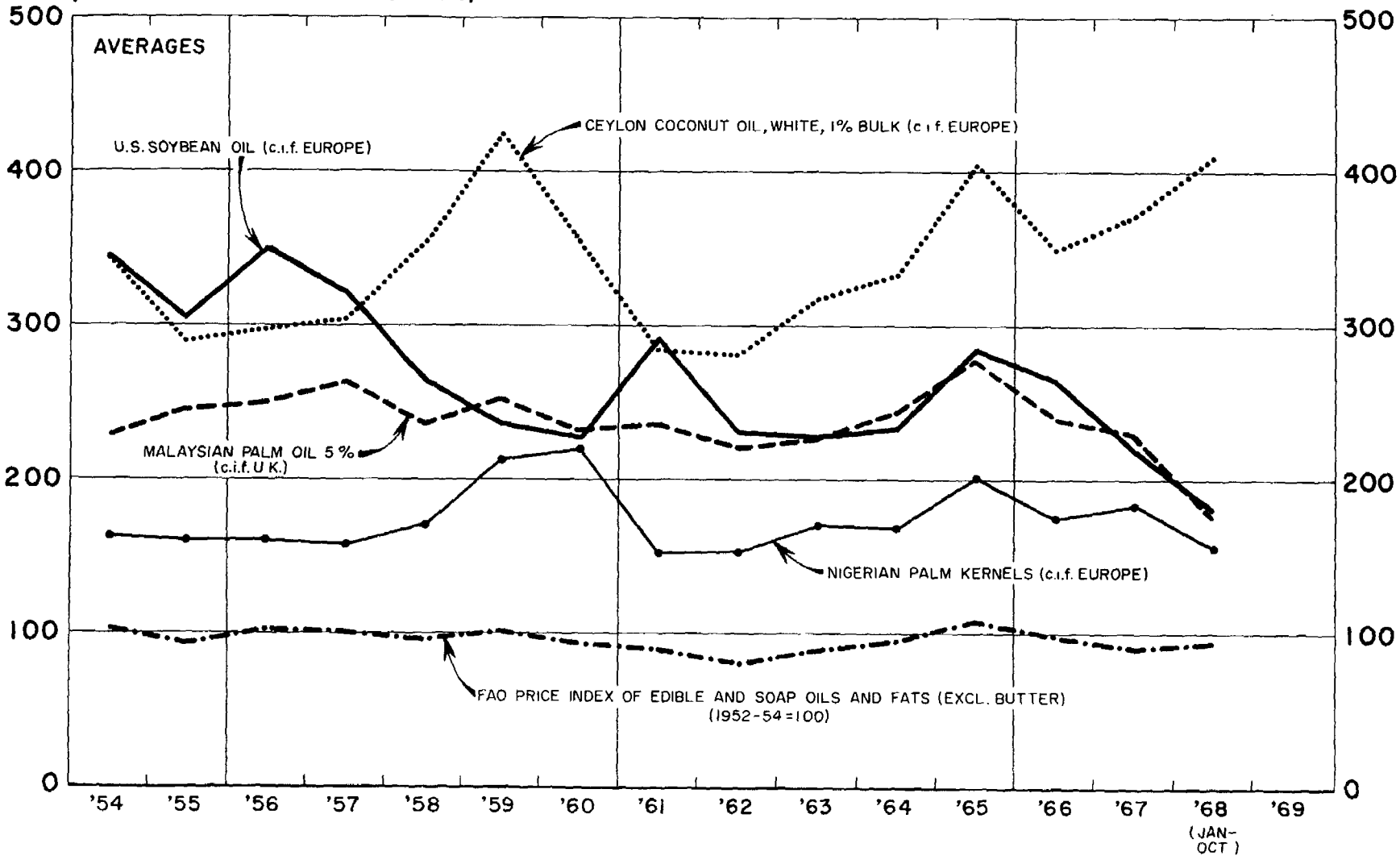
1/ Commercial Production.

Source: FAO

February 3, 1969

INDEX OF PRICES FOR EDIBLE AND SOAP OILS, AND IMPORT PRICES FOR PALM, SOYBEAN, COCONUT OILS AND PALM KERNELS

(U.S. DOLLARS PER LONG TON)



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ANNEX 7
CHART

ANNEX 8

IVORY COAST

OIL PALM AND COCONUT PROJECT

Palm Produce and Copra Production, Domestic Markets and Prices

A. Palm Oil Production

1. Currently the Ivory Coast produces and uses about 32,000 tons of palm oil annually. It is estimated that about 20,000 tons of this oil are produced from wild palms. In common with the trend in other West African countries wild palm production is expected to decline, probably to about 10,000 tons in 1980 and thereafter more rapidly. On the other hand, the production from improved palms--both estate and outgrower--will rise rapidly in the next decade, reaching between 160,000 and 170,000 tons in 1980, and resulting in a probable total Ivory Coast production of 170,000 to 180,000 tons of oil in that year.

B. Consumption Trends

2. Assuming a 3.5% annual increase in population, an annual increase in per capita income of 4.5%, and an income elasticity of demand of 0.8%, domestic consumption of palm oil is expected to rise to about 70,000 tons by 1980.

3. Of the anticipated domestic demand for palm oil in 1980 some 20,000 to 30,000 tons would be supplied by commercial producers, other than the Participation and its associated outgrowers, and by wild palms. Consequently the Participation probably would be able to market 40,000 to 50,000 tons of oil on the domestic market by 1980.

4. The following table gives the Participation's estimate for disposal of palm oil from its estates and SODEPALM sponsored outgrowers. The estimate anticipates slightly lower sales on the domestic market than may be possible.

Disposition of Palm Oil from Participation Estates and Associated Outgrowers
(metric tons)

Year	Production	Domestic Sales	Export Sales
1968	4,620	4,620	-
1969	8,938	8,938	-
1970	17,495	6,700	10,795
1971	36,348	9,693	26,655
1972	57,346	10,326	47,020
1973	80,843	11,613	69,230
1974	105,422	13,277	92,145
1975	125,803	15,933	109,870
1976	140,045	19,235	120,810
1977	148,070	23,185	124,885
1978	151,173	27,388	123,785
1979	151,473	31,188	120,285
1980	151,473	36,188	115,285
1981	151,473	41,488	109,985
1982 1/ and onward	151,473	47,088	104,385

1/ It is assumed that disposals on the domestic and export markets will remain in these proportions.

5. Export sales would preponderate over the next decade, although they would begin to decline from 1980 onwards. Domestic sales would have two outlets:

- industrial for the manufacture of soap, refined oil and shortening; and

- the traditional market for unrefined oil.

