

**Document of
The World Bank and International Finance Corporation**

Report No: 19343 AFR

**PROJECT APPRAISAL DOCUMENT
ON PROPOSED
INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
LOANS IN AMOUNTS OF
US\$ 39.5 MILLION TO THE REPUBLIC OF CHAD
AND
US\$ 53.4 MILLION TO THE REPUBLIC OF CAMEROON
AND
ON PROPOSED
INTERNATIONAL FINANCE CORPORATION
LOANS IN AMOUNTS OF US\$ 100 MILLION IN A-LOANS
AND UP TO US\$ 300 MILLION IN B-LOANS
TO THE
TCHAD OIL TRANSPORTATION COMPANY, S.A. AND
CAMEROON OIL TRANSPORTATION COMPANY, S.A.
FOR A
PETROLEUM DEVELOPMENT AND PIPELINE PROJECT**

April 13, 2000

Energy Team/AFC07
Africa Regional Office, World Bank

Oil, Gas and Chemicals
International Finance Corporation

CURRENCY EQUIVALENT

Currency Unit = CFA Franc (CFAF)

US\$ 1 = 651 CFAF

FISCAL YEARS

Cameroon: July 1 - June 30

Chad: January 1 - December 31

ABBREVIATIONS AND ACRONYMS

Chevron	Chevron Corporation (USA)
Chevron Chad	Chevron Petroleum Chad Company Limited (Bermuda)
COFACE	<i>Compagnie Française d'Assurance pour le Commerce Extérieur</i>
COTCO	Cameroon Oil Transportation Company, S.A. (Republic of Cameroon)
ECAs	Export Credit Agencies: COFACE and US EXIM
EIB	European Investment Bank
Elf	<i>Société Nationale Elf-Aquitaine</i> (France)
ECMT	Export System Construction Management Team
EMP	Environmental Management Plan, Chad Export Project
Esso Chad	Esso Exploration and Production Chad, Inc. (USA)
Exxon	Exxon Mobil Corporation (USA)
Export System	Pipeline and FSO facilities
Field System	Field development facilities at Doba, Chad
FSO	Floating Storage and Offloading Facility
GoC	Government of Cameroon
GoT	Government of Chad (<i>Tchad</i>)
IDC	Interest during construction
IPP	Indigenous Peoples Plan
MEWR	<i>Ministère de l'environnement et de l'eau</i> (Republic of Chad)
MF	<i>Ministère des finances</i> (Republic of Chad)
MINEF	<i>Ministère de l'environnement et des forêts</i> (Republic of Cameroon)
MME	<i>Ministère des mines et de l'énergie</i> (Republic of Cameroon)
MMEP	<i>Ministère des mines, de l'énergie et du pétrole</i> (Republic of Chad)
NSA	Netherland, Sewell & Associates, Inc.
Petronas	Petroleum Nasional Berhad (Malaysia)
Petronas Chad	Petronas Carigali (Chad EP) Inc. (Cayman Islands)
Pipeline Companies	COTCO and TOTCO
PPF	Project Preparation Facility
Private Sponsors	Exxon, Petronas and Chevron, as of March 2000, and Exxon, Shell and Elf prior to that time
SEERAT	<i>Société d'étude et d'exploitation de la raffinerie du Tchad</i> (Republic of Chad)
Senior Lenders	IFC, ECAs and other financial institutions lending to COTCO and TOTCO
Shell	Royal Dutch Petroleum Company and The Shell Transport and Trading Company, p.l.c.
SNH	<i>Société Nationale des Hydrocarbures</i> (Republic of Cameroon)
STEE	<i>Société tchadienne d'eau et d'électricité</i>
TOTCO	Tchad Oil Transportation Company, S.A. (Republic of Chad)
Upstream Consortium	Chevron Chad, Esso Chad and Petronas Chad, an unincorporated joint-venture
Upstream Operator	Esso Chad
US EXIM	Export-Import Bank of the United States

Bank:

Vice President:

Jean-Louis Sarbib

Country Director, Chad and Cameroon:

Serge Michailof

Sector Manager, AFTG1:

Mark Tomlinson

Task Team Leaders:

Philippe Benoit, Michel Layec

IFC:

Vice President:

Jemal-ud-din Kassum/Assaad Jabre

Director, Oil, Gas and Chemicals:

Philippe Liétard/Rashad Kaldany

Manager, Oil, Gas and Chemicals:

Maria da Graça Domingues

Investment Officers:

Shahbaz Mavaddat, Eric Siew

**Chad/Cameroon
Petroleum Development and Pipeline Project**

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Chad/Cameroon
Petroleum Development and Pipeline Project

Project Appraisal Document

World Bank: Africa Regional Office, AFC07
IFC: Oil, Gas and Chemicals Department

Date: April 13, 2000

☐ Draft

☒ Final

World Bank

Task Team Leaders: Philippe Benoit, Michel Layec

Country Director: Serge Michailof

Sector Manager: Mark Tomlinson

Project ID: TD-PE-44305 Sector: Energy

Program Objective Category: Environmentally
Sustainable Development

CM-PE-51059

Lending Instrument: Specific Investment Loan

Program of Targeted Intervention: ☐ Yes ☒ No

A. Chad

Project Financing Data ☒ Loan ☐ Credit ☐ Guarantee ☐ Other [Specify]

For Loans/Credits/Others

Amount (US\$ m/SDRm): IBRD Loan of US\$ 39.5 million

Proposed Terms:

☐ Multicurrency

☒ Single currency

Grace period (years): 5

☐ Standard Variable

☐ Fixed ☒ LIBOR-based

Years to maturity: 13 years

Commitment fee: 3/4%

Service charge: 0%

Front-End Fee: 1%

B. Cameroon

Project Financing Data ☒ Loan ☐ Credit ☐ Guarantee ☐ Other [Specify]

For Loans/Credits/Others

Amount (US\$ m/SDRm): IBRD Loan of US\$ 53.4 million

Proposed Terms:

☐ Multicurrency

☒ Fixed Spread

Grace period (years): 5

☐ Standard Variable

☒ Fixed ☐ LIBOR-based

Years to maturity: 15 years

Commitment fee: 3/4%

Service charge: 0%

Front-End Fee: 1%

Loan includes US\$ 5.34 million premium (see Section C.6)

Total Chad and Cameroon: IBRD Loans of US\$ 92.9 million

IFC

Investment Officers: Shahbaz Mavaddat, Eric Siew

Director: Philippe Liétard/Rashad Kaldany

Sector Manager: Maria da Graça Domingues

Project ID: 4338

Sector: Oil, Gas and Chemicals

Borrowers: Cameroon Oil Transportation Company and Tchad Oil Transportation Company

A-Loan: US\$ 100 million

B-Loan: up to US\$ 300 million

Financing plan (US\$ million): US\$3,723.9 million (see also diagram in Annex 12)

Source	Total	%
Private Sponsors' Equity (Exxon 40% - Petronas 35% - Chevron 25%)	2,206.4	59.2
Export Credit Agencies/Commercial Banks	600.0	16.1
Capital Markets Bond Issue	400.0	10.7
IFC A-Loan	100.0	2.7
IFC B-Loan	300.0	8.1
IBRD: Cameroon Equity*	43.5	1.2
IBRD: Chad Equity*	32.5	0.9
EIB: Cameroon Equity*	26.5	0.7
EIB: Chad Equity*	15.0	0.4
Total	3,723.9**	100.0

* Does not include interest during construction or other loan charges. Breakdown of IBRD and EIB loans to Chad and Cameroon set out in Annex 3, Table 5.

** Portion of equity financing from Private Sponsors and Governments to be provided as subordinated loans and other forms of quasi equity. The sources of funds cover costs from 2000 onwards and exclude costs already borne (principally by Private Sponsors) before and including 1999. The project costs do not include costs of about US\$ 43 million incurred for drilling wells after 2005 (until 2008). Approximately 5% of project costs are Local Costs and 95% are Foreign Costs

Government Project Costs is estimated as follows (US\$ million -- see Annex 3, Tables 4 and 5 for more details):

	Equity	IDC/Loan Charges	Preparation Costs	Total
Chad	47.5	5.5	7.0	60.0
Cameroon	70.0	13.0	8.0	91.0

Corporate Structure/Financing Plan (US\$ million) -- see also diagram in Annex 12)

Source	Upstream (Field System)		Downstream (Export System)					
			COTCO		TOTCO		Total	
	US\$	%	US\$	%	US\$	%	US\$	%
Equity:								
Private Sponsors' Funding (Exxon 40% - Petronas 35% - Chevron 25%)*	1,521.4	100.0	575.9	84.7	109.1	89.0	685.0	85.4
Chad	-	-	34.0	5.0	13.5	11.0	47.5	5.9
Cameroon	-	-	70.0	10.3	-	-	70.0	8.7
Total Equity:	1,521.4	100.0	679.9	100.0	122.6	100.0	802.5	100.0
Debt:								
ECAs/Commercial Banks	-	-	514.7	42.9	85.3	42.9	600.0	42.9
Capital Markets Bond Issue	-	-	343.1	28.6	56.9	28.5	400.0	28.6
IFC A Loan	-	-	85.8	7.2	14.2	7.1	100.0	7.1
IFC B Loan	-	-	257.3	21.5	42.7	21.4	300.0	21.4
Total Debt:	-	-	1,200.9	100.0	199.1	100.0	1,400.0	100.0
Grand Total	1,521.4		1,880.8		321.7		2,202.5	

* Portion of equity financing from Private Sponsors and Governments to be provided as subordinated loans and other forms of quasi equity.

Borrowers: Republic of Chad; Republic of Cameroon

Responsible Agencies:

Export System: Cameroon Oil Transportation Company (COTCO); Tchad Oil Transportation Company (TOTCO)

Field System: Esso Exploration and Production Chad, Inc. (Esso Chad) -- See below

Estimated disbursements (Bank FY/US\$ M)		FY2001	FY2002	FY2003	FY2004	FY2005
Chad:*	Annual	6.00	7.50	9.50	11.00	2.00
	Cumulative	6.00	13.50	23.00	34.00	36.00
Cameroon:	Annual	7.80	10.80	15.60	17.20	2.00
	Cumulative	7.80	18.60	34.20	51.40	53.40
Total (Chad/Cameroon)	Annual	13.80	18.30	25.10	28.20	4.00
	Cumulative	13.80	32.10	57.20	85.40	89.40

* Assumes that US\$ 3.5 million in unallocated funds provided to Chad remain undisbursed (see Annex 3, table 5)

Expected effectiveness date: September 30, 2000

Closing date: June 30, 2005

A. PROJECT DEVELOPMENT OBJECTIVE

1. *Project development objective (see Annex 1)*

The development objectives of the project are, through environmentally and socially sound private investment in the petroleum sector:

- to increase Chad Government expenditures on poverty alleviation activities; and
- to increase Cameroon fiscal revenues available for financing priority development expenditures, in the context of the Government's strategy for economic growth and poverty reduction.

2. *Key performance indicators (see Annex 1)*

The key performance indicators are: (a) an increase in Chad of at least US\$ 40 million per year in petroleum-financed budgetary expenditures on education, health, infrastructure, rural development and the environment and water resources in FY2005-2009; and (b) an increase in Cameroon of at least US\$ 40 million per year in FY2005-2007 in petroleum-generated revenues available to finance priority development expenditures.

B.1 STRATEGIC CONTEXT: CHAD

1. *Country Assistance Strategy (CAS) goal supported by the project*

CAS document number: 15287 - CD
New CAS document: 19365-CD

Date of latest CAS discussion: February 15, 1996
Date of upcoming CAS discussion: May 2000

Chad's central development objective is to reduce poverty by accelerating sustainable economic growth and increasing expenditures targeted at poverty alleviation, especially for health, education, infrastructure and rural development. The Bank's assistance strategy supports this objective by promoting an economic environment conducive to private sector development, catalyzing private investment to increase domestic revenues to finance expenditures in sectors essential for poverty reduction. Chad joined IFC in April 1998, in anticipation of IFC financing for the pipeline. Under Extending IFC's Reach initiative, the Corporation is exploring small investments in tourism and manufacturing as part of its efforts to support small and medium-sized enterprise development. The proposed project supports these Group efforts, using the country's oil resources as the engine of Chad's economic program. In particular, oil revenues would generate additional funding for the poverty reduction sectors. The project also fits well with Bank Group's strategy of stimulating private sector-led growth by playing a leading role in attracting significant foreign direct investment to Chad.

2. *Main economic and sector issues and Government strategy*

a. Economic issues:

Chad is among the least developed and poorest countries in the world. It was ranked 163rd among 174 countries surveyed in the United Nations Development Programme's 1998 *Human Development Report*. Key poverty indicators -- income, living conditions, food security, access to basic health care and education, life expectancy and infant mortality rates -- are well below sub-Saharan Africa averages. Chad's underdevelopment and poverty can be traced to a large extent to a difficult climate, its landlocked position, extended periods of civil strife, and Government policies that until recently have not been conducive to development.

In addition, a lack of financial resources has seriously hampered growth and poverty reduction. Insufficient budget resources force Chad to rely almost entirely on external financing for public investment, hamper the delivery of essential Government functions, and prevent adequate operation and maintenance of public investments, lowering returns on investment and requiring premature replacement of fixed capital. A significant part (50 percent) of investment financing actually covers recurrent costs, which is both costly and unsustainable in the long run. Insufficient administrative and technical capacities and lack of counterpart funding have led to chronic under-realization of programmed public investment. Inadequate savings constrain both investment and recurrent development spending.

Chad must drastically increase investment, now at around 15 percent of Gross Domestic Product (GDP), to make up for the development lag created by its post-independence history and to meet its development objectives. Also, it must improve the efficiency of domestic investment in general and public investment in particular. The proposed project would make a significant contribution to Chad's development by considerably easing public finance constraints, as well as by catalyzing increased business activity and enhancing capacity in the private and other sectors.

Recent Performance. Since 1995, Chad has carried out a fiscal consolidation and economic reform program supported by three IDA structural adjustment credits, an IMF arrangement under the Extended Structural Adjustment Facility (ESAF), and budget support from other bilateral and multilateral sources. The Government negotiated a new 3-year arrangement with the IMF for the 2000-2002 period under the new Poverty Reduction and Growth Facility (PRGF), which was approved by the IMF Executive Directors on January 7, 2000. IDA is also preparing a structural adjustment program (planned for FY01).

The 1995-99 fiscal consolidation and economic reform program helped improve significantly the public finance situation, stabilize money and credit conditions, and introduce major structural reforms aimed at reducing the role of the public sector, liberalizing the economy, increasing competition, and favoring developmental use of public resources. Chad weathered well the impact of the 1994 devaluation of the CFA franc and attained an average real growth rate of 4 percent p.a. during the 1996-99 period; the government's current primary balance deficit has turned into a surplus; fiscal revenue increased from 6.2 percent of GDP in 1995 to 9.4 percent in 1999; and inflation averaged 4.5 percent p.a. between 1995-1999. Economic and financial performance was, however, affected by vulnerability to climatic and external shocks -- e.g., the energy crisis in Nigeria and the unfavorable world market prices for cotton. By end-1999, the Government had privatized 45 out of fifty publicly-owned enterprises and had initiated a time-bound program to privatize the remaining parastatals, including the politically-sensitive cotton sector. Most price controls have been lifted, and important regulatory reforms were undertaken to liberalize telecommunications, open trade, rationalize and streamline taxation, and encourage private investment in energy and other sectors. Chad's transition to the oil era would build on this foundation.

The Government intends to continue these efforts. Over the 2000-2002 period, Chad will seek to maintain macroeconomic stability, consolidate public finances and complete the unfinished structural reform agenda, while at the same time developing with civil society a comprehensive strategy for poverty reduction. To this end, Chad is launching the development of a Poverty Reduction Strategy Paper (PRSP), with the support of the Bank and IMF. Under the PRGF arrangement concluded with the IMF, Chad will define strategies and programs in the priority poverty-reduction sectors, increase public expenditure for poverty-reduction activities, and foster the participation of communities, beneficiaries, and the private sector. Capacity building is central to these efforts. IDA approved on January 27, 2000 a capacity building project for economic management (Management of the Petroleum Economy Project)

and, together with other donors, is supporting capacity building in critical poverty-reduction sectors. The IMF is, in addition, providing technical assistance for public financial management.

b. Government strategy regarding petroleum revenue management:

Transforming Petroleum Revenues Into Poverty Reduction and Economic Growth: Petroleum revenues would present Chad with a unique opportunity to reduce poverty, but with tangible risks. Drawing on international experience, Chad is aware of the systemic transformation of the economy frequently brought about by injection of substantial petroleum resources and the need for a longer-term perspective for poverty reduction. Implementation of the proposed project would present Chad with important challenges. During construction in particular, it must manage rural migration to avoid disrupting agricultural production and social patterns (see discussion of environmental and social aspects). Once the project comes on stream, it must manage the injection into the economy of the fiscal resources generated by oil exports, to prevent domestic price distortions which would erode the competitiveness of the non-oil economy ("Dutch disease"), deploy efficiently and transparently the financial resources generated by oil exports to attain poverty reduction objectives, and mitigate governance and corruption problems often associated with large-scale revenue generating enterprises.

To achieve its objective of poverty reduction given these factors, the Government, working closely with the Bank, has adopted a petroleum revenue management program (the Petroleum Revenue Management Program) and has articulated a *Strategy for the Management of the Petroleum Economy*. The Program seeks to reduce poverty by isolating the petroleum revenues and targeting their use to the priority poverty sectors in the context of Chad's overall sectoral programs and global Government expenditure patterns. The Program is described in Part A of Annex 11, and the Government's Strategy letter is set out in Part D of the annex. The main thrust of the Government's strategy is to target the bulk of oil revenues for incremental poverty alleviation activities in a transparent manner. It relies on several key features.

- Delineation of a framework guiding the use of oil revenues, which provides, *inter alia*, for quantitative targets for the allocation of the bulk of oil revenues to priority poverty reduction activities, mandatory long-term savings of a portion of the revenues, explicit commitment and disbursement norms, and oversight and monitoring mechanisms, including non-governmental mechanisms.
- Capacity building initiatives to increase Government capacity to use oil revenues effectively within key sectors and to manage their impact on the economy, including the development of sectoral expenditure programs. These include an IDA operation to strengthen Chad's capacity to manage its public revenues (approved January 27, 2000 by the IDA Executive Directors -- see summary description in Annex 18, Part B).
- Bank support and monitoring throughout implementation to promote the allocation of resources to effective development activities, as well as reporting/auditing requirements.

The Government is strongly committed to broadening and deepening economic reforms and strengthening financial discipline; designing and implementing effective poverty reduction programs and activities; implementing mechanisms for transparency and oversight and developing national implementation capacities. As a first step in implementing the Government's strategy, the Chad Parliament approved on December 30, 1998 a law (promulgated January 11, 1999) that sets out the Government's poverty reduction objective, delineates modalities governing the use of oil revenues that would be generated by this project, and establishes mechanisms for transparency, oversight and accountability in the use of these revenues, including the respective responsibilities of the executive and legislative branches in this process, and some oversight activity for civil society. The law is set out in Part B of Annex 11. The Government's strategy enjoys broad political support from the country's leadership and legislature, takes

into account the expectations of civil society and the need to associate it with the process, and hinges on the support of Chad's external partners. It is consistent with and builds on the ongoing economic reform objectives.

Government performance under the Petroleum Revenue Management Program will be a central criterion in determining future levels of World Bank support to Chad, as well as a key contractual undertaking under the proposed IBRD loan to Chad (see, e.g., schedule to Loan Agreement on Revenue Management Program, set out in Part C of Annex 11). The implementation of agreed reforms and actions to improve public resource management will be closely monitored under the PRGF program (2000-2002), approved by the IMF Board on January 7, 2000, and related IDA and IMF budget support operations. In addition, the Government of Chad and the Private Sponsors have developed, with Bank Group assistance, environmental and social mitigation plans designed to manage the potential environmental and social impacts of the project (see discussion below in Part E.7); implementation of these plans by the Government, COTCO, TOTCO and the Upstream Consortium will be covenants under the Bank's loan agreements. IFC has obtained similar covenants from COTCO, TOTCO and the Upstream Consortium to implement their respective obligations.

c. Sector issues and related Government strategy:

Although oil was discovered in Chad over 25 years ago, it has yet to be produced, either for export or to meet domestic needs. This is due in large part to past political and social unrest, an inhospitable investment climate, unfavorable geography, and a dearth of trained and qualified staff. To turn this situation around, Chad needs to define clearly the role of the public sector in the oil sector and to enhance its ability to accelerate private sector-led petroleum exploration and production by promoting its geological potential. Finally, costly mistakes in public investment for petroleum exploration or public subsidies for petroleum consumption should be avoided. The Government's strategy in the petroleum sector is designed to: (i) concentrate responsibility for the sector in one ministry and eliminate duplication; (ii) leave investment in petroleum exploration and production to the private sector; (iii) shift the responsibility for importing, marketing, and distribution of petroleum products to the private sector; and (iv) remove barriers and provide a rational legal and fiscal framework that would allow accelerated petroleum exploration and production. These issues are discussed in greater detail in the proposed Petroleum Sector Management Capacity-Building Project (summarized in Annex 18, Part A).