6. The Association in Participation would enter into an agreement with the Blohorn group, the only industrial processor of palm oil in the Ivory Coast, under which Blohorn would have the right to purchase palm oil up to the limit of the group's processing capacity (now 20,000 tons per annum) at ruling cif European prices less export costs including duty.

C. Palm Kernels and Copra

7. All palm kernels and copra would be exported initially, although subsequently kernel crushing facilities might be built in the Ivory Coast.

D. Price Projections Used in Estimates of Project Benefits

Economic Benefits

Palm Oil and Kernels

8. For the calculation of the economic rate of return, all palm oil and kernel production is valued at projected fob Abidjan prices for export oil and kernels before deduction of export duties. The bases for the fob prices are the cif prices given in Annex 7. Table 1 attached contains details of the calculations of the differentials between cif and fob prices.

Copra

9. The 16,000 metric tons of copra likely to be produced as a result of the project are small in relation both to world exports and to EEC imports--respectively about 1.3 million and 400,000 tons in recent years. World copra and coconut oil prices have fluctuated considerably in the past few years in line with movement in the general level of fats and oils prices, but in recent years there has been a much more marked fall than for other types. This may be a reflection of the tendency for copra and coconut oil to figure less prominetly in consumption by comparison with other fats and oils, e.g. in the EEC, where between 1953-56 and 1963-64 retained imports of all oilseeds grew at a rate of 5% per annum, but copra by only 1.5%; and retained imports of all vegetable oils by 2.4% in comparison with coconut oil imports which actually declined by 0.6%. Future market prospects are obscure, however, partly because the EEC policy of encouraging livestock production may generate increased requirements for copra cake, even though increased output of animal fats and oils would reduce requirements of coconut oil. Under these circumstances it is not unreasonable to assume that all copra produced in the Ivory Coast is likely to find a market.

10. The Bank's Trade Policies and Export Projections Division estimate that the cif Europe price for copra during the life of the project will be US$165 per metric ton. In calculating the economic rate of return all copra production is valued at projected fob Abidjan prices for export before deduction of export duties. Table 2 contains details of the calculations of the differential between cif and fob price.

Financial Benefits

11. In the financial projections all palm oil sales have been included at the projected fob Abidjan price, after deduction of export duties, as local sales to the Blohorn group for industrial purposes (see para 6 above) will be made at ruling cif European prices, less export costs. Local sales for personal consumption would be made to wholesalers at prices probably slightly more attractive but no account has been taken of such prices since this market is limited and the growth unpredictable. Palm kernel and copra revenues are calculated at projected fob Abidjan prices, the former after deduction of export duties.

IVORY COAST OIL PALM AND COCONUT PROJECT

Projected Selling Price for Palm Oil and Kernels

			From 1968 to 1977		1978 (and subsequently)	
			Oil	Kernels	Oil	Kernels
CIF Europe per Ton - US$			160	136	160	136
CIF Europe per Ton - CFAF			39,520	33,592	39,520	33,592
Variables (%)	Oil	Kernels				
Moisture Loss, Insurance, Supervision/ Unloading	0.95	3.25				
Brokerage/Selling Commission	0.75	0.75				
Commission for Broker's Information Service	0.50	0.50				
	2.20	4.50	869	1,512	869	1,512
Fixed Charges (CFAF/T)						
Lighterage	-	483				
Port Taxes	65	66				
Handling	-	233				
Freight	4,928	3,740				
Unloading	-	353				
Analyses	16	28				
Stamp, duty, etc.	3	-				
Transit	-	147				
Transport	-	325				
Sacks	-	1,600				
	5,012	6,975	55,012	6,975	5,012	6,975
Price without deducting export duties			33,639	25,105	33,639	25,105
Export Duties 1/			677	1,097	1,354	2,194
FOB Ivory Coast per Ton CFAF			32,962	24,008	32,285	22,911

1/ Government intends to increase export duties from 2% to 4% for oil and from 4% to 8% for kernels from 1978 onwards.

ANNEX 8
Table 1

IVORY COAST OIL PALM AND COCONUT PROJECT

Projected Selling Price for Copra

CIF Europe per Ton - US$			165
CIF Europe per Ton - CFAF			40,755
Variables (%)			
Loss, Insurance, Supervision	4.45		
Financial Costs	1.00		
Brokerage	0.50		
	5.95	2,425	
Fixed Charges			
Lighterage	483		
Port Taxes	65		
Transit (handling & commission)	234		
Freight	3,690		
Transport	581		
Sacks	2,210		
		7,263	
Total Deductions			9,688
FOB Ivory Coast per Ton CFAF			31,067 1/

1/ At present there are no export duties on copra.

IVORY COAST OIL PALM AND COCONUT PROJECT

Ehania Oil Palm Estate - Development Costs

Year	1968	1969	1970	1971	1972	1973	1974	Total
Plantings/Ha	1,000	500	1,000	1,500				4,000
In Production/Ha					1,000	500	1,000	
Costs								
Administration								
General Charges	1,964	2,113	3,185	4,520	3,055	2,236	1,342	18,415
Head Office Expenses	3,928	4,226	6,370	9,040	6,110	4,472	2,684	36,830
Salaries and Allowances	9,779	10,923	16,680	24,130	16,962	13,431	8,266	100,171
General Transport	3,443	3,840	5,986	8,189	5,612	4,500	2,700	34,270
	19,114	21,102	32,221	45,879	31,739	24,639	14,992	189,686
Fixed Assets								
Housing	7,904	17,765	7,510	760	4,940	95,380	32,490	166,749
Road Vehicles	9,000	2,700	6,581	3,179	1,515	2,294	368	25,637
Plant	9,291	7,600	4,617	2,337	1,169	2,356	-	27,370
Agricultural Equipment	425	1,522	383	383	1,097	-	-	3,810
	26,620	29,587	19,091	6,659	8,721	100,030	32,858	223,566
Field Development								
A. Labor Days	68,000	60,000	103,000	160,000	71,500	54,000	31,500	-
Rate Per Day (CFAF)	280	280	280	280	322	322	322	-
Labor Cost	19,240	16,800	28,840	44,800	23,023	17,388	10,143	160,234
B. Land Clearing and Preparation								
Mechanical Clearing	54,000	27,000	54,000	81,000	-	-	-	216,000
Cover Crop Seed	3,500	1,750	3,500	5,250	-	-	-	14,000
Other Material	740	370	740	1,110	-	-	-	2,960
C. Lining and Planting								
Fertilizer	1,000	500	1,000	1,500	-	-	-	4,000
Wire Netting	1,500	750	1,500	2,250	-	-	-	6,000
Transport of Plants	1,100	550	1,100	1,650	-	-	-	4,400
Tools	1,280	640	1,280	1,920	-	-	-	5,120
Seedlings	26,000	15,000	27,000	41,000	3,000	-	-	112,000
D. Maintenance								
Road Maintenance	1,000	2,000	2,550	3,900	3,300	1,700	750	15,200
Fertilizer and Insecticides	-	2,500	3,750	6,250	7,500	6,250	3,750	30,000
Transport	-	730	965	1,030	1,695	900	-	5,320
Tools and Other Material	-	500	750	1,030	1,390	1,030	420	5,120
	109,360	69,090	126,975	192,690	39,908	27,268	15,063	580,154
Total Cost	155,094	119,779	178,287	245,228	80,368	151,937	62,913	993,606

ANNEX 9

IVORY COAST OIL PALM AND COCONUT PROJECT

Ehania Oil Palm Mill: Development Costs[1/]

(CFAF '000)

YEAR	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Bunch Processed - Total			6,760	18,345	47,945	79,840	110,460	142,320	159,800	170,970	176,120	177,620
- Estate			6,425	16,730	44,065	72,700	99,040	128,450	143,730	153,750	158,500	160,000
- Outgrowers			335	1,615	3,880	7,140	11,420	13,870	16,070	17,220	17,620	17,620
Mill Capacity - Tons/Hour			10	10	20	30	40	50	50	60	60	60

Disbursement Period

	1968	1969	1970	1971	1972	1973	1974	Total
Mill Equipment and Installation	175,000	175,800	-	27,100	178,900	28,200	195,300	781,300
Ancillary Installations [2/]	-	165,800	2,700	4,100	54,500	11,000	67,900	305,400
Bunch Collection Transport	-	-	4,400	3,900	9,800		12,200	44,900
Produce Evacuation Transport	-	-	-	6,900	-	6,900	4,800	18,600
Commissioning	-	15,000	-	-	-	-	-	15,000
Engineering Studies, and Supervision of Installation	24,800	15,100	-	15,400	13,900	12,400	12,600	94,200
	199,800	372,100	7,100	57,400	257,100	73,100	292,800	1,259,400

1/ Free of import duty.
2/ Includes housing, offices, workshops, oil storage tanks, roads, electrical equipment and water supply.

IVORY COAST OIL PALM AND COCONUT PROJECT

OIL PALM OUTGROWERS : DEVELOPMENT COSTS INCURRED BY SODEPALM 1/

'000 FCFA

Direct assistance by SODEPALM	1968	1969	1970	1971	1972	1973	Totals
Staff salaries, allowances and overheads	132,254	123,236	99,190	65,123	70,082	74,035	563,920
Purchase of vehicles	21,937	13,275	3,375	21,712	2,925	337	63,561
Surveys		15,050	17,200	19,350			51,600
Grant assistance to outgrowers at planting:							
Cover crop seed	12,250	14,000	15,750				42,000
Wire netting	5,250	6,000	6,750				18,000
Fertilizers	3,500	4,000	4,500				12,000
Transport	7,700	8,800	9,900				26,400
Labor	7,280	8,320	9,360				24,960
Tools and miscellaneous	4,480	5,120	5,760				15,360
Credits in kind:							
Oil palm seedlings	91,000	111,000	125,000	9,000			336,000
Fertilizers and insecticides		8,750	18,750	31,750	23,250	13,500	96,000
Credits in cash:	38,500	54,500	72,000	36,000	25,500	13,500	240,000
Total Cost	324,151	372,051	387,535	182,935	121,757	101,372	1,489,801

1/ Disbursement is for six years only. Development period ends in 1973.

IVORY COAST OIL PALM AND COCONUT PROJECT

Coconuts, Estates and Outgrowers : Development Costs
(CFAF '000)

Year	1968	1969	1970	1971	1972	1973	1974	Total
Plantings/ha	1,400	2,100	3,000	-	-	-	-	6,500
Costs								
Administration:								
General Charges	22,040	27,150	24,480	26,640	31,800	38,420	31,815	202,345
Staff Salaries	12,485	23,490	29,470	32,075	34,670	36,750	37,345	206,285
General Transport	6,235	13,120	14,630	13,545	12,460	12,500	12,340	84,830
	40,760	63,760	68,580	72,260	78,930	87,670	81,500	493,460
Fixed Assets:								
Housing	8,389	20,791	24,192	15,285	285	-	42,143	111,085
Offices and Workshops	1,092	12,350	3,800	-	-	-	-	17,242
Water and Electricity	-	-	-	-	-	3,259	10,801	14,060
Vehicles	7,760	8,060	7,125	5,550	8,060	5,475	825	42,855
Agricultural and other Equipment	7,410	7,620	2,515	1,275	1,045	2,090	1,045	23,000
	24,651	48,821	37,632	22,110	9,390	10,824	54,814	208,242
Field Development								
1. **Estates**								
Labor Cost	14,465	21,521	25,946	18,385	12,680	8,678	6,497	108,172
Mechanical Clearing	118,712	70,310	48,723	-	-	-	-	237,745
Supplies and Transport	26,901	26,309	28,313	13,383	13,413	15,403	17,373	141,095
	160,078	118,140	102,982	31,768	26,093	24,081	23,870	487,012
2. **Outgrowers**								
Labor Cost	-	5,292	10,836	-	-	-	-	16,128
Mechanical Clearing	14,000	70,000	84,000	-	-	-	-	168,000
Supplies and Transport	-	19,215	40,930	7,400	7,700	8,500	9,400	93,145
Cash Credits	-	3,000	8,000	5,000	3,000	3,000	3,000	25,000
	14,000	97,507	143,766	12,400	10,700	11,500	12,400	302,273
Total Cost	239,489	328,228	352,960	138,538	125,113	134,075	172,584	1,490,987

IVORY COAST OIL PALM AND COCONUT PROJECT

FONDS D'EXTENSION ET DE RENOUVELLEMENT (FER)

Estimated Sources and Application of Funds 1969-1982
(CFAF Millions)