3. *Economic and sector issues to be addressed by the project and strategic choices*

The proposed project offers a unique opportunity to improve Chad's development prospects significantly, provided the country can meet the challenges of managing revenues to promote sound and sustainable economic growth and poverty alleviation, while managing the environmental and social impacts of petroleum operations. The implementation of the Petroleum Revenue Management Program and of the environmental and social mitigation plans (see discussion below under Sections E.6 and E.7) agreed upon with the Bank Group should enable Chad to meet these challenges. The project (including the US\$ 600 million in export credit agency/commercial bank financing, the US\$ 300 million IFC B-loan and the proposed US\$ 400 million bond issue on international capital markets) should also help to increase private investor confidence in Chad. The development of project environmental assessments and management plans in conformity with Bank Group safeguard policies also helps to establish sound environmental standards for the sector. Thus, the project would:

- i) support private sector-led development of the petroleum sector in Chad in an environmentally and socially sound manner;

- ii) support the development and implementation of a strategy to transform Chad's oil export revenues into sustainable growth and poverty alleviation;
- iii) improve investor confidence in energy and other sectors in Chad (an increase in investor interest in exploring for oil and other minerals has already been noted);
- iv) promote the use of a private sector-led model for project implementation;
- iii) provide a model for analyzing and mitigating environmental and social impacts for petroleum operations, as well as for large-scale infrastructure and other investments, generally; and
- vi) provide the foundation for complementary Bank-supported capacity building projects to strengthen management and monitoring of the environmental and social aspects of the project, to increase Government capacity to manage the petroleum sector effectively, and to improve its ability to manage and effectively mobilize Government resources to reduce poverty (described in Annex 18, Parts A and B).

B.2 STRATEGIC CONTEXT: CAMEROON

1. Country Assistance Strategy (CAS) goal supported by the project

CAS document number:	15275-CM	Date of latest CAS discussion:	February 8, 1996
Progress Report:	IDA/R98-14	Date of Discussion:	March 13, 1998

For the past three years, Cameroon's new development strategy has been based on the sequential implementation of an ambitious reform program to overhaul an inefficient economic system, accelerate growth, and address wide ranging poverty. The Government is implementing a variety of reforms, including (i) re-establishing and maintaining a satisfactory macro-economic framework with the support of an IMF ESAF, (ii) implementing a wide-ranging program to privatize all key parastatals, (iii) restructuring its financial sector, (iv) fundamental reform of its transport sector by transferring key responsibilities to the private sector (port of Douala, rail, road fund), (v) improving transparency in the management and exploitation of forest resources, and (vi) implementing a poverty alleviation strategy based, *inter alia*, on increased expenditures targeted at social sectors. All these efforts are being supported by a Bank structural adjustment credit. In large part as a result of its efforts to re-establish macroeconomic stability and service its external debt, Cameroon has made huge external transfers, representing on average (even after rescheduling) 5.5 percent of GDP and nearly 40 percent of annual Government revenues. These efforts have hampered its ability to finance increased expenditures in the social sectors, as well as maintain and expand existing transport and other infrastructure, which now represent a bottleneck for accelerated growth.

In this context, increasing Government revenues, through such private-sector led investment as the Doba-Kribi pipeline, is key to permitting increased expenditures in support of both the poverty agenda in the social sectors and rehabilitation of basic infrastructure – two key elements in the Bank's strategy for long-term growth and poverty reduction in Cameroon. IFC's strategy for Cameroon supports: (i) the country's privatization and financial sector restructuring efforts, (ii) small and medium-sized enterprises through the Small Enterprise Fund, and African Project Development Facility, and (iii) the development of energy and other export-oriented projects.

2. Main economic and sector issues and Government strategy

Since the devaluation of the CFA franc in January 1994, economic growth has been positive, attaining about 5 percent per year in real terms since 1996. Yet much higher rates are needed to make a significant and sustainable impact on poverty reduction. In addition, a large amount of public revenues are currently

earmarked for external debt reduction. The Government's adjustment program has been supported since 1997 by a three-year IMF ESAF, by SAC III from IDA, and by France and the European Union. The Paris Club granted a fifth rescheduling arrangement in October 1997. The main thrust of the existing adjustment program is to improve macro-financial management, privatization of utilities (in particular water, electricity and telecommunications), transport companies (air, ship and rail), restructuring the port sector, putting in place a road fund, completing the restructuring of the financial sector, support for conservation and sustainable management of forest resources and transparency in their management and exploitation, and elaborating a comprehensive poverty reduction strategy that aims, *inter alia*, at improving access of the poor to key social services and economic infrastructure. A framework paper and an initial action plan was adopted by the authorities in late December 1998. The strategy calls, *inter alia*, for increasing expenditures on social sectors and for other strategic actions designed to reduce poverty. The PRSP process, recently launched in Cameroon, will build on this foundation; an interim PRSP is scheduled for CY 2000, to accompany submission of the Decision Point HIPC Initiative paper for Cameroon.

In the energy sector, the thrust of the program is to increase transparency and efficiency. In the exploration and production of hydrocarbons, the objectives are: (a) to ensure the full transfer of oil revenues from the National Hydrocarbon Company (SNH) to the budget and to increase transparency (through annual independent audits of SNH and clarifying/circumscribing the roles of the various players); and (b) to revitalize private sector investments, through such measures as modernizing the contractual and regulatory frameworks, and the preparation of both a new Petroleum Code dealing with oil exploration and production and a gas development code. In the electricity subsector, activities are underway to transfer the responsibilities of generating, transporting and distributing electricity to the private sector.

3. Economic and sector issues to be addressed by the project and strategic choices

In Cameroon, the project would provide important additional revenues for the social sectors and other essential public expenditure needs, in particular given that a large amount of Cameroon's existing revenue flows is currently earmarked for debt reduction. However, the revenues expected from the pipeline are not significant enough (about 3 percent compared to the overall Government revenues) to justify a special mechanism, such as provided under Chad's Petroleum Revenue Management Program, that would go against the spirit of budget consolidation under Cameroon's reform program being supported by the Bank. Rather, the Bank will, through its adjustment lending and overall portfolio and country dialogue, work with Cameroon to use the benefits of the pipeline activity to support its poverty strategy; the PRSP process will help to strengthen these efforts. The focus will be on increasing expenditures in the poverty sectors and promoting macroeconomic stability needed to produce economic growth and employment generation that are key instruments in the fight against poverty in Cameroon. The project (including the US\$ 900 million in export credit agency/commercial bank financing and the proposed US\$ 400 million bond issue on international capital markets) should also help to increase private investor confidence in Cameroon. The development of project environmental assessments and management plans in conformity with Bank Group safeguard policies also helps to establish sound environmental standards for the sector. Thus, the project would:

- i) improve investor confidence in energy and other sectors in Cameroon (an increase in investor interest in exploring for oil and other minerals has already been noted);
- ii) promote the use of a private sector-led model for project implementation in an environmentally and socially sound manner;

- iii) provide a model for analyzing, mitigating, and monitoring environmental and social impacts for petroleum operations, as well as for large-scale infrastructure and other investments, generally;
- iv) support Cameroon's poverty strategy (and subsequently under its PRSP) by increasing the availability of funds to finance poverty reduction activities, and to support macro-economic stability; and
- v) provide the foundation for the complementary Bank-supported capacity building project to strengthen management and monitoring of the environmental and social aspects of the project (see Annex 18, Part C).

C. PROJECT DESCRIPTION SUMMARY

1. Project components (see Annex 2 for a detailed description and Annex 3 for a detailed cost breakdown):

The project would involve: (a) the development of Chad's Doba oil fields, including drilling of about 300 wells and construction of associated facilities and infrastructure; and (b) (i) the construction of a pipeline, 760 mm (30 inch) in diameter and 1,070 km in length, from the Doba oil fields to Cameroon's Atlantic coast at Kribi (buried to about 1 m of depth), three related pumping stations, and ancillary facilities and infrastructure improvements, and (ii) the installation of an off-shore floating storage and offloading vessel and related facilities, and an 11 km submarine pipeline from the Atlantic coastline to the vessel. Component (a) constitutes the "Field System" and (b) the "Export System." The Private Sponsors will finance the Field System entirely from their corporate resources. Two joint-venture companies, TOTCO, in Chad, and COTCO, in Cameroon, will be established between the Private Sponsors and the two Governments to own and operate, respectively, the Chad and Cameroon portions of the Export System. External financing, including from the Bank and IFC, is being sought for the purpose of partially funding the cost of the Export System, estimated at US\$ 2,202.5 million (including financing costs).

The expected financial plan for the Export System, which is based on a debt-to-equity ratio of 64:36, has been structured to provide political risk mitigation for the purpose of maximizing financing from commercial banks and project bonds. This would be achieved through government equity participation in the pipeline companies and related Bank financing, and limited recourse project debt financing from IFC, US EXIM and COFACE, as well as Bank involvement. The IFC A loan, representing about 7 percent of the total debt, is expected to mobilize up to US\$ 300 million in commercial bank lending under the B loan umbrella and plays, together with Bank financing, a key role in mobilizing up to US\$ 400 million in project bonds. US EXIM and COFACE are expected to support US\$ 600 million of further debt to complete the debt financing requirement.

The total estimated cost of the project is US\$ 3.72 billion, of which about US\$ 2.20 billion is for the Export System. This includes the initial required funding of the Debt Service Reserve Accounts (DSRA), which will be financed through the downstream investments and estimated to be US\$ 177 million. Physical and price contingencies ranging from about 5 percent to 10 percent, depending on the item, are included in the project cost.

<u>Component</u>	<u>Category</u>	<u>Imple- menting Agency</u>	<u>Cost Incl Contingencies (US\$ M)</u>	<u>% of Total</u>	<u>Bank Group (Bank) financing (US\$ M)</u>	<u>% of Bank Group (Bank) financing</u>
Field System , including Development Drilling, Field Pipelines and Operations Center, and acquisition of land.	Physical	Esso Chad	1,521	41		
Export System , including Pipe, Pipeline Construction, Floating Storage, Off-loading Vessel, and Pumping Stations, and acquisition of the right of way for TOTCO.	Physical	COTCO (portion in Cameroon); TOTCO (portion in Chad)	1,568	42	121 (50)	71
Financing Costs , including Interest during Construction and Lenders' Fees & Funding of the DSRA	Other		635	17	49.5 (20.5)	29
	Total		3,724	100	170.5* (70.5)*	100%

* Figures include IFC investments, for its own account, in the project, and do not include US\$ 3.5 million in unallocated funds from IBRD. Figures do not include interest during construction and other charges on IBRD loans.

The project cost is based on 5-year development plans for the upstream and downstream components of the project, which have been prepared by Exxon-affiliated technical staff. Costs have been reviewed by Stone & Webster, an independent engineering firm contracted on behalf of IFC and the Senior Lenders and found to be satisfactory. For example, the average cost of the pipeline amounts to about US\$ 850 per metric ton, and the average unit cost for its installation is estimated at about US\$ 238 per meter; both measures were considered by Stone & Webster to compare favorably with project costs of similar magnitude undertaken in other countries. Also, using the Private Sponsors' proved plus probable reserves case, overall finding and development cost of total produced oil is estimated at about US\$ 5.2/barrel. Based on published reports, this is in line with the 5-year worldwide average (estimated at about US\$ 5.3/barrel) cost of finding and developing reserves by large integrated oil companies.

In addition to the components mentioned in the table above, there are: (a) project preparation costs for the two Governments; and (b) complementary activities regarding (i) the development and implementation of environmental and social mitigation plans for the project; and (ii) the development of Chad's revenue management program.

Component	Category	Cost Incl. Contingencies (US\$ M)	% of Total	Bank financing (US\$ M)	% of Bank financing
Revenue Management Program for Chad	Policy	--	--	Limited Financing to be provided under parallel capacity building projects	--
Environmental/Social Mitigation Plans, including Resettlement Plan for Chad and Compensation Plan for Cameroon	Policy	--	--		--
Chad Project Preparation, including for the negotiation of project contractual framework.	Project Management	7.0	<1.0%	[Provided separate 3.0 million PPF]	--
Cameroon Project Preparation, including for negotiation of project contractual framework and acquisition of COTCO right of way.	Project Management	8.0	<1.0%	[Provided Separate 1.0 million PPF]	--

2. Key policy and institutional reforms supported by the project:

The project provides a unique opportunity for IFC and the Bank to play a significant complementary role in reducing poverty in one of Africa's poorest regions. The joint IFC/IBRD approach is essential in addressing the challenges that are posed by Chad's and Cameroon's development priorities, use of revenues in Chad, environmental and social issues, and generally strengthening institutional framework in both countries.

Through its participation in the project, the Bank Group is supporting the delineation and implementation in Chad of a petroleum revenue management program, which targets oil revenues to the financing of poverty alleviation activities. Complementary activities include the development of sectoral expenditure programs in the priority sectors of education, health, infrastructure and rural development. In Chad, the oil revenues would be deployed within a comprehensive long-term economic management perspective, building on ongoing reform and capacity-building efforts. In Cameroon, the project's revenues would support the Government objective under its Poverty Program to increase expenditures in social sectors and its implementation of the structural adjustment program being supported through IDA credits. The participation of the Governments in the development of the environmental and social mitigation plans represents initial steps in strengthening the capacity of the involved ministries in this area; the capacities of the Governments to monitor the private sector and implement their own respective responsibilities under these plans would be further supported by the proposed parallel capacity building projects.

3. Benefits and target population:

The project is expected to generate about US\$ 1.82 billion (nominal) in revenues for Chad and about US\$ 550 million (nominal) for Cameroon over the 28-year operating period (assuming current Bank price projections for the marker crude (Brent) and reserves of 917 million barrels); the economic rates of return for Chad are about 70 percent and for Cameroon are about 40 percent.¹ Other benefits arise from infrastructure improvements in Cameroon, as well as in Chad, and some employment generation in both

¹ Assuming all of the revenue earned by each Government is credited to its equity investment in the Export System.

Chad and Cameroon, as well as local procurement by the project. The project can also be expected to spur further oil exploration and development in Chad and Cameroon.

Used properly, the revenues from the project could significantly benefit Chad's largely poor population by increasing expenditures on poverty alleviation activities and promoting economic growth. The oil revenue management program (described above) is designed to transform the bulk of revenues from the first ten years of operations (and a major portion of the revenues thereafter) into increased expenditures in education, health, infrastructure, rural development and the environment and water resources to benefit the population at large. Additional private investment in Chad is also likely to accompany the project's US\$ 1.7 billion capital investment in the country. The project would benefit Cameroon by generating additional fiscal revenues for priority public expenditures and help create an environment conducive to attracting additional foreign investment. Project revenues should help ease some of the financing constraints faced by both Chad and Cameroon. In addition, additional development initiatives being developed for the producing region would assist the population in the oilfield area in Chad affected by the oilfield development (including migrants), and a separate development plan would be implemented in Cameroon's Atlantic Littoral forest to address the needs of the area's indigenous people.

4. Institutional and implementation arrangements:

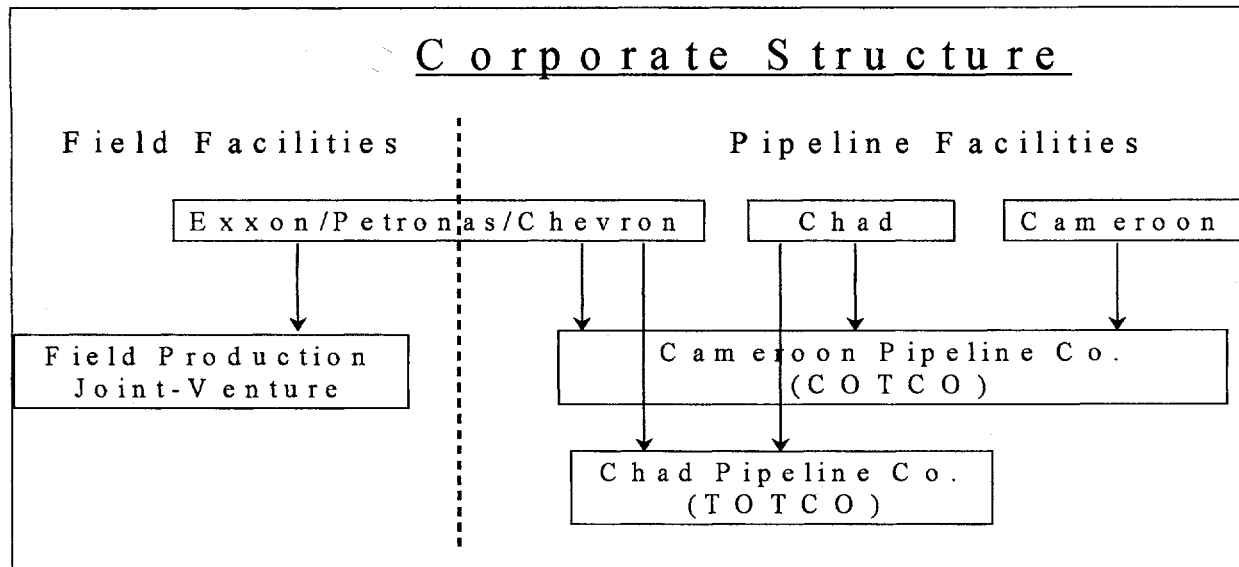
Implementation period: Five years: 2000-2005 (Export System construction: 2000-2004; Field System construction/drilling: 2000-2005, with further drilling of some additional wells through 2008; and Export and Field Systems commissioning and first oil flow by end 2004).

Project coordination: Esso Chad, the "Project Manager" and "System Operator".

Project implementation:

- The Field System (including the operations center, oil handling facilities, flow lines and other facilities in the oilfields) will be implemented by Esso Chad, on behalf of the Upstream Consortium.
- Two Project companies will build and operate the Export System:
 - TOTCO, a special-purpose company incorporated in Chad as a joint-venture between the Private Sponsors and GoT, which will own the Chad portion of the Export System (about 170 km of pipeline and the initial pumping station); and
 - COTCO, a special-purpose company incorporated in Cameroon as a joint-venture between the Private Sponsors, GoC and GoT, which will own the Cameroon portion of the Export System (about 880 km of onland pipeline, 11 km of off-shore pipeline, two pumping stations, a pressure reduction station, and the floating storage and offloading vessel).

The corporate structure is shown below. The contractual framework is described in Annex 13.



Project oversight :

Chad: Ministry of Mines, Energy and Petroleum (MMEP), as coordinator; Ministry of the Environment and Water Resources (MEWR) for environmental and social aspects; Ministry of Finance (MF) for revenue management aspects.

Cameroon: National Hydrocarbons Company (SNH), as coordinator; Ministry of Mines and Energy (MME); Ministry of the Environment and Forests (MINEF)

Exxon: Esso Chad

Petronas: Petronas Chad

Chevron: Chevron Chad

Project Insurance:

TOTCO, COTCO, the Upstream Operator (Esso Chad) and the other members of the Upstream Consortium intend to subscribe to a number of insurance coverages, which will be placed in the international markets to cover the overall project construction and operational phases. The overall insurance program, which was reviewed by an independent insurance consultant on behalf of the Senior Lenders and substantially agreed upon with TOTCO, COTCO and the Upstream Consortium members, is considered adequate.

Accounting, financial reporting, and auditing arrangements:

TOTCO, COTCO, the Upstream Operator (Esso Chad) and the other members of the Upstream Consortium will: (a) establish and maintain, to the satisfaction of the World Bank Group, adequate accounts and records, including separate accounts and records for the Project; (b) engage independent auditors acceptable to the Bank Group to audit their accounts, including the Project accounts and financial statements, in accordance with internationally acceptable accounting principles and in such detail as the Bank Group may request; and (c) undertake audits annually and submit an audit report to the Bank Group within six months after the end of each fiscal year (Statement of Expenditures will not be used since there will be no small expenses).