	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	Total
SOURCES OF FUNDS															
SODEPALM Estates															
Reimbursement CFAF 0.80/kg FFB	36.9	76.1	127.8	194.3	252.4	298.5	331.8	347.1	350.0	350.0	350.0	350.0	350.0	350.0	3,764.9
Reimbursement short-term advance	-	-	-	-	-	300.0	300.0	-	-	-	-	-	-	-	600.0
Rent for housing 1/	-	-	-	-	-	-	-	-	90.2	90.2	90.2	90.2	90.2	90.2	541.2
SODEPALM Outgrowers Financed by Fed/Bsie															
Loan repayments	-	1.3	4.4	10.3	21.7	29.8	41.6	48.6	53.5	56.1	53.2	47.4	38.1	19.2	425.2
Fonds Social															
Reimbursement of FER advance	-	-	-	-	-	-	-	-	388.8	-	-	-	-	-	388.8
TOTAL SOURCES	36.9	77.4	132.2	204.6	274.1	628.3	673.4	395.7	882.5	496.3	493.4	[illegible]	478.3	459.4	5,720.1
APPLICATION OF FUNDS															
Program of Housing															
FER funds	-	48.7	30.1	91.9	112.3	185.0	187.3	238.6	250.0	175.0	-	-	-	-	1,318.9
Fonds Social funds	-	0.5	57.5	79.7	65.2	68.5	59.4	58.0	-	-	-	-	-	-	388.8
SODEPALM Outgrowers															
Credits (CFAF 63.800/ha) made to outgrowers	-	-	-	-	-	9.1	20.4	41.9	70.2	89.1	102.3	106.8	106.8	106.9	653.5
Deficits on outgrower program 2/	21.7	66.9	113.5	101.0	101.4	151.4	235.0	176.3	121.7	94.8	65.0	52.5	47.2	41.0	1,389.4
TOTAL APPLICATIONS	21.7	116.1	201.1	272.6	278.9	414.0	502.1	514.8	441.9	358.9	167.3	159.3	154.0	147.9	3,750.6
Annual cash surplus or (deficit)	15.2	(38.7)	(68.9)	(68.0)	(4.8)	214.3	171.3	(119.1)	440.6	137.4	326.1	328.3	324.3	311.5	1,969.5
Cumulative cash surplus or (deficit)	15.2	(23.5)	(92.4)	(160.4)	(165.2)	49.1	220.4	101.3	541.9	679.3	1,005.4	1,333.7	1,658.0	1,969.5	

1/ After deducting cost of maintenance.
2/ As FER funds may not be available to meet deficits on the SODEPALM oil palm outgrowers account from 1970 through 1973 additional funds totalling CFAF 165 million (US$0.7 million) may have to be provided by Government pending recovery from FER in 1974. From 1974 onwards sufficient FER funds would be available to meet any such deficits (see SODEPALM Oil Palm Outgrower cash flow at Annex 1, table 4.

IVORY COAST OIL PALM AND COCONUT PROJECT

SUMMARY LIST OF GOODS TO BE FINANCED BY BANK LOANS

Estimated Annual Disbursements
(CFAF Millions)

	1969	1970	1971	1972	1973	1974	Total	US$M
(i) LOAN TO PALMINDUSTRIE								
Disbursements of 100%								
Imported machinery, goods and materials including vehicles	207.0	2.6	18.2	111.0	16.6	144.1	499.5	2.0
Disbursement of 70%								
Construction of factory and ancillary installations, installation of plant and machinery and tanks for oil transportation	208.7	2.5	17.3	90.5	32.6	86.1	437.7	1.8
Total IBRD Disbursements	415.7	5.1	35.5	201.5	49.2	230.2	937.2	3.8
(ii) LOAN TO SODEPALM, EHANIA ESTATE								
Disbursements of 100%								
Imported goods and materials	65.4	17.9	14.8	13.5	17.2	26.3	155.1	0.6
Oil palm and cover crop seedlings	46.2	30.5	26.3	23.0	-	-	126.0	0.5
	111.6	48.4	41.1	36.5	17.2	26.3	281.1	1.1
Disbursements of Less Than 100%								
Land clearing contracts (80%)	81.0	54.0	81.0	-	-	-	216.0	0.9
Buildings and access roads (50%)	12.9	3.7	-	2.8	71.7	16.3	107.4	0.4
	93.9	57.7	81.0	2.8	71.7	16.3	323.4	1.3
Total IBRD Disbursements	205.5	106.1	122.1	39.3	88.9	42.6	604.5	2.4
(iii) LOAN TO SODEPALM, OIL PALM OUTGROWERS AND COCONUT PROGRAM								
Disbursements of 100%								
Imported goods and materials	25.2	11.4	117.4	100.7	102.4	63.0	420.1	1.7
Cash credits to outgrowers	96.0	80.0	41.0	28.5	16.5	3.0	265.0	1.1
Oil palm and coconut seedlings	273.0	180.0	10.0	-	-	-	463.0	1.8
	394.2	271.4	168.4	129.2	118.9	66.0	1,148.1	4.6
Disbursements of Less Than 100%								
Land clearing contracts (80%)	273.0	132.7	-	-	-	-	405.7	1.6
Buildings (50%)	21.3	14.0	7.6	-	-	21.1	64.0	0.3
	294.3	146.7	7.6	-	-	21.1	469.7	1.9
Total IBRD Disbursements	688.5	418.1	176.0	129.2	118.9	87.1	1,617.8	6.5

IVORY COAST

OIL PALM AND COCONUT PROJECT

Sensitivity Analysis

1. The estimated economic rates of return from investment in the project on the basis of conservative estimates of yields, costs free of identifiable taxes but including the full cash cost of labor, and the price assumptions set out in para 3.26 of the main report and Annex 7 are as follows:

Oil Palms	
Estates	- 10.5%
Outgrowers	- 13.6%
Coconuts	
Estates and Outgrowers	- 8.9%
Overall	11.2%

For the purpose of the considerations below these rates are referred to as the standard rates of return.

2. An analysis has been made of the sensitivity of the standard rates of return to alternative assumptions concerning the following:

(a) oil palm produce yields;

(b) palm produce and copra prices; and

(c) the opportunity cost of labor.

The analysis has been carried out separately for each of these variables, assuming that the other two variables remain unchanged.

Oil Palm Produce Yields

3. The effect of a 10% increase or decrease in oil palm produce yields on the standard rates of return would be as follows:

Oil Palm Produce

Yields	Rates of Return: Ehania Estate %	Outgrowers %	Overall[1] %
Increase 10%	12	between 14 and 15	between 11 and 12
Decrease 10%	9	12	between 10 and 11

Oil Palm Produce and Copra Prices

4. The effect of price changes in palm oil [2] and copra on the standard rates of return is shown in the following table:

Palm Oil

Price US$/ton cif Europe	Rates of Return: Ehania Estate %	Outgrowers %	Overall[1] %
180	13	16	13
170	12	15	12
160	11	14	11
144	9	12	10
120	5	8	4
112	3	6	2

Copra

Price US$/ton cif Europe	Rates of Return: Coconut Estates & Outgrowers %	Overall[3] %
180	11	12
165	9	11
150	8	between 10 and 11
135	6	10

1/ Including the coconut program.
2/ Palm kernel prices have not been amended as revenue from this source accounts for less than 20% of the total value of palm produce.
3/ Including the estate and outgrower oil palm program.

Opportunity Cost of Labor

5. It is believed that the opportunity or economic cost of labor in the Ivory Coast may be substantially below the level of wages paid to estate workers. This is reflected in the rates currently paid by small farmers for casual labor, which are up to 50% lower than those paid by agricultural estates under the minimum wage laws. The following table shows the effect on the standard rates of return if the estimated cost of estate [1] labor in the main report is reduced to certain assumed opportunity cost levels.

Opportunity Cost of Labor (% of Estimated Wage Costs)	Rates of Return		
	Ehania Estate %	Coconut Program %	Overall %
60	12	between 9 and 10	nearly 12
50	between 12 and 13	nearly 10	12
40	13	10	between 12 and 13

6. Details of the calculations of the standard rates of return for Ehania estate, oil palm outgrowers and the coconut program, and the effect of assuming different prices for palm oil and copra, are shown in Tables 1, 2 and 3 attached.

1/ It is assumed that the wages paid by outgrowers are at, or close, to the opportunity cost.

2/ Including oil palm and coconut outgrower programs.

IVORY COAST OIL PALM AND COCONUT PROJECT

ESTIMATED ECONOMIC RATE OF RETURN - EHANIA INDUSTRIAL ESTATE 1/

(CFAF Millions)

On basis Oil CIF US$160
Kernels " US$136

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980 to 1992	1993	1994	1995
Expenditure																
Development Costs	154.9	119.8	178.3	245.2	80.4	151.9	62.9	-	-	-	-	-	-	-	-	-
Operating Costs	-	-	-	-	29.2	44.6	73.4	118.8	128.4	127.4	127.9	128.9	128.9	96.7	80.6	48.3
Processing Costs	-	-	-	-	8.5	17.0	28.8	46.6	59.9	70.7	76.5	78.7	78.7	59.0	49.2	29.5
Fixed assets required after completion of development period	-	-	-	-	-	-	-	77.2	30.8	23.3	16.6	11.6	7.4	5.6	4.6	2.8
Ehania Mill - Proportion of initial cost	-	124	0.9	17.8	85.7	24.4	97.6	8.9	24.1	2.1	1.1	-	-	-	-	-
Ehania Mill - Proportion of cost of renewal	-	-	-	-	0.4	1.8	3.2	6.8	7.1	11.9	13.1	15.4	13.3	10.	8.3	5.
	154.9	243.8	179.2	263.0	204.2	239.7	265.9	258.3	250.3	235.4	235.2	234.6	228.3	171.3	142.7	85.6
Revenue																
Sale of oil and Kernels (FOB before deduction of export duty)	-	-	-	-	30.9	77.0	154.4	271.3	366.5	441.6	486.7	499.2	499.2	374.4	312.	187.2
Net Cash Flow	-(154.9)	-(243.8)	-(179.2)	-(263)	-(172.3)	-(162.7)	-(111.5)	+13.	+116.2	+206.2	+251.5	+264.6	+270.9	+203.1	+169.3	+101.6
10%	.909	.826	.751	.683	.621	.564	.513	.467	.424	.386	.350	.319	2,315	.084	.076	.069
+59.1	-(140.8)	-(201.4)	-(134.6)	-(179.6)	-(107)	-(91.8)	-(57.2)	+6.1	+49.3	+79.6	+88.	+84.4	+627.1	+17.1	+12.9	+ 7.
11%	.901	.812	.731	.659	.593	.535	.482	.434	.391	.352	.317	.286	1,929	.066	.060	.054
-54.1	-(139.6)	-(198.)	-(131.)	-(173.3)	-(102.2)	-(87.0)	-(53.7)	+5.6	+45.4	+72.6	+79.7	+75.7	+522.6	+13.4	+10.2	+5.5

1215

If basis is oil CIF US$ 144
kernels " US$ 136

Economic Rate of Return: 10.5%

Revenue	-	-	-	-	28.8	69.5	189.4	245.	330.9	398.6	439.2	450.5	450.5	337.9	281.5	168.9
Net Cash Flow	-(154.9)	-(243.8)	-(179.2)	-(263.)	-(175.4)	-(170.2)	-(76.5)	-(13.3)	+80.6	+163.2	+204.	+215.9	+222.2	+166.6	+138.8	+83.3
9%	.917	.842	.772	.708	.650	.596	.547	.502	.460	.422	.388	.356	2,663	.106	.098	.090
-43.1	-(142.)	-(205.3)	-(138.3)	-(186.2)	-(114.)	-(101.4)	-(41.8)	-(6.7)	+37.1	+68.9	+79.2	+76.9	+591.7	+17.7	+13.6	+7.5
8%	.926	.857	.794	.735	.681	.630	.583	.540	.500	.463	.429	.397	3,139	.135	.125	.116
+69.9	-(143.4)	-(208.9)	-(142.3)	-(193.3)	-(119.4)	-(107.2)	-(44.6)	-(7.2)	+40.3	+75.6	+87.5	+85.7	+697.5	+22.5	+17.4	+9.7

If basis is Oil CIF US$120
Kernels CIF US$136

Economic Rate of Return: 8.6%

Revenue	-	-	-	-	24.2	58.3	117.	205.5	277.4	334.2	368.	377.4	377.4	280.6	235.9	141.6
Net Cash Flow	-(154.9)	-(243.8)	-(179.2)	-(263.)	-(180.)	-(181.4)	-(148.9)	-(52.8)	+27.1	+98.8	+132.8	+142.8	+149.1	+109.3	+93.2	+56.
5%	.952	.907	.864	.823	.784	.746	.711	.677	.645	.614	.585	.557	5,231	.281	.268	.255
-72.5	-(147.5)	-(221.1)	-(154.8)	-(216.4)	-(141.1)	-(35.3)	-(105.9)	-(35.7)	+ 17.5	+60.7	+77.7	+79.5	+779.9	+30.7	+25.	+14.3
4%	.962	.925	.889	.855	.822	.790	.760	.731	.703	.676	.650	.625	6,237	.361	.347	.333
+30	-(149.)	-(225.5)	-(159.3)	-(224.9)	-(148.)	-(143.3)	-(113.2)	-(58.6)	+19.1	+66.8	+86.3	+89.3	+929.9	+39.5	+32.3	+18.5