The Bank would also receive: (a) annual audits of the Petroleum Revenue Account and Petroleum Future-Generations Investment Account, established by GoT (see description in Annex 11 of petroleum revenue management program), and (b) annual audits of the separate off-shore accounts established to support IBRD and the Senior Lender loans, including the account established to receive Chad's royalty and other receipts.

In addition, TOTCO and COTCO will maintain offshore dollar-denominated escrow accounts to receive equity and debt funding (i.e., during construction), as well as revenues (during operations), as well as offshore Debt Service reserve accounts securing the Senior Lenders holding six-months' principal and interest due to these lenders. Each of the Upstream Consortium members will also maintain an offshore dollar-denominated escrow account to receive proceeds from the sale of its oil from the three fields (excluding Chad royalty), and from which its share of the tariff payments due to COTCO and TOTCO will be made. All escrow accounts of TOTCO, COTCO and the Upstream Consortium members will be operated in accordance with the IFC/Senior Lenders' semi-annual budgetary controls for both the Project's construction and operational phases. These budgets will also be used by the Senior Lenders (including IFC) to produce independent financial projections to monitor reserves adequacy and minimum debt coverage ratios requirements. Chad royalties and other revenues will be paid into the offshore escrow account established to secure the IBRD and EIB loans (see discussion below in Section C.6); the balance will then be distributed to Chad to be applied in accordance with the revenue management program described in Annex 11.

Monitoring and evaluation arrangements:

(a) TOTCO, COTCO, the Upstream Operator – namely, the agencies implementing the project – would submit quarterly reports to the Bank Group, covering, *inter alia*, progress on physical implementation, procurement, financial commitments and other elements of project progress, and the other members of the Upstream Consortium would submit summary reports quarterly; (b) TOTCO, COTCO, the Upstream Operator would submit quarterly monitoring reports regarding implementation of the environmental management plan (to be made available by the Bank Group to the public); (c) GoT and GoC would submit annual reports regarding project progress in connection with the annual reviews to be carried out with the Bank, and quarterly reports regarding implementation of the EMP; (d) representatives of TOTCO, COTCO, the Upstream Operator, GoT and GoC, and the Bank would meet annually to review progress in project implementation and a mid-term review would take place approximately two years after loan effectiveness; and (e) the Governments would submit to the Bank, with the assistance of COTCO, TOTCO and the Upstream Operator, a Project Implementation Completion Report within six months after the loan closing date.

The Bank Group, together with the other lenders, would also employ an external compliance monitor group to assist it in monitoring implementation of the environmental management plan. The external compliance monitoring group (also referred to as the EMP Compliance Monitoring Consultant) would include a spectrum of skills, such as social development/consultation expertise, ecological/natural resource specialization, experience in the implementation of pipelines/other linear developments, and strong knowledge of the oil industry. The external compliance monitor group would conduct periodic site visits (quarterly during the construction period and annually thereafter), and review the monitoring reports prepared by the private operators and the Governments, and would liaise with local groups in-country as appropriate. The Bank Group would also continue its periodic meetings with local NGOs to assess progress in implementation of the project, including the environmental management and resettlement/compensation plans.

Quarterly progress reports and proved reserves estimates would be submitted by COTCO/TOTCO and/or by the Upstream Consortium members to the Senior Lenders (including IFC), with a copy to the Bank. These will be reviewed by independent technical consultants, who will have the right to make site inspections on behalf of the Senior Lenders, and independent petroleum engineering consultants. An independent insurance consultant will also review annually the project insurance on behalf of the Senior Lenders to ensure adequate coverages.

5. Bond issue and shareholder financing

At the request of GoT and GoC, COTCO and TOTCO are exploring issuing bonds on the international capital markets of about US\$ 400 million in total. These bonds would be *pari passu* with the other senior loans made to the pipeline companies, namely by IFC and under the coverage provided by the export credit agencies. The bonds are expected to be floated by end-2001. In the event that the bond offering fails to meet its US\$ 400 million target, the Private Sponsors would provide additional equity funds to fill any financing gap. This would result in the debt-equity ratio for the pipeline companies dropping from about 64:36 to potentially as low as 45:55 (assuming no bonds are issued). Three principal reasons could lead to a bond of less than US\$ 400 million: (a) if the level of proved reserves at Project completion is less than 595 million barrels² (IFC's base-case), then the bonds will have to be prepaid through a Private Sponsor equity injection to a level that provides adequate coverage ratios given the level of proved reserves at that time; (b) the bond offering does not garner the desired interest from international capital markets, in which event the shortfall would be filled by additional Private Sponsor equity; and (c) if the oil price outlook of the Senior Lenders is not sufficient to support the full targeted amount of bonds under the agreements negotiated by the Private Sponsors with the Senior Lenders. GoT and GoC also have the option of injecting additional equity to prevent dilution, but to date only GoT has indicated an interest in doing so.

The bond issue provides two main benefits for the two countries. First, it reduces the need for equity financing from the two Governments, by generating more debt financing. This meets the Governments' objectives of maintaining their percentage shareholdings in COTCO closer to the levels they had originally targeted (namely 15 percent for Cameroon and 5 percent for Chad), while also generating more equity per dollar invested (and, ultimately, per dollar borrowed from IBRD/EIB). Second, it is a vehicle to provide for formal recognition by and official ratings from international capital markets and rating agencies, and would support efforts to attract foreign investment.

6. IBRD Loans and Support Arrangements

a. Chad

The IBRD loan to Chad, an IDA-only country, would be provided under the traditional elements of the enclave loan structure. Under this structure, IBRD loans are supported, in addition to the sovereign repayment obligations, by various support arrangements designed to enable IBRD to look directly to the project revenues for repayment, together, in certain cases, with other guarantees. The project is expected to generate for Chad revenues each year far in excess (by a factor of greater than four) of the annual debt service payments due the Bank under the loan. The proposed IBRD loan would benefit from the following support arrangements:

- The IBRD loan would benefit from commercial risk pre-completion guarantees covering principal (used to finance Chad's equity investments in COTCO and TOTCO) and interest due under the IBRD loan. These guarantees would be provided by creditworthy Exxon/Petronas/Chevron companies, on a several basis (i.e., each oil company guarantor would be responsible for obligations under its guarantee, but not for the obligations of the other companies under their respective guarantees).

² No bonds will be permitted under the agreements with the Senior Lenders if the adjusted proved case (which is based on an adjusted level of proved reserves) remains at the current adjusted level of 570 million barrels.

- The IBRD loan would be repaid directly from an off-shore escrow account, specifically established to receive all royalties, taxes and dividends payable to Chad in connection with the project.
- An offshore Chad debt service reserve account would also be established to support debt service payments due to IBRD; this reserve account would hold at all times an amount equal to 18 months of debt service payments due to IBRD under the Chad loan. The reserve would be funded from Chad's royalties, taxes and dividends generated during the first 12 months of project operations.
- In the event of interruption of project operations, Chad's revenues would remain in the escrow account until project operations resume (i.e., a moratorium on disbursements to Chad from the offshore escrow account).

Chad has chosen the floating rate dollar-based single currency IBRD loan product (US dollars matches the currency of project revenues). The loan would have a five-year grace period, an eight-year repayment period, with level repayment of principal. The total loan amount of US\$ 39.5 million would include US\$ 3.5 million in unallocated funds, which would allow Chad to maintain its equity stake in COTCO and TOTCO if there is a call for an additional 10 percent equity infusion requirement because of cost overruns or only partial success of the COTCO/TOTCO bond offering.

b. Cameroon

The IBRD loan to Cameroon, an IDA-only country, would also be supported by various additional arrangements. Like the loan to Chad, it would benefit from pre-completion commercial risk guarantees provided, on a several basis (i.e., separately), by creditworthy Exxon/Petronas/Chevron companies. However, in lieu of an escrow account/debt service reserve support structure, the Bank is charging Cameroon a premium. This premium structure is better adapted to Cameroon's current commercial debt situation than the escrow account/reserve approach given, *inter alia*, the Government's outstanding commercial debt and the inter-creditor contractual obligations that characterize some of these loans. The premium for Cameroon has been set at 10 percent of the loan amount (i.e., US\$ 5.34 million of the loan total of US\$ 53.4 million). Like other loan charges, this amount has been capitalized into the total loan amount and would be drawn down in relative proportion to other disbursements under the loan. Cameroon has selected the fixed spread loan, denominated in dollars (which matches the currency of project revenues); it would have a five-year grace period, followed by a ten-year repayment period, with level repayment of principal. Cameroon has capped its equity infusion at the US\$ 70 million to be provided by IBRD and EIB, so the IBRD loan would not include any unallocated provision.

7. Security and Support Arrangements for the IFC Loans

The security package which is being negotiated for the IFC loans to TOTCO and COTCO is expected to include a pre-completion guarantee against commercial risks to be provided by creditworthy affiliates of the Private Sponsors. Project Completion is achieved upon the satisfaction of certain physical completion, reserves adequacy and financial tests. Post completion, the IFC loans are expected to be secured by the assets and revenues of TOTCO and COTCO and other suitable support arrangements to be furnished by the Private Sponsors and their affiliates.

8. *Cofinancing: EIB*

The European Investment Bank (EIB) is proposing, like IBRD, to provide financing to GoC (about US\$ 30 million equivalent) and GoT (about US\$ 17 million equivalent) to finance the Governments' respective equity investments in the pipeline companies. EIB loans would be provided with a maturity of 15 years, including 5 years' grace, and an interest rate of 3 percent per annum. EIB is also providing additional non-concessional financing directly to the Private Sponsors. The Bank will coordinate its activities with EIB, as well as with the IFC/ Senior Lenders group, and will enter into a memoranda of understanding setting out principles for coordination, cooperation and concerted action between the Bank and EIB, and with IFC, US EXIM, COFACE and the other Senior Lenders.

D. PROJECT RATIONALE

1. *Project alternatives considered and reasons for rejection:*

Once the Private Sponsors determined that exploitation of the oil in southern Chad was potentially economically feasible, three main oil field development scenarios were evaluated: (a) a small-scale development of only the lighter oils of the Doba and Doseo basins; (b) a moderate-scale development of the heavy and light crudes of the Doba basin only (the option selected); and, (c) a large-scale development of the heavy and light crudes of all the three basins, Doba, Doseo, and Lake Chad. From the point of view of cost and quality of oils, scenario (b) offered more profitability than the other two alternatives. The large amount of water produced at the well heads could either be discharged on the surface or reinjected into the ground. It was decided from the cost and environmental points of view that reinjecting the water would be the better solution. Alternative well configurations and layouts were also studied (vertical vs. deviated).

In addition, various oil export transportation alternatives were considered, including: (a) trucking the crude by road to a railhead and then shipping it via the rail system; (b) using river transport; and (c) the construction of a pipeline, with on-shore storage/loading marine terminals; and (d) a pipeline with off-shore storage/loading facilities. Given, in part, the expected volumes, the most economical and optimum transport option was the construction of a buried pipeline of about 1,000 km originating at the oil fields in southern Chad, continuing across Cameroon, and extending via an 11 km submarine pipeline to a floating storage and off-loading vessel in the Gulf of Guinea. Alternative sites for project facilities were studied and those selected were located in such a way as to minimize costs and limit impacts to sensitive resources and the population. Criteria considered in evaluating the pipeline corridor and alignment alternatives included cost, technical feasibility and environmental/social issues (see discussion below). Various different pipeline configurations were analyzed. The sizing of the pipeline and overall capacity (225,000 barrels per day, with maximum capacity of 250,000 barrels per day, diminishing over time as viscosity of the throughput oil increases) are consistent with the reservoir estimates for the Doba oil fields of about 917 million barrels proved and probable reserves.

2. Major related Government projects financed by the Bank and/or other development agencies (completed, ongoing, and planned):

Chad:

Sector issue	Project	Latest Supervision (Form 590) Ratings (Bank-financed projects only)	
		Implementation Progress (IP)	Development Objective (DO)
	<u>Bank-financed</u>		
Macro-Economic Reform:	Second Structural Adjustment Credit (completed)	S	S
	Third Structural Adjustment Credit (completed)	S	S
Domestic Energy Development	Sedigi Development Project Engineering Credit	S	S
	Household Energy	S	S
	Electricity (FY01)	N/A	N/A
Capacity Building	TA for Economic and Financial Management (completed)	S	S
	Capacity Building for Economic Management	S	S
	Petroleum Sector Management Capacity Building/Env. (FY00) – pipeline related	N/A	N/A
	Management of the Petroleum Economy (1/00) – pipeline related	N/A	N/A
Health Sector:	Health and Safe Motherhood	S	S
	Population and AIDS	S	S
Education:	Basic Education	S	S
	Education VI (FY02)	N/A	N/A
Transport:	Transport II	S	S
	Transport III (FY01)	N/A	N/A
Agriculture:	Agricultural Services	U	U
<u>Other development agencies</u>			
AFD (France)	Rural roads in cotton area (almost completed)		
African Development Bank	Road upgrading, paving, etc. (ongoing)		
European Union	Road upgrading, paving, etc. (ongoing)		
KfW (Germany)	Road upgrading, paving, etc. (ongoing)		
Taiwan	Road upgrading, paving, etc. (ongoing)		
GTZ (Germany)	Rural roads in Northeast (ongoing)		
IP/DO Ratings: HS (Highly Satisfactory), S (Satisfactory), U (Unsatisfactory), HU (Highly Unsatisfactory) N/A: Not available as project under preparation or in early implementation.			

Cameroon:

Sector issue	Project	Latest Supervision (Form 590) Ratings (Bank-financed projects only)	
		Implementation Progress (IP)	Development Objective (DO)
	<u>Bank-financed</u>		
Macroeconomic reform:	Structural Adjustment Credit II (completed)	S	S
	Structural Adjustment Credit III	S	S
Transport	Transport Sector TA	S	S
	Transport Sector	S	S
	Railway Concessioning (FY00)	N/A	N/A
Capacity Building	Environmental Management (FY00)— pipeline related	N/A	N/A
	Forestry and Environment (FY01)	N/A	N/A
Private Sector Development	Privatization and Private Sector	S	S
<u>Other development agencies</u>			
GEF	Biodiversity Conservation and Management (ongoing)	S	S
AFD (France), African Development Bank, European Union, KfW (Germany), and BMZ (German Cooperation)	Road maintenance and rehabilitation (ongoing)		
AFD and European Union	Urban transport infrastructure (planned)		
OECF (Japan), KfW, and AFD	Port infrastructure and equipment (ongoing and planned)		
KfW and AFD	Railway (completed)		
AFD and European Investment Bank	Railway Concessioning (planned)		
UNDP	Capacity Building for implementation of National Env. Mgmt. Program (planned)		
GTZ (Germany)	Capacity Building for Ministry of Environment (ongoing)		
IP/DO Ratings: HS (Highly Satisfactory), S (Satisfactory), U (Unsatisfactory), HU (Highly Unsatisfactory) N/A: Not available as project under preparation or in early implementation.			

3. Lessons learned and reflected in the project design:

The Bank Group has financed only a handful of transnational petroleum pipelines in the last 25 years, including Bank financing of the Bolivia/Argentina Gas Pipeline Project (0635-BO) in 1973, the Second Natural Gas Pipeline Project in Tunisia (1864-TU) 17 years ago, the Bolivia/Brazil Gas Pipeline Project in 1997, and IFC financing in 1998 of the Azerbaijan/Georgia Early Oil Project (IFC/R98-180). As a general proposition, the Bank Group's oil and gas lending strategy recognizes the difficulties in financing and implementing such projects, but it identifies them as being of the highest priority for Bank Group support. However, the Bank Group's experience and that of developing countries in large-scale energy projects point to several lessons.

- First is the advisability of choosing a private sector operator, in particular one with strong financial incentives. The Private Sponsors' large private sector financial investment and the management by

Private Sponsor controlled and majority-owned subsidiaries should help ensure effective project management.

- Second, experience has shown that a large influx of revenues into the economy through increased government earnings can result in distortions and significant waste. Hence the requirement that an acceptable revenue management strategy be developed.
- Third, given Chad's institutional weaknesses, the project relies heavily on the private sector operators. In addition, parallel capacity-building projects are being proposed to strengthen Chad's capacity to manage oil revenues, the petroleum subsector, and environmental and social impacts of the project. A capacity building project is being proposed for Cameroon as well to strengthen its environmental management.
- Fourth, project sustainability is enhanced by ensuring that local populations see tangible benefits from the project and receive an equitable portion of the revenues.

In Chad, tangible benefits to the oil producing region are expected to flow from several sources during construction and subsequent operations: (a) road improvements, employment generation, and income opportunities from local procurement of food and other goods and services by Esso Chad and TOTCO and their sub-contractors (as well as payments of compensation by the operator under the resettlement and compensation plan); (b) development and implementation by GoT of a development plan for the region, including a short to medium-term component to address induced impacts relating to the project (certain social infrastructure would be financed under the planned parallel IDA capacity building operation), and a medium- to long-term component focussed on the development needs of the region generally; (c) allocation of an equitable portion of revenues earmarked for the priority sectors under GoT's revenue management program to the producing region; and (d) effective and transparent use in the oil producing region of the supplemental "5 percent" of royalties earmarked for this region under the revenue management law.

In Cameroon, local benefits would include the following: (i) local employment generation and local procurement of food and services by COTCO and its construction sub-contractors; and (ii) the proposed indigenous peoples plan will also generate benefits for local populations along the pipeline route, benefits which should endure beyond the construction phase when disruption is expected to be most significant. In addition, local populations will receive payment of compensation for crop damage and community-based compensation for loss of common resources under the Cameroon compensation plan.

- Fifth, continuing commitment of the countries and cooperation between the countries is an important element for success. The large benefits that each country is expected to reap from the project provide an important incentive for continued support. In addition, Chad and Cameroon have negotiated a treaty of cooperation relating to the project which creates a foundation for the future.
- Sixth, the Bank Group can play a catalytic role in mobilizing private sector financing for such large capital intensive projects by mitigating political risks, in particular for investments in countries without a pertinent track record, and where the project is dependent on transporting the goods across a specified neighboring country.

4. Indications of Government commitment and ownership, and of Private Sponsor commitment:

Both Governments have over the last five years negotiated and signed numerous agreements with the Private Sponsors for the development of the project and for equity stakes in COTCO and TOTCO. The two countries have spent a substantial amount of time and their own funds in this process. In addition, the two Governments have publicly recognized the importance of this project. Chadian officials, in particular, have repeatedly confirmed the central role that this project would play in the country's future development. The Government initiated a public information campaign with its civil society and citizens to discuss the implications of oil production for Chadian society. Up-front legislative actions have also been taken: the Chad Government prepared and submitted to its Parliament a revenue management law for debate (law was approved by Parliament on December 30, 1998 and promulgated in January 1999). Notwithstanding the recent change in the Private Sponsors' membership, the Private Sponsors, as a group, have expended a great deal of their resources in preparing this project; they would be the majority owners/financiers and have strong financial incentives to complete the project on time. The two Governments have worked closely with the Private Sponsors in defining the financial structure, and analyzing the environmental and social impacts of the proposed project. Project start-up activities have begun, both in Chad and Cameroon, including mobilization of contractors responsible for carrying out a centerline survey and infrastructure upgrades. In addition, the Private Sponsors have agreed to assume the financial cost for external counsel hired by IBRD to advise it on legal aspects relating to the structuring of an enclave loan and other issues.

5. Value added of Bank and IFC support in this project:

The Bank Group's involvement has already helped to raise the standard and quality of the environmental assessments and the mitigation plans, including significant adjustments to project design. For example, the proposed routing has been altered to avoid the environmentally sensitive Mbéré Rift Valley and the areas of bio-diversity in the Deng Deng forest, both in Cameroon. The Private Sponsors and Governments have also undertaken extensive consultations with local NGOs and the public. The Bank Group, through an integrated IFC/IBRD approach, is ensuring that the project is in compliance with all applicable World Bank environmental and social policies and guidelines, and will carefully monitor the implementation of the Environmental Management Plan (EMP). The Bank will also support the strengthening of the Governments' capacities to fulfill their respective responsibilities under the EMP. Furthermore, coordinated IFC and Bank actions will provide additional leverage for Governments' compliance with their obligations.

The Bank Group involvement in this project has provided a vehicle to promote the development by Chad of a strong strategy to transform the petroleum revenues into poverty alleviation and sustainable economic growth (see discussion above on Chad's revenue management program). Bank Group involvement also helped to support the equitable treatment of Chad and Cameroon by the Private Sponsors.

The development of private sector-financed transnational projects is often constrained by concerns about political risks. A principal difficulty in attracting the US\$ 3-billion plus financing from the private sector for this project is the perceived risks and complexities involving an operation from Chad across Cameroon to the Atlantic Coast. The Bank Group's support has been a key element in catalyzing the involvement of the Private Sponsors, who have stated that they would be unwilling to proceed with the project without the Bank Group's participation, given the significance they attach to the mitigation of political risks provided by the Bank Group's involvement. Bank Group involvement would also be crucial to catalyze the US\$ 900 million in financing from commercial lenders/ECAs (including under IFC's B-Loan), who have also indicated their unwillingness to proceed without the Bank Group's involvement, and the

US\$ 400 million bond issue. IFC and the Bank will help to support stability of the project's arrangements and operation, and will play a critical role in a project involving cooperation between two Governments and three international oil companies. In such an environment, IFC, as well as the Bank, can help to ensure confidence in the basic commercial and technical soundness of the project and reduce inevitable tensions as various agreements are tested in practice.

E: SUMMARY PROJECT ANALYSIS (Detailed assessments are in the project file, see Annex 8)

The project economic analysis and financial analysis can be carried out from varying different perspectives and by delineating the project in different ways (e.g., overall project, from Chad's perspective, from Cameroon's perspective). Returns are sensitive to various factors, such as price and reserves, and different parties assess these factors using different norms. For example, the Senior Lenders, including IFC, have assessed the project and the security of their respective loans on the basis of proved reserves only, as is the norm in lending assessments. The Private Sponsors and the Governments are assessing the project on the basis of the Private Sponsors' estimates for proved plus probable reserves, which they view as providing a more reasonable basis (given, in part, their equity-like perspective). Based on an assessment by Bank technical staff of the geological and other information provided by the Private Sponsors, and having reviewed the independently certified reserves estimates, the proved plus probable case is also being used for the economic analysis and to assess projected Government and Private Sponsor returns. The independently certified proved case is used as the base for the financial analysis from the perspective of IFC as lender. The following analysis attempts to set out these various aspects, with a particular focus on the economic assessment of the project from the perspective of each of the countries, as well as the financial assessment for the Private Sponsors and the Senior Lenders.

1. Economic (supported by Annex 4):

☒ Cost-Benefit Analysis ☐ Cost Effectiveness Analysis ☐ Other (Specify)

All figures presented in this Section E.1 are provided in real 1999 US\$'s.

Net Present Value (NPV)@10%, Real

Re: Project: NPV = US\$ 1,417 million; IRR = 19%

Re: Chad: NPV = US\$ 463 million; IRR = 70%

Re: Cameroon: NPV = US\$ 144 million; IRR = 39%

The cost-benefit analysis was carried out for the project as a whole to ensure its soundness (see a. below). The economic cost-benefit analysis was also carried out for Chad and Cameroon, individually (see b. and c. below) and was made assuming that all the financing being provided for the project, other than the IBRD and EIB loans to finance the Governments' investments, represents tied financing that would not otherwise be available to either Chad or Cameroon without the project; this represents 97 percent of total financing for the project. The analysis focuses on the direct revenues generated by the project, which are large compared to additional benefits from infrastructure improvements, employment generation and other activities (see Part H of Annex 4). Similarly, environment related costs are expected to be relatively small compared to these benefits and are dealt with through a sensitivity analysis (see Part I of Annex 4).

Base Case Scenario

All direct revenues are generated by the sale of crude oil in international markets. In the base case (the "Base Case"), the sales are based on a Brent oil price of \$15.25/bbl in 1999 US\$'s (consistent with the Bank's 1/2000 oil price projections), adjusted downward to an average price of about \$13.50/bbl to take

account for quality, marketing and transportation. As described above, the proved plus probable reserves case is used for the Base Case. This represents 917 million barrels of oil produced over a 28-year period, which results in the shipment through the pipeline of about 883 million barrels -- the rest being used for field operations.

a. Project as a whole

Project Assumptions: The costs include: (i) exploration, pre-development, and upstream development expenditures in Chad; (ii) pipeline construction costs in Chad and Cameroon; and (iii) upstream and pipeline operating costs in both Chad and Cameroon. Project capital costs (i.e., items (i) and (ii)), including financing costs, total US\$ 3.72 billion.

Project Returns: In the Base Case, the NPV of the revenues of the project as a whole is US\$ 1,417 million, and the rate of return is 19%.

The sensitivity analysis for the project as a whole demonstrates that the project is less sensitive to changes in capital costs than to oil price and reserve levels:

- A 20% increase in project capital costs reduces the NPV to US\$ 1,038 million and the rate of return to 17%.
- A drop of about 20% in crude oil prices produces an NPV of US\$ 404 million and a rate of return of about 13%.
- A drop of about 20% in reserves (to 701 million barrels) would decrease the project's NPV to US\$ 549 million and the rate of return to 14%.

The probability/ risk analysis shows there is a 50% chance that the NPV will exceed US\$ 1,251 million and a 30% chance that it will exceed US\$ 1,537 million. Similarly, the estimated probability distribution of the rate of return shows a 50% chance that the IRR will exceed 18% and a 80% chance it will exceed 15% (details provided in Annex 4).

b. Chad

Returns to Chad: Chad is entitled to the following direct revenues under the project: (a) a royalty payment; (b) an upstream corporate tax on the Upstream Consortium; (c) a corporate pipeline tax on TOTCO; and (d) dividends from its equity participation in TOTCO and COTCO. It is estimated that the direct revenues to Chad would amount to US\$ 1.677 billion over the 28-year operational period. The NPV for Chad would be US\$ 463 million and the IRR about 70% (based on a Chad equity investment of about US\$ 42 million). A comparative study made of oil production agreements in other countries concluded that the returns to Chad are reasonable. In addition, the project would generate other important benefits not included in the preceding economic calculations, specifically in terms of improvements in infrastructure, local employment generation and local procurement of goods and services.

The results of the sensitivity analysis regarding the returns to Chad demonstrate that its returns are insensitive to changes in project capital costs, but are sensitive to changes in oil price and reserve levels:

- A 20% increase in project capital costs marginally reduces Chad's NPV to US\$ 443 million and its rate of return to 69%.
- A drop of about 20% in crude oil prices produces a reduction in the NPV to US\$ 271 million and a lowered rate of return of 56%.
- A drop of about 20% in reserves (to 701 million barrels) would decrease Chad's NPV to US\$ 289 million and its rate of return to 63%.

The probability/risk analysis shows that there is a 50% chance that Chad's NPV will exceed US\$ 428 million. It also shows that there is a 50% chance that Chad's rate of return will exceed 66% and that the risk of a rate of return below 40% is negligible (details provided in Annex 4).

Fiscal Impacts on Chad: From Chad's perspective, royalties, income taxes on the upstream and TOTCO, and dividends are treated as general Government revenues. These total US\$ 1.677 billion. Over the project life, the average annual revenue is estimated to be about US\$ 60 million.⁴ Only limited taxes or import duties would be imposed by Chad on project goods and services during construction.

c. Cameroon

Returns to Cameroon: Under the project, Cameroon will be entitled to receive (a) a transit fee for every barrel of oil that goes through the Cameroon portion of the pipeline; (b) a corporate income tax on COTCO; and (c) dividends from its equity participation in COTCO. In the Base Case, Cameroon would earn a total of about US\$ 505 million in revenues from the project, its NPV would be US\$ 144 million and its IRR about 39% (based on a Cameroon equity investment of about US\$ 70 million). A comparative study of oil pipeline transportation agreements in other countries concluded that the returns to Cameroon are reasonable. In addition, Cameroon would benefit from substantial improvements to its infrastructure (over US\$ 100 million would be spent by the project), local employment generation during construction, rail and trucker freight payments, and commissary procurement for locally produced food and other provisions during construction.

The results of the sensitivity analysis regarding the returns to Cameroon show that its returns are insensitive to changes in both capital costs and oil price levels, but are sensitive to changes in reserve levels:

- A 20% increase in project costs has no significant effect on Cameroon (i.e., NPV remains at about US\$ 145 million and IRR at 39%), since its returns are primarily dependent on the volume shipped.
- Similarly, a drop of about 20% in petroleum prices has no significant impact on Cameroon's returns (i.e., NPV remains at about US\$ 145 million and IRR at 39%) because its revenues are not directly a function of the price of oil. Consequently, Cameroon's returns are essentially insulated from volatility in world oil prices.
- A drop of about 20% in reserves (to 701 million barrels) would decrease Cameroon's NPV to US\$ 117 million and its rate of return to 36%.

⁴ Given, in part, the allocation framework established under Chad's Revenue Management Program, this should translate into at least US\$ 40 million in additional annual expenditures in the priority poverty sectors over the first ten years of production.

The probability/risk analysis shows there is a 50% chance that Cameroon's NPV will exceed US\$ 139 million and its rate of return will exceed 38%, and that the risk of a rate of return below 33% is negligible (details provided in Annex 4).

Fiscal Impacts on Cameroon: From Cameroon's perspective, the transit fees, dividends and income tax on COTCO are treated as general Government revenues. These total US\$ 505 million, representing an annual average of about US\$ 18 million, with annual average levels over the first five years of production of about US\$ 45 million. Only limited taxes or import duties would be imposed by Cameroon on goods and services during construction.

2. Financial:

[All figures presented in this Section E.2 are provided in nominal terms.]

NPV@12%, Nominal

Re: Project:

Consortium proved and probable reserves case: NPV = US\$ 1,104 million; IRR = 19.6%

Senior Lenders/IFC's Base Case: negative NPV; IRR = 8.2%

Re: Private Sponsors

Consortium proved and probable reserves case: NPV = US\$ 544 million⁵; IRR = 18.5%

Re: COTCO and TOTCO: Minimum DSCR = 1.99

: Minimum Loan Life Cover Ratio = 2.17

As indicated earlier, the project's financial performance has been prepared under two reserves scenarios: (a) proved and probable reserves of 917 million barrels, which is used to evaluate the Private Sponsors' returns and is also used by the Bank as a base-case for the economic analysis; and (b) IFC's base-case using proved reserves of 595 million barrels⁶. Scenario (a) yields satisfactory revenues and returns to the equity holders. Scenario (b) is the norm for raising commercial debt and is used by all the Senior Lenders and IFC to evaluate the debt servicing capacity for TOTCO and COTCO (i.e., IFC's proposed borrowers). However, scenario (b), which is not applicable from an equity perspective, produces a negative NPV for the Private Sponsors. Also, the internal rate of return calculated under that scenario does not reflect the project's true commercial value.

Both above-mentioned scenarios (a) and (b) are based on the January 2000 Bank price projections for Brent crude, with appropriate quality, transportation and marketing adjustments. IFC's (and Senior Lenders') base-case or scenario (b), which is discussed in more detail below, provides strong debt coverage ratios for IFC and the Senior Lenders.

IFC Base-Case for Loan Evaluation

IFC's base-case financial model (which includes US\$ 400 million of project bonds), uses the expected production profile approved by NSA based on the recovery of a minimum of 595 million barrels of proved reserves of crude oil. Two calculations for debt service coverage are presented: a standard Debt Service Coverage Ratio (DSCR), which compares a given period's operating cash flow with debt service for that period, and a Life of Loan (LOL) coverage ratio, which compares the present value of cash flows over the loan life to total debt outstanding in a given year.

⁵ Does not include Consortium's 1993-1999 sunken costs.

⁶ Should the level of proved reserves be less than 595 million barrels at project completion, the project bonds would reduce accordingly, with no bonds allowed if proved reserves remain at their currently certified level of 570 million barrels.

For this project, the base case LOL and DSCR measures during the life of the IFC loan are projected to be strong at a minimum of 1.99 and 2.17 respectively. The table below summarizes the financial projections for the 2004-2011 period, 2005 being the first full year of oil production.

IFC's Base Case Assumptions and Resulting Financial Ratios, 2004-2011
(Nominal US\$ Million)

	<u>2004*</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
Oil Production (million barrels)	40.6	78.0	63.3	49.1	41.0	34.5	29.6	26.0
Doba Oil Price (nominal US\$ /bbl)	15.09	15.30	15.47	15.64	15.81	15.98	16.15	16.21
Gross Revenues	582.5	1,135	931.7	729.8	615.7	523.6	454.1	400.6
Cash Flow Before Debt Service	352.8	705.2	673.1	519.4	421.0	344.5	268.3	224.8
Debt Service	176.7	347.6	336.6	248.6	190.6	147.8	105.6	83.5
Cash Flow After Debt Service	176.1	357.6	336.6	270.8	230.3	196.6	162.7	141.3
<u>Ratios</u>								
DSCR	2.00	2.03	2.00	2.09	2.21	2.33	2.54	2.69
LOL	2.17	2.19	2.28	2.40	2.55	2.71	2.92	3.19

*6 months only

Export System Tariff Arrangements

The tariff charged by COTCO and TOTCO, to ship oil from the Doba fields through the Export System is designed to fund operating costs, the Cameroon transit fee (in the case of COTCO only), taxes, and debt service payments due to the Senior Lenders, and a return on equity of 10% per annum on the equity investments in these pipeline companies.

The dividend income for COTCO/TOTCO's shareholders is supplemented by various additional sources of income: (i) the return for the Upstream Consortium is supplemented by their profits from the oil fields; (ii) the returns to Chad are supplemented by the royalties from the sale of oil, the corporate income tax imposed on TOTCO's profits, and the corporate income tax imposed on the Upstream Consortium profits from the oil fields; and (iii) the returns to Cameroon are supplemented by the transit fee and the corporate income tax imposed on COTCO's profits.

Oil Price Projections

The oil prices assumed in the financial projections are based on the January 2000 World Bank forecast, adjusted down to account for quality, marketing and freight. The financial projections conservatively assume that this discount will be applicable throughout the project life although it is expected to decrease over time as a market is established for the Doba crude.

The Doba crude is a heavy crude with a relatively low sulfur content, but a high acidity. These characteristics are different from most crudes already established in the market. The acidic characteristic is a disadvantage because of its corrosive nature and would require that the crude is mixed with other crudes during refinery operations to mitigate some of the corrosive impacts. A Doba crude valuation study was carried out by an independent consulting firm, Scientific Software-Intercomp (U.K.) Ltd (SSI), which concluded that the Doba crude is likely to discount at about US\$ 2.3-3.5/bbl relative to Brent, depending on the level of Brent, to compensate for its low gravity and acidity. As a result, the aggregate discount to Brent was estimated at an average of about US\$ 3.5/bbl in nominal terms after taking into account quality, transportation and marketing costs.

Oil Price Projections (Nominal US\$ per Barrel)

	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>
Brent Crude Price*	17.75	18.00	18.20	18.40	18.60	18.80
Doba crude price	15.09	15.30	15.47	15.64	15.81	15.98

* World Bank January 2000 forecasts

Sensitivity Analysis

Under IFC's (and the other Senior Lenders') base-case, the sensitivity analysis shows that the oil price would have to decrease by 32%, to a Brent price per barrel of about US\$ 12.2, relative to the base case scenario price of US\$ 18.0 per barrel, both expressed in nominal dollars, to cause the DSCR to fall to its critical level of 1.0 and the LOL to 1.18.

Sensitivity analysis shows that the Private Sponsors' returns are particularly sensitive to a change in oil prices and/or reserves. For example, a drop of about 20% in the price of oil would, under the 917 million barrel reserves base-case, decrease the Private Sponsors' return on equity from 18.5% to 8.7%. However, to the extent that the level of oil reserves exceeds 1,050 million barrels, the Private Sponsors would enjoy a positive NPV, even under this assumption of lower oil prices. The willingness of each of the Private Sponsors to invest is dependent on a variety of factors, most notably their respective long-term price projections and their appreciation for the likelihood of additional oil reserves. These are subjective analyses, based on their own assessments; their long-term price projections are not shared, including amongst themselves, for anti-trust considerations.

3. Market and Offtake Arrangements :

All the oil production from the three Doba Fields is expected to be exported under Offtake Agreements between the Upstream Consortium Members and their respective affiliates, acceptable to the Senior Lenders and the Bank. Under these agreements, each offtaker will commit to purchase from its affiliated Upstream Consortium member its share of the production of oil from the three Doba Fields. Such obligations will not include any royalty oil taken-in-kind by Chad. The point of purchase will be the loading facilities offshore Kribi in Cameroon. Under such agreements, the offtaker is obligated to pay the purchase price, excluding the royalty due to Chad, into the respective Upstream Consortium members' project escrow account. The royalty due will be paid directly to Chad's escrow account, established in part to secure the IBRD and EIB loans. The Private Sponsors will undertake to ensure that their respective offtakers comply with their lifting and payment obligations and in connection therewith will furnish the Senior Lenders with appropriate letters of support.

4. Technical:

IFC, on behalf of the Bank Group, has appointed NSA to act as its independent engineers to do (i) a full Audit of Reserves in the production concession areas and (ii) a Certification of Costs. Proven reserves are estimated at 570 million barrels and proven and probable at 684 million barrels. The Private Sponsors estimate proven plus probable at about 917 million barrels, which estimate was viewed as providing a reasonable base case by Bank technical staff. As mentioned earlier (see section E.2 above), IFC's loan evaluation is based on the recovery of 595 million barrels. A cost certification was carried out which demonstrated that the projected costs estimates were reasonable; a separate updated cost certification is being completed, and preliminary reports indicate that the costs remain reasonable and in

line with those assumed in the financial projections. All technology to be used is well known and proven and no significant technical issues were identified that would threaten the viability of the project.

5. Institutional:

a. Executing agencies:

The Private Sponsors have the capacity to implement the project. They have established special purpose companies to carry out the project upstream (i.e., the Upstream Consortium members) and downstream, namely COTCO and TOTCO, joint-venture companies that are majority owned by the Private Sponsors, with minority GoT and GoC holdings. Annex 12 describes the corporate relationships between these subsidiaries and their respective parent Private Sponsors. In brief:

- Exxon Mobil Corporation (Exxon), rated AAA by Standard and Poor's and Aaa by Moody's, is the largest US multinational oil company. In December 1999, Exxon Corporation merged with Mobil Corporation. Exxon is involved in exploration, production, manufacturing, distribution, and marketing of petroleum products in over 100 countries. In recent years, Exxon Corporation had established a major position in the deep water off Angola, Nigeria and Congo and, as a result of the merger with Mobil Corporation, Exxon's holdings in Africa have increased. Exxon Corporation employed about 80,000 people, had revenues of US\$117 billion and net income of US\$6.4 billion in 1998. Esso Chad is a wholly-owned subsidiary of Exxon. It was established in 1976 as a special purpose company to manage the development of Chad's oil resources on behalf of and with the support of the Exxon corporate family.
- Petroliaam Nasional Berhad (Petronas), rated BBB by Standard and Poor's and Baa3 by Moody's, is the state-owned oil company of Malaysia, with extensive domestic and international activities as a fully integrated multinational with operations in oil, gas and petrochemicals. It currently operates in more than 20 countries. Petronas employs about 18,500 people, and had revenues of US\$ 9.2 billion and net income of US\$ 2.6 billion in 1998. Petronas Chad will, upon its establishment, be a wholly-owned subsidiary of Petronas; it is being established as a special purpose company to manage Petronas's interests in Chad's oil resources on behalf of and with the support of the Petronas corporate family.
- Chevron Corporation (Chevron), rated AA by Standard and Poor's and Aa2 by Moody's, is the second largest US multinational oil company. It currently operates in about 90 countries. Chevron employs about 31,000 people, and had revenues of US\$ 35 billion and net income of US\$ 2 billion in 1999. Chevron Chad will, upon its establishment, be a wholly-owned subsidiary of Chevron; it is being established as a special purpose company to manage Chevron's interests in Chad's oil resources on behalf of and with the assistance of the Chevron corporate family.

The Private Sponsor group originally comprised Exxon, Shell and Elf. In the fall of 1999, Shell and Elf indicated that they were reconsidering their participation in the project, as a result of a reassessment of the venture's significance within their overall corporate business strategy. Exxon immediately initiated a search for new possible co-sponsors and Shell and Elf are formally being replaced by Petronas and Chevron.