If basis is Oil CIF US$112
Kernels CIF US$136

Economic Rate of Return: 4.5%

Revenue	-	-	-	-	22.6	54.6	109.6	192.3	259.6	312.7	344.2	353.1	353.1	264.8	220.7	132.4
Net Cash Flow	-(154.9)	-(243.8)	-(179.2)	-(263.)	-(181.6)	-(185.1)	-(156.3)	-(66.)	+9.3	+77.3	+109.	+118.5	+124.8	+93.5	+78.	+46.8
4%	.962	.925	.889	.855	.822	.790	.760	.731	.703	.676	.650	.625	6,237	.361	.347	.333
-162.5	-(149)	-(225.5)	-(159.3)	-(224.9)	-(149.3)	-(146.2)	-(118.8)	-(48.2)	+6.5	+52.3	+70.9	+74.1	+778.4	+63.8	+27.1	+15.6
3%	.971	.943	.915	.888	.863	.837	.813	.789	.766	.744	.722	.701	7,459	.464	.450	.437
-12.3	-(150.4)	-(229.9)	-(164.)	-(233.5)	-(156.7)	-(154.9)	-(127.1)	-(52.1)	+7.1	+57.5	+787	+83.1	+930.9	+43.4	+35.1	+20.5
2%	.980	.961	.942	.924	.906	.888	.871	.853	.837	.820	.804	.788	8,948	.598	.586	.574
+178.2	-(151.8)	-(234.3)	-(168.8)	-(243.)	-(164.5)	-(164.4)	-(136.1)	-(56.3)	+7.8	+63.4	+87.6	+93.4	1,116.7	+55.9	+ 45.7	+26.9

Economic Rate of Return: 2.9%

1/ The Economic Rate of Return for investment in Ehania Mill will be equivalent to the above rates.

Ivory Coast Oil Palm and Coconut Project

Estimated Economic rate of return - 12,000 ha - Outgrowers Oil Palms
(CFAF Millions)

Basis: Oil CIF US $ 160 CIF
Kernel " " $ 136 CIF

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980 to 1992	1993	1994
Expenditure															
Direct costs															
Development costs	324.2	372.1	387.5	182.9	121.8	101.4	-	-	-	-	-	-	-	-	-
Allocation of Mill Investment Costs	-	-	188.4	141.2	191.2	83.7	90.4	78.4	67.0	9.4	3.8	-	-	-	-
Operating Costs Field															
a) Sodepalm service charges (1)	-	-	-	-	11.7	34.2	65.1	83.2	93.5	99.8	100.8	100.8	100.8	71.4	37.8
b) Fertilizers, insect. tools (2)	-	-	-	-	9.5	22.1	33.9	33.5	30.4	30.4	30.4	30.4	30.4	21.5	11.4
Operating Costs-Processing	-	-	-	-	16.8	48.5	89.8	127.8	161.5	187.6	193.6	193.9	194.-	137.4	72.8
Allocation of Mill renewal costs	-	-	-	-	4.-	8.-	25.1	38.6	37.5	70.6	77.-	74.4	77.7	55.-	29.1
Indirect Costs															
Hired Labor	67.2	59.9	34.-	24.6	12.-	12.1	18.5	23.5	29.2	31.3	33.-	33.-	33.-	23.4	12.4
	391.4	432.-	609.9	348.7	367.-	310.-	322.8	385.-	419.1	429.1	438.6	432.5	435.9	308.7	163.5
Revenue															
Sale of oil and kernel (FOB before deduction of Export duty)	-	-	-	-	50.-	176.6	396.3	654.7	874.4	874.4	1,011.8	1,047.8	1,047.8	742.2	392.9
Net Cash Flow	- 391.4	-(432.-)	-(609.9)	-(348.7)	-(317.-)	-(133.4)	+73.6	+269.7	+455.3	+582.7	+609.2	+615.3	+611.9	+433.5	+229.4
12%	.893	.797	.712	.636	.567	.507	.452	.404	.361	.322	.287	.257	1,649	.053	.047
+272.8	-(349.5)	-(344.3)	-(434.2)	-(221.8)	-(179.7)	-(67.6)	+33.2	+109.-	+164.4	+187.6	+174.8	+158.1	+1,009.-	+23.-	+10.8
13%	.885	.783	.693	.613	.543	.480	.425	.376	.333	.295	.261	.231	1,412	.042	.037
+ 90.6	-(346.4)	-(338.3)	-(422.7)	-(213.8)	-(172.1)	-(64.-)	.31.2	+101.4	+151.6	+171.9	+159.-	+142.1	+864.-	+19.2	+8.5
14%	.877	.769	.675	.592	.519	.456	.400	.351	.308	.270	.237	.208	1,213	.033	.029
- 61.7	-(343.3)	-(332.2)	-(411.7)	-(206.4)	-(164.5)	(60.8)	+29.4	+94.7	+140.2	+157.3	+144.4	+128.-	+742.2	+14.3	+6.7

Economic rate of return: 13.6 %

If basis is oil CIF US $ 144
Kernel " " $ 136

Revenue	-	-	-	-	45.3	159.7	358.2	591.2	789.3	913.2	945.7	945.7	945.7	669.9	354.6
Net Cash Flow	- 391.4	-(432.-)	-(609.9)	-(348.7)	-(321.7)	-(150.3)	+95.3	+206.2	+370.2	+484.1	+507.1	+513.2	+509.8	+361.2	+191.1
11%	.901	.812	.731	.659	.593	.535	.482	.434	.391	.352	.317	.286	1,929	.066	.060
+ 97.6	-(352.7)	-(350.8)	-(445.8)	-(229.8)	-(190.8)	-(80.4)	+17.-	+89.5	+144.7	+170.4	+160.8	+146.8	+983.4	+23.8	+11.5
12%	.893	.797	.712	.636	.567	.507	.452	.404	.361	.322	.287	.257	1,649	.053	.047
- 73.4	-(349.5)	-(344.3)	-(434.2)	-(221.8)	-(182.4)	-(76.2)	+16.-	+83.3	+133.6	+155.9	+145.5	+131.9	+840.7	+19.1	+9.-

Economic rate of return: 11.6%

If basis is oil CIF US $ 120
kernel " " $ 136

Revenue	-	-	-	-	38.2	134.3	300.9	496.-	661.8	765.4	792.7	792.7	792.7	561.5	297.2
Net Cash Flow	-(391.4)	-(432.-)	-(609.9)	-(348.7)	-(328.8)	-(175.7)	-(21.9)	+111.-	+242.7	+336.3	+354.1	+360.2	+356.8	+252.8	+133.7
8%	.926	.857	.794	.735	.681	.630	.583	.540	.500	.463	.429	.397	3,139.-	.135	.125
-17.9	-(362.4)	-(370.2)	-(484.2)	-(256.3)	-(223.9)	-(110.7)	-(12.8)	+59.9	+121.4	+155.7	+151.9	+143.-	+1,120.-	+34.1	+16.7
9%	.917	.842	.772	.708	.650	.596	.547	.502	.460	.422	.388	.356	2,663.-	.106	.098
-223.9	-(358.9)	-(363.7)	-(470.8)	-(246.9)	-(213.7)	-(104.7)	-(12.3)	+55.7	+111.6	+141.9	+137.4	+128.2	+950.1	+26.8	+13.1
7%	.935	.873	.816	.763	.713	.666	.623	.582	.544	.508	.475	.444	3,711	.172	.161
+212.7	-(366.-)	-(377.1)	-(497.7)	-(266.1)	-(234.4)	-(117.-)	-(13.6)	+64.6	+132.-	+170.8	+168.2	+159.9	+1,324.1	+43.5	+21.5