The EMPs will be carried out by Esso Chad, COTCO and TOTCO, in cooperation with the Governments concerned. Esso Chad, COTCO and TOTCO will take primary responsibility for mitigating the project's direct impacts by controlling their contractors, workers, and work sites. The compensation, resettlement, oil spill contingency and decommissioning plans will be implemented by these private sector companies in

collaboration with the Governments. In addition, the Private Sponsors (through COTCO) will contribute to the establishment of an Environmental Foundation for the management of the environmental offsets and the funding of the activities under the indigenous peoples plan in ecologically sensitive areas. The execution of these projects may be carried out by Government agencies, local authorities, and/or local and international NGOs. Assessment of their capacity will be part of the responsibility of the Foundation's management board.

The Governments will have primary responsibility for the management of the indirect impacts and for monitoring and evaluation of the environmental management plans. Chad has established an inter-ministerial coordinating committee for the environmental aspects of the project whose Secretariat is provided by the Ministry of Environment. Cameroon has established a committee to monitor the project as a whole, with a sub-committee on environment, whose secretariat is being provided by SNH. Capacity building operations are planned for both countries to enable the Governments to fulfill their environmental oversight responsibilities. Government capacity will be further strengthened through the advice of the Environmental Panel.

b. Project Management, Project Manager and Operator:

Esso Chad will be the project manager and operator. It is assuming overall project coordination responsibilities, including with TOTCO/COTCO, the two Governments, the Bank, IFC, the ECAs and the other lenders. The three Private Sponsors, GoC and GoT are represented on the Board of COTCO, which provides another vehicle for project management and coordination. Chad and the three Private Sponsors will also coordinate their activities through TOTCO and in the context of the field operations.

In line with normal oil and gas industry practice, Esso Chad has selected and will continue to select, via competitive bidding, a majority of international contractors for the Project's facilities. Esso Chad will be responsible to specify and coordinate the overall construction work, and to closely supervise the contractors to ensure that they comply with the Project's development plans and the environmental management plans. Esso Chad will be primarily staffed by personnel from Exxon-affiliates and Fluor Daniel, which is a reputable engineering and project management firm. It will also include a few selected Petronas and Chevron personnel as well as some local employees.

For the Government of Chad, project coordination responsibility has resided in the Presidency, but upon project launch will be assumed by its Ministry of Mines and Energy (MME), while in Cameroon it has been delegated to the National Petroleum Company (SNH).

6. Social:

Chad faces divisions along ethnic lines. The prospect of oil wealth has raised high expectations and needs to be managed properly. Measures taken to manage this risk include the development of the Petroleum Revenue Management Program for Chad (Annex 11), revenue sharing with the oil producing area, an equitable compensation and resettlement plan, development programs for affected areas, and broad based public consultation on all aspects of project design (Annexes 15, 16 and 17). The context in Cameroon differs, as it has been developing oil for several decades and the proposed project will only have a marginal impact on its overall revenue position and wealth. Although the context differs in Cameroon, it remains important to ensure that various stakeholders see benefits from the project. Measures taken to manage this risk include an equitable compensation plan, special programs for indigenous people and vulnerable groups, and broad based public consultation on all aspects of project design (Annexes 15, 16 and 17).

A Chad Resettlement and Compensation Plan is in place for households affected by the project. It is estimated that less than 150 households will need to be moved. Likely project impacts and compensation arrangements were extensively and thoroughly discussed with people in the area. Many have opted for compensation in kind (such as ox - ploughs and donkey carts). A very high percentage of those who opted for cash compensation have re-invested in agriculture or livestock. A development plan is being prepared by the Government of Chad for the Doba oil field area that focuses on land and resource management and the mitigation of induced migration to the area; these and other related initiatives to benefit the producing region would be financed by IDA under the Chad Petroleum Sector Management Capacity Building Project. The private sponsors will complement this plan through provisions to assist with the management and monitoring of induced impacts.

Resettlement is not expected in Cameroon. However, very limited resettlement is possible with respect to ancillary infrastructure (mainly roads). In the event that resettlement does arise, the private sponsors will comply with OD 4.30 on Involuntary Resettlement. Extensive and frequent public consultation has taken place on the subject of likely project impacts and compensation measures. Compensation rates for all crops, trees, and other assets have been well researched and discussed with affected people in all categories of land tenure. The private sponsors will pay compensation at real market values, which are over and above government schedules.

Bakola forest people and Bantu farmers inhabit the pipeline corridor/alignment through the Atlantic littoral forest. Although impacts on the Bakola population are transitory, COTCO is providing funds through a foundation for an Indigenous Peoples Plan which supports health, education, and economic development projects for this marginalized ethnic group. Furthermore, the Environmental Management Plans (Annex 14) also include comprehensive measures to protect worker and public health and safety; e.g., through worker screening and education, community outreach, and regional development programs.

7. *Environmental assessment:*

Environmental Category

☒ A ☐ B ☐ C

Environmental issues associated with the project include, but are not limited to, direct and induced impacts related to the development of the three oil fields in the Doba Basin, alternative analysis of candidate pipeline corridors and pipeline alignment within the preferred corridor, impacts from infrastructure projects, upgrades and construction activities, avoidance, mitigation and compensation of impacts to biodiversity, oil spill prevention and response planning, and potential impacts to international waterways, and worker and public health and safety. To identify and predict impacts relating to these and other issues, separate Environmental Assessments (EAs) were prepared for Chad and Cameroon. On the basis of these EAs, Environmental Management Plans (EMPs) have been prepared for the respective countries. These have been made available at various public sites in Chad and Cameroon, and were filed in the Bank's InfoShop (Annex 14). IBRD and IFC have worked closely to ensure that the respective governments and Exxon will implement the EMPs in a timely and prudent fashion.

Alternative corridors have been assessed for the pipeline and alignment of the pipeline within the preferred corridor has been optimized from cost, technical, safety, environment and social perspectives. A plan for archaeological finds, prepared with the participation of local scientists, is in place, while pipeline construction and oil field development activities will minimize impacts to sacred sites identified in consultation with local people. In addition to aligning the pipeline to follow existing infrastructure and/or traverse degraded land, biodiversity impact mitigation includes two environmental offsets - one for the semi-deciduous forest and one for the Atlantic Littoral forest (decrees establishing these offsets were signed by the GoC in January 2000). A Foundation will be established to fund the two environmental offsets and the Indigenous Peoples Plan in Cameroon.

While the project has been designed and will be constructed to avoid oil spill risks, a General Oil Spill Response Plan has been prepared (Annex 14), which has also been made available in-country and filed in the Bank's InfoShop. This plan is in accordance with guidance from the International Petroleum Industry Environmental Conservation Association, generally acknowledged to be the industry standard. It includes an Environmental Sensitivity Index which prioritises response actions to high risk areas. It also has details of safety mechanisms for the offshore export terminal. Area-specific oil spill response plans (e.g., for the three fields in the Doba Basin, at the offshore facility) will be in place before first oil.

The project would cross the Mbéré River and several of its tributaries. This river flows along the border between Cameroon and the Central African Republic (CAR), into the Logone River in Chad, which flows into the River Chari, which in turn empties into Lake Chad several hundred kilometers to the north of the pipeline. Lake Chad is bordered by Niger, Nigeria, as well as Cameroon and Chad. Similarly, the project facilities and pipeline in the oilfield area in southern Chad cross tributaries of the Logone River, which again eventually empties into Lake Chad (see attached map). In 1998, CAR, Niger and Nigeria were notified of the project in accordance with OP 7.50. CAR and Niger endorsed the project proceeding; the third riparian state has yet to respond. All the Lake Chad riparians, are members of the Commission for the Lake Chad Basin, headquartered in N'Djamena, which provides an existing vehicle to address potential impacts on the Lake Chad. Chad also informed the Commission of the proposed project. Moreover, the project is designed (including physical design of the pipeline, strategic placement of block valves, monitoring and response systems) so as not to cause appreciable harm to the Lake Chad riparians. As a result of these factors, the project complies with the requirements of OP 7.50.

Consultation with potentially affected peoples, agencies, and other stakeholders, including NGOs, began in this project in 1993. These consultations provided input to the draft environmental documents which were released to the public in late 1997 and early 1998. Feedback on these documents, as well as other consultation activities, have been integrated into the final series of environmental and social documentation that was released in-country and in the World Bank InfoShop in June 1999 (Annex 17).

In addition to World Bank Group's own monitoring, the project includes a provision for an Environmental Management Plan Compliance Monitor who will act on behalf of the Bank Group to regularly review implementation of the EMPs by Esso Chad, COTCO, TOTCO, their contractors and the governments. Furthermore, World Bank capacity building programs (see summary description of related projects in Annex 18, Parts A and C) are to be implemented to strengthen capacity in the respective countries, particularly as they relate to the implementation and monitoring of project EMPs. The project, as designed, will comply with applicable World Bank Group environmental and health and safety guidelines and safeguard policies.

8. Participatory approach:

a. Primary beneficiaries and other affected groups:

The primary beneficiaries of the project are the populations that will benefit from the increased fiscal revenues generated for Chad and their allocation to poverty expenditures in accordance with the revenue management program. These groups participate through the involvement of Chad's Parliament, both in debating and approving the proposed revenue management program and in the allocation of petroleum revenues through Parliament's approval and other involvement in the annual budgetary process. In addition, civil society is represented on the revenue oversight committee established under Chad's Petroleum Revenue Management Law, that will monitor Chad's disbursement of revenues to ensure compliance with the expenditure program agreed upon as part of the budget. In Cameroon, the use of

revenues (representing about 3 percent of current fiscal revenues) will be determined through the general budgetary process debated in its parliament. The primary affected groups are the populations living in the vicinity of the oilfields and the pipeline; these populations and local NGOs have been consulted by Esso Chad/COTCO/TOTCO, GoC and GoT in connection with the environmental management, resettlement and compensation plans, and will be directly involved to varying extents in their implementation.

b. Other stakeholders:

Other stakeholders include: (i) international NGOs, with whom the Esso Chad/COTCO/TOTCO have been consulting; (ii) the donor community, which has an important role to play in supporting Chad in transforming its oil revenues into sustainable poverty alleviation and development, and which participate through Bank/donor, round-table and other forums; and (iii) Senior Lenders to the Project, who have negotiated various contractual rights, including undertakings regarding implementation of the environmental management plans and the right to receive periodic reports.

The following table summarizes the degree of consultation under the project, with particular reference to environmental and social management plans, including their constituent parts (such as the compensation plans, the indigenous peoples plan and the program to address induced impacts in the oilfield area).

	Identification/Preparation	Implementation	Operation
Beneficiaries/community groups	IS/CON	IS/CON/COL	IS/CON/COL
National/Local NGOs	IS/CON	IS/CON/COL	IS/CON/COL
Academic institutions	IS/CON	IS/CON/COL	IS
Local Governments	IS/CON	IS/CON/COL	IS/CON
Other donors	IS/CON/COL	IS/CON/COL	IS/CON/COL
International NGOs	IS/CON	IS/CON	IS/CON/COL
[Note: IS=Information Sharing; CON=Consultation; COL=Collaboration]			

F: SUSTAINABILITY AND RISKS

1. Sustainability:

The sustainability of the project would be supported through a combination of the following factors: (a) the commercial and economic benefits flowing to the Private Sponsors, Chad, and Cameroon; (b) private sector assumption of responsibility to operate the upstream and downstream facilities, coupled with the more than US\$ 2 billion financial commitment of the Private Sponsors; (c) the Chad revenue management program designed to generate tangible poverty alleviation and broad-based economic growth, including in the oil producing region, through the sound use of revenues and the creation of savings; and (d) the project's potential to catalyze further private sector investment in Chad and Cameroon.

2. *Critical Risks (reflecting risks/assumptions in the fourth column of Annex 1):*

Risk	Risk Rating*	Risk Minimization Measure
Project outputs to development objectives	Significant	
Absence of continuing Chad commitment to the allocation of revenues to priority sectors.	Significant	Implementation of the revenue management program. Involvement of executive and legislative branches of Government. Current/future Bank Group dialogue, support and leverage (including <i>ex ante</i> mutual agreement on core elements). Continued importance of donor financing which exceed expected oil revenues.
Chad inability to absorb substantial additional revenues.	Modest	Capacity exists to absorb some additional revenues. Full use would depend on increased capacity. This is being addressed in part through planned capacity building support from Bank/Donors focused on public expenditure management and sectoral plans (e.g., sector expenditure programs).
Deterioration in security situation in Chad.	Significant	Implementation of revenue management plan, including principle of equitable regional distribution of revenues and special allocation to producing region. Continued Government political and economic reforms.
Deterioration in macroeconomic performance in Chad and Cameroon.	Significant	Multilateral technical and financial support to Chad and Cameroon.
Absence of continuing Cameroon commitment to social sector expenditures.	Modest	Current/future Bank Group dialogue/support/leverage.
Absence of continuing Cameroon and/or Chad commitment to environmental protection.	Significant	Current/future Bank Group dialogue/support/leverage.
Project components to outputs	Modest	
Private sector commitment	Significant	Substantial private investment; reputation. Commitment expected to increase as actual investment increases.
Level of reserves	Low	Reserves certification; substantial private investment.

Risk	Risk Rating*	Risk Minimization Measure
Oil Price	Modest	<p>For Governments: Project generates substantial revenues to Governments even if price of oil drops, even though Chad revenues function of market-based oil price calculations. Cameroon revenues essentially unaffected since primarily based on volume shipped, not price.</p> <p>For Private Sponsors: risk of substantial long-term depressed price projections may delay or stall decision to invest. During operations, revenues sufficient to cover ongoing Private Sponsor costs, particularly given large up-front financial commitment.</p> <p>For the Senior Lenders (including IFC): the sensitivity analysis shows that, using the proved reserves case and World Bank oil price forecasts, the project could withstand a 32% drop in prices and still be able to service its debt.</p>
Cost Overruns	Modest	<p>Cost estimates independently certified. Although cost overruns foreseeable, should be manageable given Private Sponsors' financial investment in project and resources to finance overruns.</p>
Medium-Term (5-15 years) Contractual Stability	Low	<p>Governments' and Private Sponsors' commitments and financial benefits (both direct and indirect). Extensive Government evaluations. Chad negotiators assisted by external advisors. Bank Group participation in the financing scheme.</p>
Long-Term (>15 years) Contractual Stability	Substantial	<p>Contractual stability presents more risks over long-term, for example in case of relative changes in pricing for oil sales, transportation and other costs. Sound project implementation over the medium term should provide supportive context for any potential adjustments.</p>
Political Risks	Significant	<p>Governments' commitment and financial benefits. Revenue management plan in Chad. Government equity in COTCO and TOTCO. Significant engagement of Bank Group, EIB, and ECAs. World Bank and Senior Lenders direct agreements with Governments. Chad Government also obtaining UNDP/UNHCHR technical assistance program on governance/human rights.</p>

<u>Risk</u>	<u>Risk Rating*</u>	<u>Risk Minimization Measure</u>
Project Completion	Low	Technology is well proven. Extensive experience of Private Sponsors. Creditworthy Private Sponsor companies to provide pre-completion guarantees.
Limited Project Delays (<12 months)	Substantial	Interest of all parties in avoiding delays and mechanisms for ongoing dialogue.
Extended Project Delays (>12 months)	Modest	Factors listed under Political Risks, Project Completion and Project Delays.
Pipeline Operation	Low	Esso Chad (Exxon), which has considerable experience in operating pipelines, will act as project operator.
Environmental Management Capacity	Modest	Parallel capacity building operations planned for Chad and Cameroon. Private Sponsor assumption of significant responsibilities.
Environment (including offsets in Cameroon)	Modest	EAs address potential risks. Primary responsibility with private sector operator, under Government and Bank Group supervision. Bank Group Leverage
Social	Significant	Risks addressed by Compensation/Resettlement plans, financing to address induced impacts on producing region under IDA capacity building operation, and regional development planning process. Responsibility shared between Governments and private sector operators under Bank Group supervision.
Market Demand	Low	Private Sponsors' oil-trading affiliates committed to lift oil under "take and pay" off-take Agreements.
Financial Risks	Low	Projected financial results are adequate for the equity holders and Senior Lenders.
Syndication of IFC B loan	Modest	Quality of Private Sponsors, Bank Group involvement, offshore nature of the financing, minimum subscription requirement to both B and ECA-supported loans, and possible underwriting of part of or the entire B loan. In the event the B loan is less than the required US\$ 300 million, the deficit would be funded by additional Private Sponsor equity. GoT and GoC also have the option of injecting additional equity to prevent dilution, but to date only GoT has indicated an interest in doing so.

<u>Risk</u>	<u>Risk Rating*</u>	<u>Risk Minimization Measure</u>
Devaluation and Non-Convertibility	Low	Revenues and debt service obligations defined in US\$.
Overall project risk rating	Significant	
* Terminology: Low: Less than 25% probability; Modest: 25-<50% probability; Significant: <50% probability, but significant adverse impact; Substantial: >50%-75% probability; High: >75-100% probability		

3. Possible Controversial Aspects:

Use of World Bank Group resources for a large-scale petroleum development project with multinational oil companies. The Bank Group's participation helps to catalyze the required private investment that generates revenues Chad needs to accelerate its efforts to reduce poverty. The Bank's involvement also provides a vehicle to support Chad in the development and implementation of a strategy to transform petroleum resources into poverty alleviation and broad-based economic growth. It also helps to ensure that environmental and social issues are carefully addressed. The Private Sponsors have been reluctant to commit their substantial resources without the participation of the Bank Group, which they see as mitigating some of the political risk that they are assuming. Others, on the other hand, question the role of the Bank Group in financing this type of a project. Bank Group financing in this project amounts to less than 6 percent and is highly catalytic, in particular given perceived risks presented by this complex cross-border operation. This financing is also consistent with the Bank Group policy of helping to catalyze private investment and supporting increased expenditures on poverty alleviation by supporting revenue generating economic activities. Because IBRD financing has been chosen, the project would not reduce the amount of IDA resources available to finance social sector or other projects – and the revenues generated are expected to increase social sector financing in these countries.

Use of IBRD Loans in IDA-Only Countries may raise concerns: (a) regarding the debt burden of the countries and (b) implications for IBRD as lender. These concerns are mitigated by the revenue expected to be generated by the project and by the structure of the loans. First, the project is expected to generate substantial revenues, sufficient to cover the countries' debt obligations. Potential benefits are substantial, particularly in the case of Chad. For Cameroon the debt service payments under the IBRD loan would represent an increase of only about 2 percent in its annual actual external debt service payments and the project is expected to generate over the life of the IBRD loan revenues totaling over five times the total IBRD debt service obligation due on the loan. For Chad, while debt service payments on the IBRD loan would represent about 10 percent of estimated debt service obligations, the project is expected to generate over the life of the IBRD loan revenues that are over 15 times the total IBRD debt service obligation due on the loan. As regards the second issue, the proposed enclave structure and support arrangement for the Chad loan and premium structure for the Cameroon loan provide IBRD with sufficient comfort, in particular given the robustness of the project's financial terms, the substantial private sector investment, the pre-completion guarantee covering both the Chad and Cameroon loans, and other commercial/political risk mitigating factors (such as the strong incentives of the Government and Private Sponsors to promote project success).

Environmental and Social Issues: Concerns have been voiced about the project's environmental and social aspects. While the project touches upon a variety of the Bank Group's environmental and social safeguard policies, all major issues have been addressed and it is expected that impacts can be mitigated to a less than significant level. The environmental management plan for the project includes: (i) measures to mitigate biodiversity loss through environmental offsets, (ii) provisions for compensation and, where necessary, resettlement of affected people, (iii) programs to offset the indirect impacts of the project on local communities, including indigenous people, and (iv) an oil spill contingency plan, as well as (v) all of the normal environmental precautions associated with oilfield development and with building and operating a pipeline and an offshore loading facility. The Governments and the Private Sponsors have carried out an extensive program to inform and consult with affected peoples and local NGOs. The Governments also hired a panel of environmental experts to help them in reviewing the EAs and EMPs, and would continue to employ such experts through the implementation period. The parallel capacity building operations proposed for Chad and Cameroon should also help to address these concerns. In addition, the pipeline companies (COTCO/TOTCO), the oilfield operator (Esso Chad) and the Governments have also contractually undertaken to apply the same levels of analysis, protection and consultation to oil from any new field development to be exported through the pipeline.

Governance in Chad and Cameroon: Concern is being voiced over transparency and accountability in the use of public resources, the role of civil society, and the responsiveness of public officials to those they govern. The far-reaching oil revenue management program in Chad is designed to provide for transparency. In addition, the unusual amount of information made available to the public (including regarding the operation's financial terms) and the extensive consultation program carried out, including at the village level, have helped to increase awareness about the project. The Bank also continues through its adjustment operations and dialogue, as well as through the recently initiated PRSP process, to promote increased transparency and strengthened governance in both Chad and Cameroon.

Impact of Project on Chad Context. Concerns are also being voiced about the potential for this large-scale operation to undermine stability in the project area. GoT's efforts to develop and implement, with Bank support, a sound revenue management program, as well as various initiatives directed at the project area (including a special 5 percent allocation of royalties to the producing region, and the proposed capacity building operation, which would include financing for health and other measures to address induced impacts in the project area) should promote stability by helping to produce tangible benefits for Chad's population generally, and specifically for affected populations in the project area (see also discussion in Annex 11, Part A, paragraph 9).

G: MAIN IBRD & IFC LOAN CONDITIONS

1. Board Presentation Conditions:

- (a) Exxon/Petronas/Chevron reconstitute Private Sponsors group and Conditional Final Investment Decision issued by the Private Sponsors.

2. Effectiveness Conditions:

- (a) Unconditional Final Investment Decision by Private Sponsors.
- (b) Signature and effectiveness of the Financing Agreements, in form and substance satisfactory to the Bank, including (i) the escrow agreement supporting the IBRD loan to Chad; (ii) EIB loan agreements; (iii) IFC Loan Agreements and other Senior Lender agreements.

- (c) Signature and effectiveness of the TOTCO and COTCO Transportation Contracts and the other field and export system agreements, in form and substance satisfactory to the Bank Group.
- (d) Signature and Effectiveness of the COTCO Project Agreement.
- (e) Signature and Effectiveness of the TOTCO Project Agreement.
- (f) Signature and Effectiveness of the Esso Chad Project Agreement, the Petronas Chad Project Agreement, and the Chevron Chad Project Agreement.
- (g) Signature and Effectiveness of the COTCO and TOTCO Shareholder Funding Agreements and Subsidiary Loan Agreements.
- (h) Signature and effectiveness of the pre-completion guarantees from the Private Sponsors covering the IBRD loans.
- (i) Signature and effectiveness of two parallel capacity building projects for Chad.
- (j) Signature and effectiveness of parallel capacity building project for Cameroon.
- (k) Issuance of necessary permits and authorizations: (i) to COTCO by Cameroon; (ii) to TOTCO by Chad; and (iii) to Upstream Consortium by Chad.
- (l) The appointment of auditors by COTCO, TOTCO, Esso Chad, Petronas Chad and Chevron Chad acceptable to the Bank Group.
- (m) The appointment of the EMP compliance monitoring consultant group.
- (n) Establishment by COTCO and TOTCO of a financial management/accounting system for the project.
- (o) Receipt by Bank Group of satisfactory legal opinions.

3. *Other:*

- *Resource Allocation:*
 - (a) Chad's implementation of the Petroleum Revenue Management Program.
- *Environmental/Social/Involuntary Resettlement/Indigenous People:*
 - (b) Implementation of the EMP in Chad, including the Compensation and Resettlement Plan.
 - (c) Implementation of the EMP in Cameroon, including the Compensation Plan, the Indigenous Peoples Plan and the Offsite Environmental Enhancement Plan (regarding the offsets).
 - (d) Any non-project oil to be shipped through the pipeline to have been developed in accordance with the principles of the EMP with respect to environmental analysis, protection and consultation.
- *Financial and Contractual Performance*
 - (e) Compliance with off-take and other project agreements negotiated with the Governments and Private Sponsors.
- *Audits/Reporting:*
 - (f) Reporting requirements regarding project revenues.
 - (g) Reporting requirements for environmental/social aspects.
 - (h) Audits of COTCO, TOTCO, Esso Chad, Petronas Chad and Chevron Chad.
 - (i) Audits of Chad's petroleum revenue accounts.

4. Main Features of the proposed IFC Loans

(a) Two A Loans (for IFC's account)

Borrowers:	TOTCO and COTCO
Amount and Currency:	US\$ 100 million
Commitment Fee:	0.5% per annum on the undisbursed balance of the loans
Front-end Fee:	1% of the amount of the loans
Repayment:	up to 18 unequal semi-annual installments, starting within a year after project completion
Prepayment Fee:	none

(b) B Loans (for the account of participants)

Borrowers:	TOTCO and COTCO
Amount and Currency:	Up to US \$300 million
Commitment Fee:	As for A Loans
Front-end Fee:	To be determined
Repayment:	As for A loans
Prepayment Fee:	none

H. READINESS FOR IMPLEMENTATION

[X] The engineering design documents for the first year's activities are complete and ready for the start of project implementation. [] Not applicable.

[X] The procurement documents for the first year's activities are complete and ready for the start of project implementation.

[X] The Project Implementation Plan has been appraised and found to be realistic and of satisfactory quality.

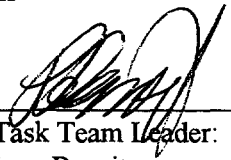
[] The following items are lacking and are discussed under loan conditions (Section G):


I. COMPLIANCE WITH BANK POLICIES

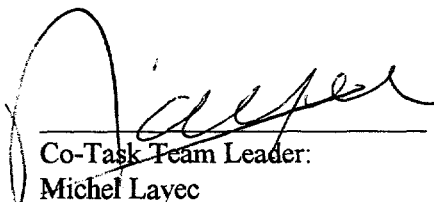
[X] This project complies with all applicable Bank policies.

[] [The following exceptions to Bank policies are recommended for approval: _____. The project complies with all other applicable Bank policies.]

Bank

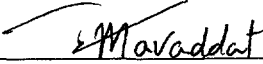

Co-Task Team Leader:
Philippe Benoit


Sector Manager:
Mark Tomlinson


Co-Task Team Leader:
Michel Layec


Country Director:
Serge Michailof

IFC



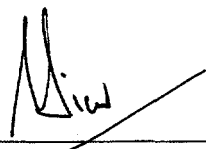
Investment Officer:

Shahbaz Mayaddat



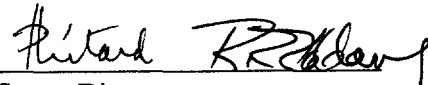
Sector Manager:

Maria Graça da Domingues



Investment Officer:

Eric Siew



Sector Director:

Philippe Lietard/Rashad Kaldany

Annex 1 Project Design Summary

Part A: CHAD

Narrative Summary	Key Performance Indicators	Monitoring and Supervision	Critical Assumptions and Risks
CAS Objectives 1. Capacity building for improved governance. 2. Establish foundations for improved delivery of basic social services. 3. Remove constraints to growth.	1. Strengthened public sector management, including consolidated budget. 2. Development of validated sector strategies for health and education, and delineation of sector expenditure programs. 3. Increased private participation in economy and completion of privatization program.	- Bank dialogue with Chad. - Public expenditure reviews with GoT. - Continuing dialogue between Chad and the Bank/IFC on promotion of private investment	<i>[CAS Objective to Bank Mission]</i> 1. Effectiveness of poverty alleviation programs. 2. Private Investment.
Project Development Objectives Increase public expenditures on poverty reduction sectors through environmentally and socially sound private investment in the petroleum sector.	Increase of at least US\$ 40 million per year in petroleum financed budget expenditures on education, health, infrastructure, rural development and the environment for FY2005-2009.	- Public expenditure reviews with Chad - Reporting by GoT on implementation of Petroleum Revenue Management Program and audits of petroleum revenue accounts.	<i>[Development Objectives to CAS Objective]</i> 1. Government commitment to focusing overall expenditures on poverty alleviation. 2. Supportive business environment and socio-political stability.
Project Outputs 1. Substantial fiscal revenues from export of Doba petroleum. 2. Petroleum Revenue Management Program in operation. 3. Private sector owned and operated oil field	1.(a) Export of first oil flow through pipeline by end-2004 and 81 million barrels/year in 2005-2007. (b) Government petroleum revenues of at least US\$ 70 million per annum 2005-2008.	- Quarterly reporting by Upstream Consortium, COTCO, and TOTCO, and annual reporting by GoT and GoC on project progress. - Independent Technical Consultant's reports.	<i>[Outputs to Development Objectives]</i> 1. Distribution of petroleum revenues in accordance with allocations in Petroleum Revenue Management Program.

Part A: CHAD

Narrative Summary	Key Performance Indicators	Monitoring and Supervision	Critical Assumptions and Risks
<p>and export systems.</p> <p>4. Development of oilfields and construction and operation of pipeline in environmentally and socially sound manner.</p>	<p>2. Petroleum revenues allocated and disbursed in accordance with Petroleum Revenue Management Program.</p> <p>3. Private sector ownership and control of Doba oilfield and pipeline companies (excluding minority government share).</p> <p>4. Achievement of targets and norms prescribed in the EMP, including under the Resettlement and Compensation Plan.</p>	<ul style="list-style-type: none"> - Bank Group supervision missions. - Reporting by GoT on implementation of Petroleum Revenue Management Program and audits of petroleum revenue accounts. - Reports from Government/Civil Society Petroleum Oversight Committee. - Reporting by off-shore trustees regarding off-shore project revenues accounts. - Annual audits of COTCO, TOTCO, and Upstream Consortium Accounts. - Bank/IMF/GoT public expenditure reviews. - Ongoing consultations with local and international NGOs on env., social, etc. issues. - Env./Social Expert Panel reports. - EMP Compliance Monitoring on implementation of the EMP. 	<p>2. Development of additional expenditure programs in poverty sectors.</p> <p>3. Supportive enabling environment for private investment and socio-political stability.</p>

Part A: CHAD

Narrative Summary	Key Performance Indicators	Monitoring and Supervision	Critical Assumptions and Risks
Project Components			[Components to Outputs]
<p>1. Construction of Field and Export Systems, including:</p> <p>(a) Drilling of about 300 production wells and 20 water reinjection wells.</p> <p>(b) Infrastructure facilities, including a Central Treating Facility, a 100 MW electric power generation plant, an airfield, office buildings and housing.</p> <p>(c) about 180 km of pipeline length built within Chad's borders and a pumping station.</p> <p>(d) Upgrading of infrastructure, including bridge across Mbéré river.</p> <p>2. Design and Implementation of sound Petroleum Revenue Management Program.</p> <p>3. Over US\$ 1.5 billion private investment and commercial financing in Chad, including bond issue.</p> <p>4. Implementation of Environmental Management Plan,</p>	<p><i>Total Cost (excluding financing costs): US\$ 1.78 billion (US\$ 1.52 billion for Field System and US\$ 260 million for Export System)</i></p> <p>1.(a) Drilling of at least 50 wells by end 2003 and at least 150 wells by end 2004.</p> <p>(b) Construction progress of at least 35% by end-2002, and at least 75% by end-2003.</p> <p>(c) Construction of 70 km of pipeline in Chad by end-2003.</p> <p>(d) Upgrading of approximately 100km of roads and construction of Mbéré River bridge by end-2002.</p> <p>(e) Commissioning of Export System and Field System before end-2004.</p> <p>2. Preparation of government decrees and other administrative actions to implement the Petroleum Revenue Management Program.</p> <p>3. (a) Project investments in Chad of US\$ 250 million by end-2001, of US\$ 550 million by end-2002, and of US\$ 1,350 million by end-2003.</p>	<ul style="list-style-type: none"> - Quarterly reporting by Upstream Consortium, COTCO, and TOTCO, and annual reporting by GoT and GoC on project progress. - Bank Group supervision missions. - Independent Technical Consultant's Reports. - Ongoing consultations with local and international NGOs on env., social, etc. issues. - Env./Social Expert Panel reports. - EMP Compliance Monitoring on implementation of the EMP. 	<p>1 (a) Long-term oil prices remain above about US\$ 8-10/barrel range (1999 dollars) and sufficient production and exports.</p> <p>(b) No significant political risks occur, including ongoing stability in production zone.</p> <p>(c) Technical reliability of production and export system.</p> <p>(d) Capacity of Private Sponsors.</p> <p>(e) Ongoing cooperation among Private Sponsors, GoC and GoT.</p> <p>(f) Continued private sector commitment to project.</p> <p>(g) Project success in Cameroon.</p> <p>2. Continued commitment by GoT to Petroleum Revenue Management Program.</p> <p>3. Stable operating and investment environment for the project; sufficient interest from</p>

Part A: CHAD

Narrative Summary	Key Performance Indicators	Monitoring and Supervision	Critical Assumptions and Risks
including Resettlement and Compensation Plan, and of regional development activities.	<p>(b) Successful mobilization of commercial financing and bond issue by end-2001, and financing of at least US\$ 200 million (for COTCO/TOTCO) by end-2003.</p> <p>4. Re: environmental and social aspects: (a) compensation and resettlement implemented in a timely manner; (b) no significant or lasting environmental damage caused by construction; (c) minimal social conflict in project area; and (d) affected communities participate in economic benefits.</p>		<p>international capital markets.</p> <p>4. Capacity and willingness to implement the environmental and social impact mitigation plans.</p>

Part B: CAMEROON

Narrative Summary	Key Performance Indicators	Monitoring and Supervision	Critical Assumptions and Risks
CAS Objectives <ol style="list-style-type: none"> 1. Improve Resource Mobilization. 2. Alleviate Poverty. 3. Create favorable Environment for Private Sector Development. 	<ol style="list-style-type: none"> 1. Increase revenue to GDP ratio. 2. Reallocate budgetary resources toward priority sectors. 3. Privatization and liberalization in transport, financial and petroleum sectors. 	<ul style="list-style-type: none"> - Bank dialogue with Cameroon. - Public expenditure reviews and Bank supervision missions. 	<i>[CAS Objective to Bank Mission]</i> <ol style="list-style-type: none"> 1. Government is committed to providing improved social services to the poor. 2. Increased Government capacity in environmental management.
Project Development Objectives <ol style="list-style-type: none"> 1. Increase the availability of fiscal revenues for spending on priority development expenditures through environmentally and socially sound private investment in the petroleum sector. 	<p>An increase of at least US\$ 40 million per annum in FY2005-2007 in petroleum generated revenues available to finance priority development expenditures.</p>	<ul style="list-style-type: none"> - Public expenditure reviews with Cameroon. 	<i>[Development Objectives to CAS Objective]</i> <ol style="list-style-type: none"> 1. Sound macroeconomic framework in place. 2. Government is committed to encouraging greater private investment.
Project Outputs <ol style="list-style-type: none"> 1. Substantial revenues from export of Doba oil. 2. Private sector owned and operated export system. 3. Construction and operation of the oil export system in an environmentally and socially sound manner. 	<ol style="list-style-type: none"> 1. Increase in Government revenues by at least US\$ 40 million/year in 2005-2007. 2. Physical completion and commissioning of Export System before end-2004. 3. Achievement of targets and norms prescribed in the EMPPs, including under the Compensation Plan, and Indigenous Peoples Plan. 	<ul style="list-style-type: none"> - Quarterly reporting by Upstream Consortium, COTCO and TOTCO, and annual reporting by GoT and GoC on project progress. - Independent Technical Consultant's reports. - Bank Group supervision missions. - Ongoing consultations with local and international NGOs on 	<i>[Outputs to Development Objectives]</i> <ol style="list-style-type: none"> 1. Government is committed to increased priority development expenditures, while maintaining macroeconomic stability. 2. Government commitment to promoting private sector.

Part B: CAMEROON

Narrative Summary	Key Performance Indicators	Monitoring and Supervision	Critical Assumptions and Risks
<p>Project Components</p> <p>1. Construction of Export System, including:</p> <p>(a) about 890 km of pipeline length built within Cameroon's borders and two pumping stations.</p> <p>(b) Submarine pipeline extending 11 km offshore from Kribi and associated pressure reduction station.</p> <p>(c) Floating Storage and Offloading vessel (FSO) at the terminal.</p> <p>(d) Upgrading of infrastructure, including roads and rail.</p> <p>2. Over US\$ 1.5 billion private investment and commercial financing in Cameroon, including bond issue.</p>	<p><i>Total Cost (excluding financing costs): US\$ 1.3 billion</i></p> <p>1 (a) Construction of 175 km by end-2002, and 890 km by end-2003.</p> <p>(b) Construction of submarine pipeline by end-2004.</p> <p>(c) Construction of FSO by end-2004</p> <p>(d) Upgrading of roads and construction of Mbéré River bridge by end-2002</p> <p>2 (a) Investments in Cameroon of US\$ 350 million by end-2001, of US\$ 750 million by end-2002, and of US\$ 1,250 million by end-2003.</p> <p>(b) Successful mobilization of commercial financing and bond issue by end-2001, and financing of at least US\$ 200 million (for COTCO/TOTCO) by end-</p>	<ul style="list-style-type: none"> - Quarterly reporting by Upstream Consortium, COTCO, and TOTCO, and annual reporting by GoT and GoC on project progress - Bank supervision missions. - Ongoing consultations with local and international NGOs on env., social issues, etc. - Env./Social Expert Panel reports. - Independent Technical Consultant's reports - EMP Compliance Monitoring on implementation of the EMP. 	<p>[Components to Outputs]</p> <p>1. (a) Price of oil is above about US\$ 8-10/barrel (1999 dollars) and sufficient production and exports.</p> <p>(b) No significant political risks occur.</p> <p>(c) Technical reliability of production and export system.</p> <p>(d) Capacity of Private Sponsors.</p> <p>(e) Ongoing cooperation among Private Sponsors, GoC and GoT.</p> <p>(f) Continued private sector commitment to project.</p> <p>(g) Project success in Chad.</p> <p>2. Stable operating and investment environment for the project, sufficient interest from international capital</p>

Part B: CAMEROON

Narrative Summary	Key Performance Indicators	Monitoring and Supervision	Critical Assumptions and Risks
<p>3. Implementation of Environmental Management, Compensation and Indigenous Peoples Plans.</p>	<p>2003</p> <p>3. Re: environmental/social aspects: (a) compensation completed in a timely manner; (b) no significant or lasting environmental damage caused by construction; (c) affected communities participate in economic benefits; and (d) development of management plans for offset nature reserves.</p>		<p>markets.</p> <p>3. Capacity and willingness to implement the environmental and social impact mitigation plans.</p>

Annex 2

Detailed Project Description and Project Schedule

I. Project Component 1: Field System – US\$ 1.5 billion ('99\$; no related financing costs)

A. Well Installations

1. Each of the three oil fields will include oil, water and gas handling facilities and pipelines. Approximately 300 producing wells and 25 water re-injection wells are currently envisaged, of which approximately two-thirds will be in Komé - the largest field. Continuing technological and economic appraisal activities will provide better definition of the producing reservoirs, and thereby the location and number of wells to be drilled.

2. Because the low pressures of the reservoirs are not sufficient to push the oil to the surface, each well will be equipped with an electric pump located about a mile below the surface. The fluid produced (oil, water, gas) will flow from each well through field manifolds to gathering stations for collection and separation of oil and water. Deep wells will be used to re-inject produced water safely back into the producing horizon's aquifer in the Komé, Bolobo and Miandoum fields.

B. Operations Center and Central Treating Facility

3. In addition to the previously described components at the individual oil field locations, an Operations Center (OC) will be located in the field area and consist of the following facilities:

- Central Treating Facility (CTF)
- An electric power generation plant
- Warehouse, maintenance/operations training center
- An airstrip
- Administrative office buildings for manager and support staff
- A small medical clinic for the workforce
- A single status camp
- The first pipeline pumping station (part of the Export System)

4. The primary purpose of the CTF, which receives water and oil from the gathering stations, is to de-water the oil and water mixture coming from each field to produce sales-quality crude oil meeting a one percent maximum basic sediment and water specification. Facilities will be constructed in accordance with international design codes such as those of the American Petroleum Institute (API), American National Standards Institute (ANSI) and American Society of Mechanical Engineers (ASME).

5. A turbine fired electric power plant (120 megawatts installed capacity) will be constructed and operated for supplying power to all the field facilities. Fuel for the power plant would be a combination of produced crude oil and associated natural gas. Waste heat from the turbine exhaust will be recovered and used to assist in the oil separation.