Economic rate of return: 7.9 %

If basis is oil CIF US $ 112
kernel " " $ 136

Revenue	-	-	-	-	35.8	125.8	281.8	464.3	619.2	716.1	741.6	741.6	741.6	525.3	278.1
Net Cash Flow	-(391.4)	-(432.-)	-(609.9)	-(348.7)	-(331.2)	-(184.2)	-(41.0)	+79.3	+200.1	+287.-	+303.-	+309.1	+305.7	+216.6	+114.6
7%	.935	.873	.816	.763	.713	.666	.623	.582	.544	.508	.475	.444	3,711	.172	.161
-118.9	-(366.-)	-(377.1)	-(497.7)	-(266.1)	-(236.1)	-(122.7)	-(25.5)	+46.2	+108.9	+145.8	+143.9	+137.2	+1,134.5	+37.3	+18.5
6%	.943	.890	.840	.792	.747	.705	.665	.627	.592	.558	.527	.497	4,340	.220	.207
+- 93.-	-(369.1)	-(384.5)	-(512.3)	-(276.2)	-(247.4)	-(129.9)	-(27.3)	+49.7	+118.5	+160.1	+159.7	+153.6	+1,326.7	+47.7	+23.7

Economic rate of return: 6.4%

(1) Unit.(SODEPALM) services charges x IBRD Outgrowers' Production.
(2) On basis of Annex 5 Table 2.

IVORY COAST OIL PALM AND COCONUT PROJECT

Estimated Economic Rate of Return - Coconut Program - 6,500 ha Scheduled for Bank Financing
(CFAF Millions)

247 CFAF = $1 US

On Basis Copra CIF US$ 165

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982/2027
Expenditures															
Development Costs	232.9	310.8	333.-	138.5	125.1	134.1	172.6	160.2	114.6	15.7	31.4	31.4	47.1	-	-
Operating Costs															
- Estates															
- Direct Costs	-	-	-	-	-	-	1.3	19.-	48.8	79.1	100.6	111.5	115.9	118.-	118.-
- Indirect Costs	-	-	-	-	-	-	0.9	10.7	35.7	72.1	78.9	81.1	81.7	81.9	81.9
- Maintenance of Buildings	-	-	0.6	1.9	3.3	4.2	4.4	3.5	2.9	3.8	4.9	6.0	6.9	7.4	7.4
- Outgrowers															
- Tools, Fertilizers, Insecticides	-	-	-	-	-	-	-	-	6.1	18.3	18.3	18.3	18.3	18.3	18.3
- Hired Labor	-	2.4	6.3	4.1	2.9	1.5	-	-	-	-	-	-	-	-	-
Renewals															
- Vehicles	-	-	-	-	-	-	1.8	5.2	10.6	9.7	11.1	10.6	8.7	8.7	8.7
- Other Equipment	-	-	-	-	-	-	4.3	2.2	2.9	6.4	2.7	10.1	4.4	4.4	4.4
Total Expenditures	232.9	313.2	339.9	144.5	131.3	139.8	185.3	200.8	221.6	205.1	247.9	269.-	283.-	238.7	238.7
Revenue							1486.9 / 1789								
Reimbursement															
Cost of Supervising	-	-	-	-	-	-	-	-	0.4	2.9	7.6	10.4	11.5	11.9	11.9
Sale of Copra	-	-	-	-	-	-	0.7	14.9	89.-	225.5	389.7	471.6	502.-	511.4	511.4
Total Revenue	-	-	-	-	-	-	0.7	14.9	89.4	228.4	397.3	482.-	513.5	523.3	523.3
Net Cash Flow	-(232.9)	-(313.2)	-(339.9)	-(144.5)	-(131.3)	-(139.8)	-(184.6)	-(185.9)	-(132.2)	+ 23.3	+149.4	+213.-	+230.5	+284.6	+284.6
9%	.917 -(213.6)	.842 -(263.7)	.772 -(262.4)	.708 -(102.3)	.650 -(85.3)	.596 -(83.3)	.547 -(101.-)	.502 -(93.3)	.460 -(60.8)	.422 + 9.8	.388 + 58.-	.356 + 75.8	.326 + 75.1	3.561 +1,013.5	
8%	.926 -(215.7)	.857 -(268.4)	.794 -(269.9)	.735 -(106.2)	.681 -(89.4)	.630 -(88.1)	.583 -(107.6)	.540 -(100.4)	.500 -(66.1)	.463 + 10.8	.429 + 64.1	.397 + 84.6	.368 + 84.8	4.473 +1,273.-	

Economic Rate Of Return: 8.9%

If Basis is Copra CIF US$150

Revenue															
Reimbursement															
Cost of Supervising	-	-	-	-	-	-	-	-	0.4	2.9	7.6	10.4	11.5	11.9	11.9
Sale of Copra	-	-	-	-	-	-	0.7	13.2	79.-	200.3	343.5	418.7	445.7	454.-	454.-
Total Revenue	-	-	-	-	-	-	0.7	13.2	79.4	203.2	351.1	429.1	457.2	465.9	465.9
Net Cash Flow	-(232.9)	-(313.2)	-(339.9)	-(144.5)	-(131.3)	-(139.8)	-(184.6)	-(187.6)	-(142.2)	-(1.-)	+103.2	+169.1	+174.2	+227.2	+227.2
8%	.926 -(215.7)	.857 -(268.4)	.794 -(269.9)	.735 -(106.2)	.681 -(89.4)	.630 -(88.1)	.583 -(107.6)	.540 -(101.3)	.500 -(71.1)	.463 -(0.9)	.429 + 44.3	.397 + 63.6	.368 + 64.1	4.473 +1,016.3	
7%	.935 -(217.8)	.873 -(273.4)	.816 -(277.4)	.763 -(110.3)	.713 -(93.6)	.666 -(93.1)	.623 -(115.-)	.582 -(109.2)	.544 -(77.4)	.508 -(1.-)	.475 + 49.-	.444 + 71.1	.415 + 72.3	5.682 +1,291.-	