6. The following summarizes the overall field facilities basis:

- A) ~300 Developmental wells - ~290 Producing wells and 25 water disposal wells
 - Wellhead pressure: 150-250 psig (1,030-1,720 kPa)
 - Electric submersible pumps for all producing wells except L.K.
 - Sand control: primarily cased hole gravel pack
- B) Production facilities at Komé, Miandoum and Bolobo fields
 - Well pads with Electric Submersible Pump (ESP) transformers and control equipment and associated access roads
 - Manifold sites with manifolds and well testing equipment (11 at Komé, 3 at Bolobo, 3 at Miandoum)
 - Field pump stations (2 at Komé, 1 at Bolobo) including electric motor driven multiphase pumps
 - Well flowlines, emulsion gathering lines, water injection distribution lines
 - Electrical distribution substations and overhead electrical lines to wells
 - Gathering stations at Komé and Miandoum
 - Free water knock out tanks
 - Produced water skim oil tanks, surge tanks, and water injection pumps
 - Vapor recovery system
 - Produced gas compressors
 - Production fluid metering equipment
- C) Operation Center (OC) located at Komé gathering system
 - Central Treating Facility (CTF)
 - Central Control Room
 - Main manifolds with emergency shutdown valves and pig receivers
 - Emulsion treating system and bad oil storage and treating tank
 - Treated crude surge tanks
 - Vapor recovery system
 - Utilities
 - Crude oil topping plant
 - Power plant (120 MW installed capacity) and transmission system
 - 4 - 30 MW electrical generators and transformers
 - 4 - crude and gas fueled turbine drivers with waste heat recovery
 - Main power plant bus / switchgear and transformers
 - Control room
 - Miandoum crude oil fuel treating system and storage tanks
 - 33kV / 66 kV transformers and overhead transmission system to field substations
 - Operation Support Facilities
 - Warehouse, maintenance, training center buildings
 - Administration office with medical clinic
 - Telecommunications system
 - Airstrip (approximately 3,200 meters, hard surfaced)
 - Single status camp for about 220 people
 - Multi-purpose indoor leisure facility and outdoor sports fields

- Kitchen, dining, laundry facilities
- Landfill and incinerator

II. Project Component 2: Export System – US\$1.6 billion ('99\$ - excludes related financing costs)

A. Pipeline Installations

7. The export pipeline (76-cm-diameter (30-inch), ~1,070 km (670-miles)) will be constructed from the Doba Basin in southern Chad to the southern coast of Cameroon near Kribi, with approximately 180-km (110-miles) of the length in Chad and 890-km (560-miles) in Cameroon. The line pipe will be made from Grade X-70 steel material with five different wall thicknesses ranging from 0.310" to 0.542" depending on the hydraulic gradient. The entire pipeline will be buried with a minimum of one meter of cover except where soil conditions (rock) dictate otherwise. Burial depth will be increased to 1.3 meters for approximately 20 km downstream of each pump station to minimize surface temperature impacts resulting from high oil temperatures. The pipeline will be protected with an external corrosion coating and cathodic protection. Valves will be installed at approximately 35-km (22-mile) intervals along the pipeline to facilitate system operation and maintenance. The pipeline system will contain an electronic monitoring system to identify potential leaks during operations.

8. For the construction of the export pipeline, an overall minimum right-of-way width of 30 meters will be required with some locations, such as river crossings and steep slopes, extended to a maximum right-of-way width of 60 meters. A permanent right-of-way of approximately 10 to 15 meters wide will be necessary to permit continued access to segments of the pipeline by authorized vehicles as required for normal operations, maintenance and emergency response. After construction, the right-of-way will be available for prior use, including farming or ranching. No permanent structures or trees will be allowed on the right-of-way.

B. Pump Stations and Pressure Reducing Station

9. The originating pump station, located in Chad, will be an electric facility with power supplied by the field facilities power plant. The originating pump station will also have 200,000 barrels of crude storage. The two pump stations located in Cameroon will be self-supporting and include a crude oil topping plant for fuel, three industrial grade diesel fueled turbine driven pumps (4,000 HP each), electrical power generation, and associated utilities. Crude heaters and turbine waste heat recovery will be used to increase crude temperature to 71°C (160°F) at the outlet to the stations. Single status housing units will be constructed for operations staff.

10. A pressure reducing station will be located near Kribi, designed to regulate the delivery pressure to a Floating Storage and Offloading (FSO) vessel. It will be fully automated and located approximately 1-km (0.6-mile) inland from the connection point between the onshore pipeline and offshore segment. In addition to control valves to limit pressure to the FSO vessel, the station will include surge tankage for collection of emergency relief crude oil.

C. Offshore Facilities: Floating Storage and Offloading Vessel (FSO) and Subsea Loading Pipeline

11. The FSO vessel will be a crude oil tanker converted to stationary use with a storage capacity of 2 million barrels of oil. It will be permanently moored on station using a single-point mooring (SPM) system. The SPM/FSO facility will be installed approximately 11 km offshore in minimum depth of

33 meters of water. A 76-cm (30-inch) heavy wall concrete coated subsea loading pipeline extending from the shoreline will supply the FSO with crude oil.

12. The FSO vessel will provide temporary storage of the crude oil before loading ocean-going tankers. The crude oil will be transferred from the FSO through marine hoses to tandem-berthed ocean-going export tankers with an average transfer rate of 45,000 barrels per hour. Comprehensive oil spill prevention and response plans will be developed and equipment put in place to prevent and address oil spills from the subsea pipeline, FSO vessel or loading tankers. A crude custody transfer metering system will be installed on the FSO deck. Accommodation for operating staff will be provided aboard the FSO vessel as well as a helipad.

D. Infrastructure

13. The infrastructure relating to the Export System will include a pipeline operations and administrative office in Douala, an operations and maintenance facility at Ngoumou and Komé, and permanent storage yards in Douala and Ngaoundal. Nine temporary storage yards will be constructed strategically along the pipeline route to store pipe during construction. A satellite based communications system will be installed to allow voice and data transmission at any point along the pipeline route. Airfields will be improved or constructed near the Pump Station # 2 and # 3 sites. Helipads will be established at Pump Stations # 2 and # 3 as well as the Pressure Reducing Station.

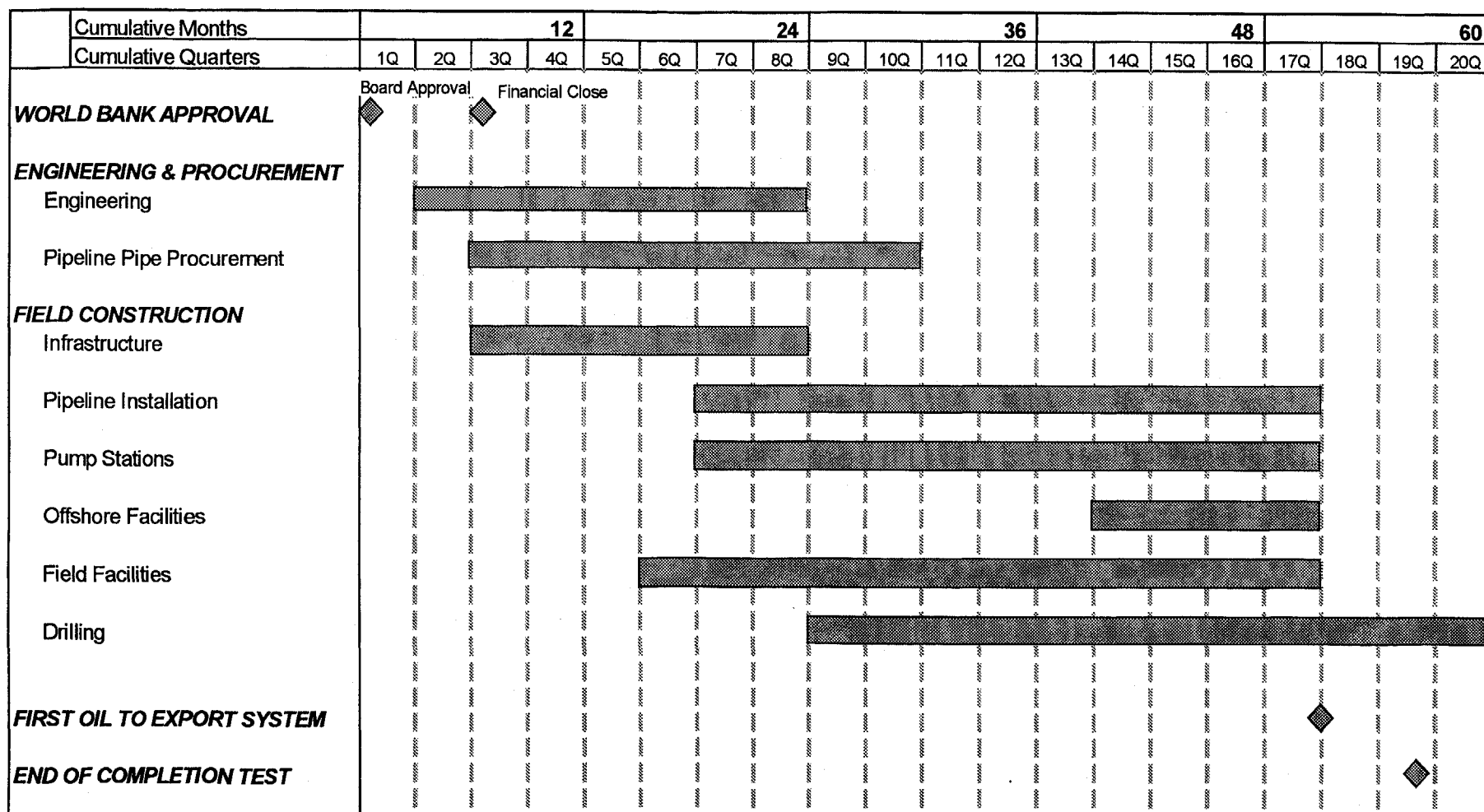
14. Other infrastructure improvements would consist of:

- Port of Douala: Site improvements such as a grading, railroad spur extensions, etc.
- Railroad: The existing railway system will be used to transport project materials from the Port of Douala up through Ngaoundal. Locomotives, rolling stock and track would be upgraded.
- Roads: The road network from the railhead at Ngaoundal to Komé will be upgraded. Upgrades (substrates, surface, drainage, culverts, etc.) will be made to several hundred kilometers of roads in northern Cameroon and 150-200 kilometers in southern Chad are expected. Several bridges along the route may require strengthening and a new bridge will be constructed across the Mbéré River at the Chad/Cameroon border to facilitate the flow of equipment and materials to build the Export System and Field System. Repairs (cleaning drainage systems, patching, surface repairs, etc.) of several hundred kilometers of additional roads in Cameroon at various locations will also be needed.

III. Project Schedule

15. The schedule for project activities is set out in the attached table.

SCHEDULE – CHAD/CAMEROON PETROLEUM DEVELOPMENT AND PIPELINE PROJECT



Annex 3

Estimated Project Costs and Financing Plan

Table 1: Estimated Project Costs¹
(in million US\$)
(Net of taxes and Duties)

	Local	Foreign	Total	IBRD %
A. FIELD SYSTEM				
Development Drilling, Surface Facilities, Inter-Field Pipeline Systems, Buildings	43	1054	1097	
Logistics & Railroad Tariffs, Roads, Storage Yards, Telecommunications	16	143	159	
Project Management	7	96	103	
Operator & Start-up Costs	8	154	162	
Total Financing Required	74	1,447	1,521	
B. EXPORT SYSTEM				
Pipeline Installation, Line Pipe, Offshore Facilities, Pump Stations	37	987	1024	7%
Railroad Upgrades, Logistics & Railroad Tariffs, Roads, Storage Yards, M'Bere Bridge, Telecommunications	26	253	279	
Project Management	8	94	102	
Operator and Start-up Costs	8	154	162	
Total Export System Project Cost	79	1,488	1,567	
Interest during construction and Other Financial Costs	-	458	458	
Debt Service Reserve Funding		177	177	
Total Financing Required	79	2,123	2,202	
C. FIELD + EXPORT SYSTEMS				
Total Financing Required	153	3,570	3,723	
D. PROJECT PREPARATION COSTS				
Chad	3	4	7	
Cameroon ²	6	2	8	
E. PROJECT GRAND TOTAL	162	3,576	3,738	

¹ Includes Physical and Price Contingencies. Excludes all sunk in costs until 1999.

² Project Preparation Costs for Cameroon include cost of acquiring the right-of-way (estimated at US\$ 1.5 million).

Table 2: Project Costs--Allocation by Country (US\$ million and %)
(Net of taxes and Duties)

	Chad	Cameroon	Total
A. FIELD SYSTEM	1,521 (83%)		1,521
B. EXPORT SYSTEM	322 (17%)	1,880 (100%)	2,202
C. PROJECT TOTAL (includes financing costs)	1,843 (49%)	1,880 (51%)	3,723

Table 3: Estimated Project Financing Plan (US\$ million), excludes financing costs

Financing plan (US\$ million): US\$3,723.9 million (see also diagram in Annex 12)		
Source	Total	%
Private Sponsors' Equity (Exxon 40% - Petronas 35% - Chevron 25%)	2,206.4	59.2
Export Credit Agencies/Commercial Banks	600.0	16.1
Capital Markets Bond Issue	400.0	10.7
IFC A-Loan	100.0	2.7
IFC B-Loan	300.0	8.1
IBRD: Cameroon Equity*	43.5	1.2
IBRD: Chad Equity*	32.5	0.9
EIB: Cameroon Equity*	26.5	0.7
EIB: Chad Equity*	15.0	0.4
Total	3,723.9**	100.0

* Does not include interest during construction or other loan charges. Breakdown of IBRD and EIB loans to Chad and Cameroon set out in Annex 3, Table 5.

** Portion of equity financing from Private Sponsors and Governments to be provided as subordinated loans and other forms of quasi equity. The sources of funds cover costs from 2000 onwards and exclude costs already borne (principally by Private Sponsors) before and including 1999. The project costs do not include costs of about US\$ 43 million incurred for drilling wells after 2005 (until 2008). Approximately 5% of project costs are Local Costs and 95% are Foreign Costs

Table 4: Estimated Government Financing Plan (US\$ million)

	Equity	IDC/Loan Charges	Preparation Costs	Total
Chad	47.5	5.5	7.0	60.0
Cameroon	70.0	13.0	8.0	91.0

Preparation costs for Governments include: (a) for Cameroon about US\$1.5 million to assist in financing acquisition of right of way for COTCO, and about US\$1 million for financial and environmental advisors (financed in part through a PPF and a PHRD grant); and (b) for Chad about US\$5 million for legal, financial and environmental advisors (financed in part through a PPF and PHRD grant) -- right of way acquisition in Chad is being financed by TOTCO and Esso Chad.

Table 5: Government Borrowing (US\$ million)

Sources	Equity			IDC/ Com*	Sub- Total	Unallo- cated	Grand Total
	TOTCO	COTCO	Total				
Chad:							
IBRD	8.5	24.0	32.5	3.5	36.0	3.5	39.5
EIB	5.0	10.0	15.0	2.0	17.0	0.0	17.0
Total	13.5	34.0	47.5	5.5	53.0	3.5	56.5
Cameroon:							
IBRD	--	43.5	43.5	9.9	53.4	--	53.4
EIB	--	26.5	26.5	3.1	29.6	--	29.6
Total	--	70.0	70.0	13.0	83.0	--	83.0
Chad + Cameroon:							
IBRD	8.5	67.5	76.0	13.4	89.4	3.5	92.9
EIB	5.0	36.5	41.5	5.1	46.6	0.0	46.6
Total	13.5	104.0	117.5	18.5	136.0	3.5	139.5

*IDC/Com.: Interest during construction, and commitment and other charges, including, in the case of Cameroon, the US\$ 5.34 million premium (see discussion of IBRD loan in Section C.6).

Annex 4 Economic Analysis

A. Summary

1. The economic analysis assesses the returns of the project from the perspectives of Chad and Cameroon, as well as for the project as a whole. These returns are estimated to be significant. In the base case, which assumes 917 million barrels of developed reserves and a Brent oil price of US\$15.25/bbl, the revenues for the project as a whole are US\$ 12.0 billion (in real 1999 US dollars, undiscounted) over the life of the project (i.e., a 28-year production period), and the net revenues (net of operating and maintenance costs, but before debt service) are US\$ 9.2 billion.¹ The Governments' revenues are US\$ 1.7 billion for Chad and US\$ 505 million for Cameroon. The net present value (NPV) of these revenues, discounted at 10%, is US\$ 463 million for Chad, US\$ 144 million for Cameroon, and US\$ 1,417 million for the project as a whole. The economic rate of return (IRR) for Chad is about 70% and the return for Cameroon is 39%. The returns to Chad are sensitive to significant variations in the international price of oil and to the quantities of oil exported, and the returns to Cameroon are sensitive only to changes in the latter. Even assuming variations in these key factors, the returns to Chad and Cameroon remain robust. A probability/risk analysis shows that there is a 50% chance that the rate of return to Chad will exceed 66% and the risk of it going below 40% is negligible. Similarly, there is a 50% chance that the rate of return to Cameroon will exceed 38%, and the risk of it being less than 33% is negligible. Based on comparative studies made of oil exploration and production agreements, pipeline transportation contracts and related transactions in other countries, the agreements concluded for this project by Chad and Cameroon with the Private Sponsors are reasonable.

2. The following tables show the net present values (NPV) and the internal rates of return (IRR) for Chad, Cameroon and for the Private Sponsors² for different crude oil prices and reserves scenarios.³

Net Present Values and Internal Rates of Return

Base Case re: Reserves (917 million bbls.) and Price Scenarios

NPV @ 10% (real; millions of USD)	Chad	Cameroon	Private Sponsors
US\$ 12/barrel (International price)	271	148	(98)
US\$ 15.25/barrel (International price)	463	144	706
US\$ 18.50/barrel (International price)	822	141	1,361

IRR (%)	Chad	Cameroon	Private Sponsors
US\$ 12/barrel (International price)	56	39	9
US\$ 15.25/barrel (International price)	70	39	18
US\$ 18.50/barrel (International price)	84	39	25

¹ All figures are provided in real 1999 dollars and are given on an undiscounted basis, unless otherwise indicated.

² The analysis recognizes that the financing provided by the Private Sponsors (i.e., equity investment in the Field System and the Export System) and the Senior Lenders (i.e., debt financing in the pipeline companies, including IFC's US\$ 100 million in A-loans to these companies) constitutes tied financing.

³ See Attachment 1 to this Annex 4 for additional scenarios.

Net Present Values and Internal Rates of Return*Base Case re: International Crude Price (US\$ 15.25/bbl.) and Reserves Scenarios*

NPV @ 10% (real; millions of USD)	Chad	Cameroon	Private Sponsors
595 million barrels	205	104	(344)
917 million barrels	463	144	706
1038 million barrels	603	158	1,045

IRR (%)	Chad	Cameroon	Private Sponsors
595 million barrels	60	35	<0
917 million barrels	70	39	18
1038 million barrels	75	40	21

3. The detailed analysis provided below comprises: (a) an examination of the project development alternatives; (b) a cost-benefit analysis for the project as a whole; (c) an estimation of the economic returns to Chad; (d) an estimation of the economic returns to Cameroon; and (e) an evaluation of the environmental and social costs associated with the project. In all scenarios investigated for the development of the crude oil discoveries in Chad, oil is exported to international markets and the limited natural gas available is used by the project (e.g., for power generation).

4. What would Chad's and Cameroon's economies look like without the project and what would they look like with the project? Without the project, Chad and Cameroon would forego the benefits described in this Annex 4. The project, which is an integrated operation (with no separable component), would dramatically alter the development prospects in Chad by generating much-needed additional fiscal revenues to support Chad's development strategy. Whether Chad would be better or worse-off with the project is intimately tied to the proper use of oil revenues (see discussion in Annex 11 on Petroleum Revenue Management Program). The project would also provide important additional revenues to Cameroon, but its impact on Cameroon's economy is marginal in relative terms (about 3% of current fiscal revenues); the project, however, would generate significant returns for Cameroon in absolute terms, as well as compared to its discretionary expenditures (see discussion below in para. 30). Since the oil developed is exported, the project's output does not add directly to the provision of goods or services in either country (other than the oil consumed to operate the project's own assets), nor does it substitute for (or displace) goods or services that would have been provided anyway.

B. Project Development Alternatives

5. Project development alternatives were considered relating to: (a) which oil fields to develop and the sequence of development of these fields; and (b) what transportation system should be used to export the oil.