Economic Rate Of Return: 7.5%

If Basis is Copra CIF US$135

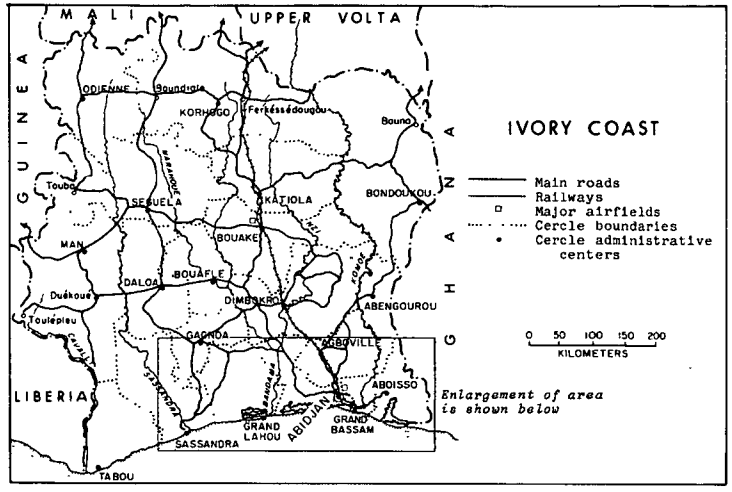
Revenue															
Reimbursement															
Cost of Supervising	-	-	-	-	-	-	-	-	0.4	2.9	7.6	10.4	11.5	11.9	11.9
Sale of Copra	-	-	-	-	-	-	0.6	11.5	69.-	175.-	300.1	365.8	389.4	396.7	396.7
Total Revenue	-	-	-	-	-	-	0.6	11.5	69.4	177.9	307.7	376.2	400.9	408.6	408.6
Net Cash Flow	-(232.9)	-(313.2)	-(339.9)	-(144.5)	-(131.3)	-(139.8)	-(184.7)	-(189.3)	-(152.2)	-(27.2)	+ 59.8	+107.2	+117.9	+169.9	+169.9
7%	.935 -(217.8)	.873 -(273.4)	.816 -(277.4)	.763 -(110.3)	.713 -(93.6)	.666 -(93.1)	.623 -(115.1)	.582 -(110.2)	.544 -(82.8)	.508 -(13.8)	.475 + 28.4	.444 + 47.6	.415 + 48.9	5.682 + 965.4	
6%	.943 -(219.6)	.890 -(278.7)	.840 -(285.5)	.792 -(114.4)	.747 -(98.1)	.705 -(98.6)	.665 -(122.8)	.627 -(118.7)	.592 -(90.1)	.558 -(15.2)	.527 + 31.5	.497 + 53.3	.469 + 55.3	7.379 +1,241.8	
5%	.952 -(221.7)	.907 -(284.1)	.864 -(293.7)	.823 -(118.9)	.784 -(102.9)	.746 -(104.3)	.711 -(131.3)	.677 -(128.9)	.645 -(98.2)	.614 -(16.7)	.585 + 35.-	.557 + 59.7	.530 + 62.5	9.536 +1,620.2	

Economic Rate Of Return: 5.8%

ANNEX 15
Table 3

IVORY COAST

OIL PALM AND COCONUT PROJECT
SODEPALM OIL PALM AND COCONUT PROGRAMS



OIL PALM ESTATES

Existing or in course of establishment

SODEPALM

Estates created under FED grants, Agreement C.183

Estates created or being created under FED grants, Agreement C.331

Ehania Estate to be established under Bank project

OTHERS

State and private estates

OIL PALM OUTGROWERS

Outgrower sectors (O.S.), radius from mills

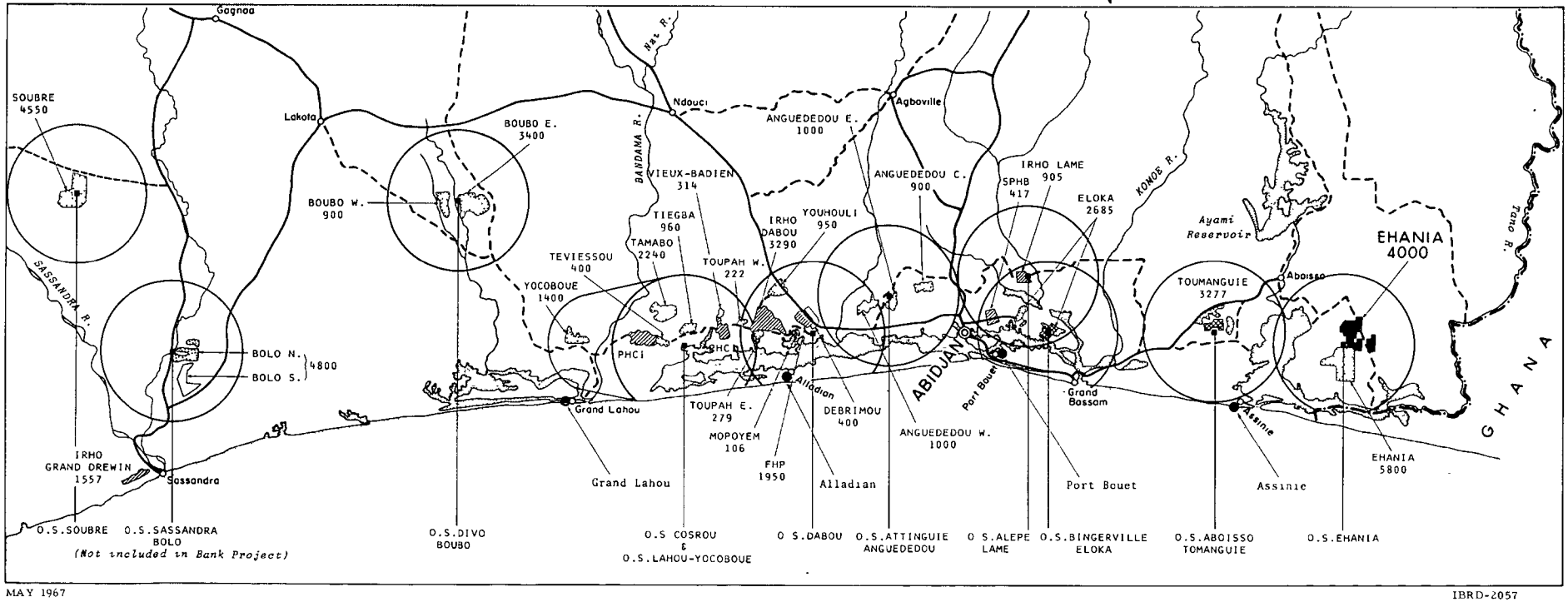
Main roads

Secondary roads

COCONUT PROJECTS

N

0 10 20 30 40 50
KILOMETERS



MAY 1967

IBRD-2057