6. Field development scenarios. The Private Sponsors have evaluated three main oil field development scenarios: (a) a small scale development of only the lighter oils of the Doba and Doseo basins; (b) a moderate scale project to develop the heavy and light crudes of the Doba basin only; and (c) a larger development of the heavy and light crudes for three basins: Doba, Doseo and Lake Chad. Scenario (b) above, the development of the Doba basin heavy and light crudes, was found to be most profitable in

comparison to the other two alternatives. The portion of the Doba basin directly concerned by this project consists of three fields: Kome, Bolobo and Miandoum. In addition, numerous development options for the Doba basin were evaluated with a focus of defining an economically viable project. Field development plans will further develop and optimize well type and locations of these wells.

7. Transportation Alternatives. Various oil export transportation alternatives were also considered. A feasibility study found that it would be technically possible to truck 5,000 to 15,000 barrels per day (KBPD) from the Doba area in Chad to Ngaoundéré in Cameroon and then use the Cameroon railroad to transport the crude to the port of Douala. However, this method was not technically feasible or economically attractive for the volumes of greater than 15 KBPD that are expected to flow from the Doba field (average of 90 KBPD over the production period, and over 200,000 KBPD during the initial years of production). Also, it would present important environmental risks. A second alternative evaluated was transporting crude by a pipeline to Ngaoundéré and then by rail to Douala. This option is limited to 45 KBPD due to the constraints on rail transportation in Cameroon, and therefore was not found economically attractive. River routes were also found to be impractical due to their inability to handle large volumes of crude, as well as for reasons of seasonal flow limitations. The best transportation option was to build a pipeline originating in the Doba area in Chad and crossing Cameroon to the Atlantic coast. Three alternative corridors were assessed and the best option, from economic and environmental viewpoints, is a 1070 km (670 mile) long, 30" diameter pipeline, originating in the Doba area, crossing Cameroon to a floating storage and offloading vessel in the Gulf of Guinea, offshore Kribi in Cameroon (see project facilities map).

8. Political Risk Mitigation/Catalyzing Private Investment. World Bank Group participation is perceived by the private sector investors (both the Private Sponsors and commercial lenders) and the export credit agencies as central to the political risk mitigation package that is catalyzing over US\$ 3.5 billion in equity and commercial financing for this oil project. World Bank Group involvement, as well as the financial investments of Chad and Cameroon in the pipeline companies, provide comfort to these oil companies and lenders that the political risks presented by this cross-border operation and first-time petroleum export venture from Chad can be adequately mitigated over the medium to long term required to support their respective equity and long-term debt investments.

C. Project Costs and Base Case Assumptions³

9. Project Costs. For the purposes of the economic analysis of the project, the principal costs taken into account are for: (a) exploration, pre-development and upstream development activities in Chad; (b) the pipeline in Chad and Cameroon and related facilities, including the floating storage facilities offshore in Cameroon; (c) operating and maintenance for the upstream facilities in Chad and the pipeline in both Chad and Cameroon; and (d) environmental and social impact management related to the project's construction and operation. The project capital costs (i.e., items (a) and (b)) are estimated at about US\$ 3.72 billion (in nominal dollars), of which: (i) the oil field system (wells, gathering system, power plant, project infrastructure, etc.) are estimated to cost US\$ 1.52 billion, and (ii) the export system (pipeline, pumping stations, and offshore floating storage and offloading facilities) are estimated to cost US\$ 2.20 billion

³ Ideally, the cost and benefit flows should be presented at shadow rather than market prices, with world (or border parity prices) used for tradables, and a standard conversion factor used to convert market prices of non-tradables. However, since the project output is exported and sold at world prices, and over 95% of expenditures are on foreign goods and services, it was decided not to present these refinements because they do not significantly impact the economic returns.

(including about US\$ 630 million in financing costs, such as interest during construction and funding for the debt service reserves). For purposes of this analysis, project capital costs do not include an additional US\$ 600 million (nominal) spent by the Private Sponsors over the last 5 years, nor an estimated US\$ 15 million (nominal) in project preparation costs borne by the Governments, which are being treated as "sunk costs". Operating and maintenance costs over the life of the project have been estimated at US\$ 3.8 billion (nominal) -- i.e., an annual average of about US\$ 140 million. Subsumed in these project costs are the environmental and social management costs being borne by the Private Sponsors, which have been estimated at US\$ 55-75 million (nominal).

10. Incremental Environmental, Social and Implementation Costs for Chad and Cameroon. The incremental environmental and social costs to be borne by Chad and Cameroon are described below in Part I of this Annex. As these costs are expected to be relatively small compared with project benefits, their impacts on the NPVs and the IRRs of the countries are assessed through a sensitivity analysis. In addition, Chad and Cameroon will directly incur costs related to the implementation of the project, which are also addressed through the sensitivity analysis.

11. Base Case Scenario. Project benefits are generated through the sale of the project's crude oil in international markets. For the economic analysis, the base case scenario (the "Base Case") assumes the development of 917 million barrels of reserves (i.e., the Private Sponsors' proved plus probable reserves case)⁴ over a 28-year production period. After accounting for the project's own uses (in particular regarding operation of the power plant in the oilfields), about 883 millions barrels will be made available at Kribi for sale to international markets. The following table provides for the range of reserve figures used in the sensitivity analysis: (i) the Base Case based on proved plus probable; (ii) a lower case, based on proved, using the reserves level IFC/Senior Lenders are employing to assess coverage and other ratios (see discussion in Section E.2 of main text); and (iii) a higher case, which equates to proved plus probable plus a portion of possible reserves. In the Base Case, revenue figures are calculated on the basis of a Brent oil price of \$15.25/bbl in 1999 US\$'s (which closely approximates World Bank oil price forecasts in 1999 US\$'s⁵), adjusted downward to an average price of about \$13.50/bbl to take account for quality, marketing and transportation.

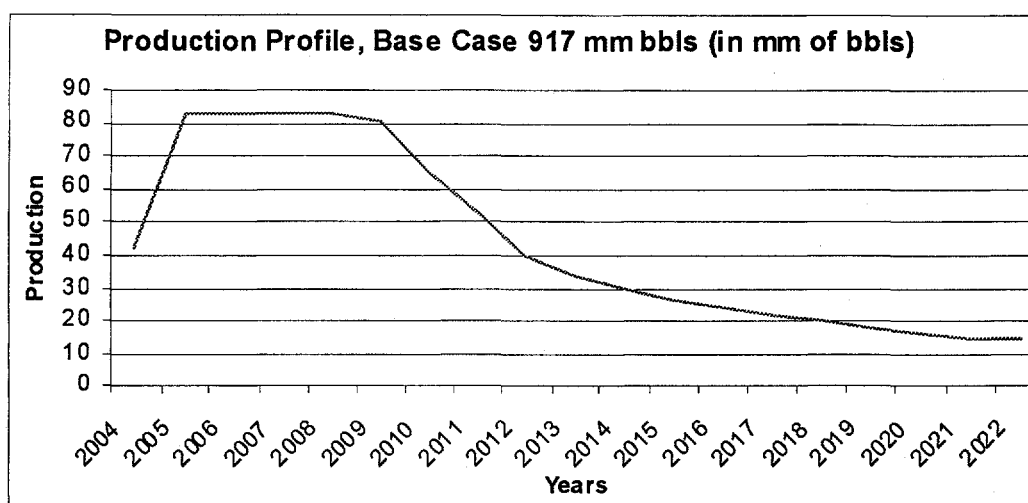
Reserves Scenarios

Reserve	Size of Reserves (million barrels)
Lower Case	595
Proven and Probable Case	917
Higher Case	1,038

⁴ Based on an assessment by Bank technical staff of the geological and other information provided by the Private Sponsors, and having reviewed the independently certified reserves estimates, the 917 million barrels proved plus probable case provides an appropriate basis for the economic analysis and to assess projected Government and Private Sponsor returns.

⁵ World Bank price forecasts covering the production period (i.e., 2004 and beyond) have fluctuated over time, but have remained in a range between about US\$ 14/bbl and US\$ 16/bbl in real terms. For purposes of simplicity, the Base Case has assumed a constant price of \$15.25/bbl in 1999 US dollars, which is consistent with the average of the Bank's January 2000 oil price projections.

12. **Production Profile.** For the Base Case (namely proven and probable reserves of 917 million barrels of oil produced over a 28 year period), the production profile for the 2004-2022 period is set out in the chart below.



D. Economics of the Project as a Whole

13. The total revenues from the project in the Base Case are expected to be US\$ 12.0 billion. The undiscounted benefits, net of operating and maintenance costs (but before debt service), are estimated to be US\$ 9.2 billion and the net present value of project revenues (at 10% discount rate) would be US\$ 1,417 million.

14. **Sensitivities and Switching Values.** The sensitivity of project revenues and of net present benefits regarding crude oil prices and reserves to be produced are indicated in the following table.

Oil Prices, Size of Reserves and Net Present Values (US\$ million)

	Oil Prices (US\$ /bbl) 917 Million barrels			Size of Reserves (Million barrels) at US\$ 15/bbl.		
	\$12.00	\$15.25	\$18.50	595 M bbls	917 M bbls	1038 M bbls
Undiscounted Net Revenue Flows (before debt service)	6,736	9,172	11,866	5,302	9,172	10,706
Net Present Value @ 10%	404	1,417	2,458	52	1,417	1,925

15. Switching values were also calculated for several variables, namely capital expenditures, operating costs, and sales (quantities and price levels).⁶ The results are indicated in the following table. Project returns are not very sensitive to variations in capital expenditures and in operating costs. They are, however, sensitive to significant drops in the international price of crude oil and in quantities exported (i.e.,

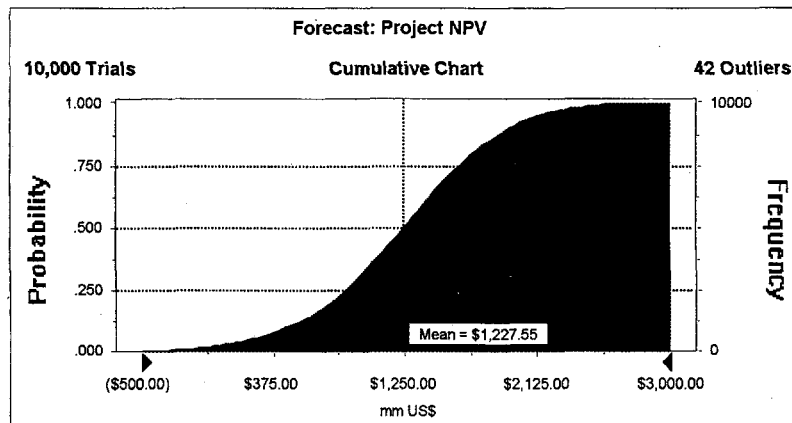
⁶ The switching value of a variable is that value at which the project's net present value (NPV) becomes zero.

reserves). It is useful at this point to distinguish between those variables over which the project implementation agencies (i.e., the Private Sponsor companies) have some control and those over which they only have an indirect control or none at all. The implementation agencies have some degree of control over costs. Their control over the quantities sold (and therefore pumped from the ground) and over the implementation schedule (i.e., to avoid delays) is also significant, but not complete, given, *inter alia*, technical and political uncertainties. However, they have little or no control over the international prices of oil; this represents the main commercial risk.

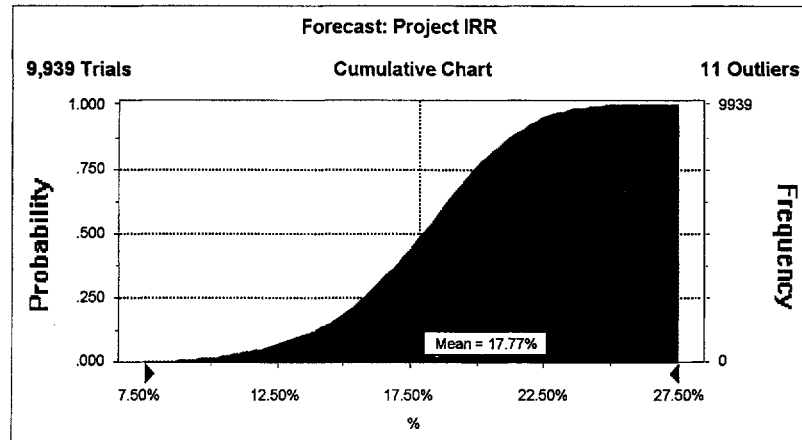
Switching Values

Variable	Switching Value (increases/decreases by:)
Total Capital Expenditures	+ 126.0%
Total Operating Costs	+ 185.0%
Crude Sales Revenue (Price)	- 29.5%
Crude Sales Revenue (Quantity)	- 39.8%

16. In order to estimate the expected NPV of the project and to account for the uncertainties surrounding key economic variables, especially on the benefit side, a probability (or risk) analysis was carried out. The assumed underlying probability distributions chosen are of two types: 'beta' for the production profile (which serves as an effective surrogate for sales) and 'lognormal' for the international price of oil. The results of the Monte-Carlo simulation for the NPV of the project as a whole, based on about 10,000 simulations, are summarized in the following cumulative probability distribution. This figure shows that the project's expected mean net present value is about US\$ 1,227 million; there is a 50% chance that the NPV will exceed US\$ 1.2 billion and a 30% chance that it will exceed US\$ 1.5 billion.



17. Similarly, the probability distribution of the rate of return shows that there is a 50% chance that the project rate of return will exceed 18%, and about a 80% chance that it will exceed 15% (see following figure). The risk of having less than a 10% rate of return is small and this rate could be considered a minimum. On the other hand, the probability of rates of return higher than 20% is about 25%. The mean rate of return is about 17.77%. It indicates that, on average, the project would be expected to yield a 17.77% rate of return.



E. Economic Benefits to Chad

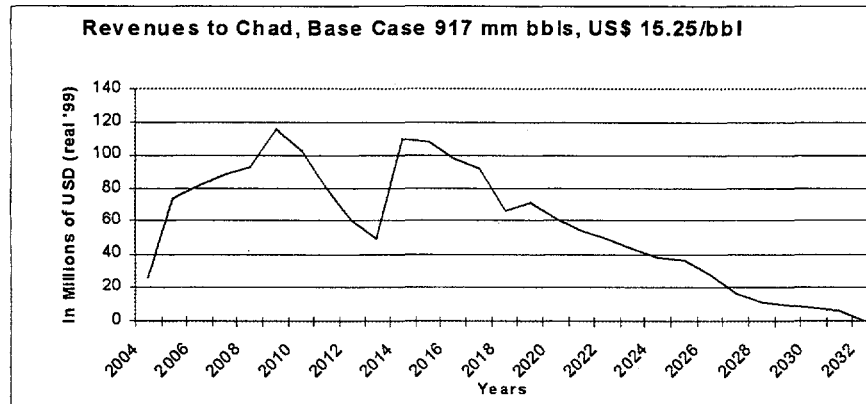
18. **Costs to Chad.** Chad would incur costs in acquiring its equity participations in the two pipeline companies (COTCO and TOTCO). The analysis and underlying calculations presented in this document are based on an equity investment of about US\$ 42 million.⁷ In addition, Chad would face other costs,⁸ including: (a) expenses incurred in overseeing the execution of the Environmental Management Plan by TOTCO and Esso Chad, and in helping to mitigate induced social impacts in the project area (for which support would be provided by IDA under the Petroleum Sector Management Capacity Building Project, described in Annex 18, Part A), and (b) other incremental environmental and social costs. Their impact is assessed as part of the sensitivity analysis under Part I of this Annex.

19. **Benefits to Chad.** The implementation of the project would generate important benefits to Chad from three sources: (a) direct revenues from the project; (b) improvements in infrastructure as a result of the project; and (c) spending in the local economy generated during both the construction and operation phases of the project. Given the disproportionately large size of direct revenues compared to other expected benefits, the economic analysis focuses on the direct revenues to Chad. Under existing agreements, Chad is entitled to the following direct revenues: (i) royalty payments; (ii) an upstream corporate income tax on the Upstream Consortium; (iii) a pipeline corporate income tax on TOTCO; and (iv) dividends from its equity participations in TOTCO and COTCO.

20. In the Base Case, Chad's revenues would total US\$ 1.677 billion. Its cash flows would start in the first year of production (2004), increase rapidly and peak in year 2009 at about US\$ 116 million, decline till 2014 when they increase again as a result of upstream tax revenues, and thereafter gradually decline. This would correspond to an average annual revenue of US\$ 60 million over the 2004-2032 period. The cash flow profile for Chad in the Base Case is shown in the chart below.

⁷ Chad recently has explored increasing its investment by US\$ 5 million, which would have a minimal impact on its returns.

⁸ The economic evaluation excludes the opportunity cost of depleted natural capital ("user cost", "depletion premium") in accordance with standard Bank practice for this kind of project.



It is estimated that royalties and upstream income taxes would represent about 56% and 30%, respectively, of Chad's total expected revenues. The corporate income tax on TOTCO, which is third in importance, would represent about 9%, and Chad's share of dividends in TOTCO and COTCO about 5% of its total revenues (see following table).

Chad Direct Revenues (US\$ Million)

	Royalty	Upstream Income Tax	Corporate Income tax on TOTCO	Chad share of TOTCO/COTCO's Dividends	Total
Real (99\$)	938	510	153	75	1677

21. The importance of these revenues is best highlighted by comparing them to key macroeconomic aggregates of the Chadian economy. The project's expected average annual revenue of US\$ 60 million (real) for Chad is equivalent to nearly 50% of Government revenues in 1998; this average also represents about 3% of Chad's 1998 GDP.

22. Economic NPV and IRR. In the Base Case, the NPV (discounted at 10%) of Chad's investment in the project, taking into account only direct revenues, is expected to equal US\$ 463 million; the project would provide a rate of return of about 70% on Chad's equity investment.¹⁰ A comparative study made of oil exploration and production agreements in other countries concluded that the returns to Chad are reasonable.

¹⁰ It should be noted that Chad's revenues are largely independent of the size of its equity investment (and related cost) in the pipeline companies, TOTCO and COTCO. Consequently, a lower invested amount would increase the rate of return, but would not significantly affect the NPV.

23. The sensitivity of Chad's total revenues, NPV and IRR to different levels of reserves is set out below:

Reserves and Returns to Chad
(at international price of crude oil of US\$ 15.25/bbl)

Reserve Size (millions of bbls)	Total Revenues (Real, \$M)	NPV @10%	IRR
595	685	205	60
917	1,677	463	70
1038	2,292	603	75

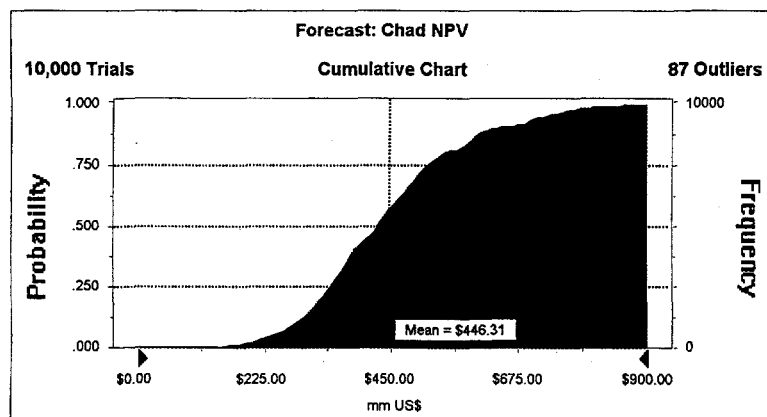
24. The sensitivity of Chad's total revenues to variations in both the price of oil and levels of reserves is shown below:

Sensitivity of Chad's Revenues and NPV to Reserve Size and Oil Prices

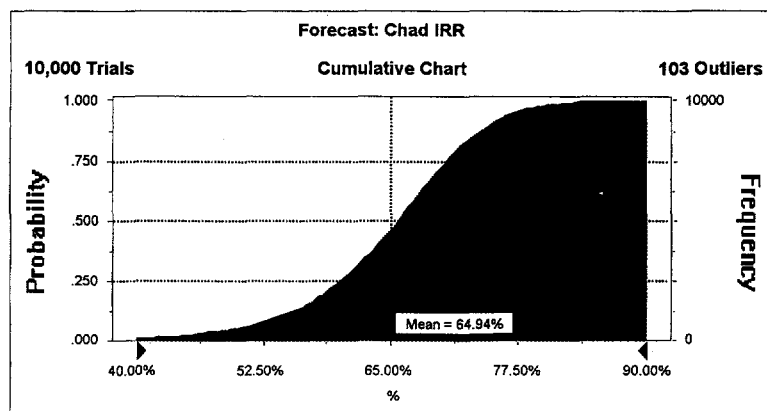
Chad's Revenues (Real, Undiscounted)	Oil Price/bbl (international prices)		
Reserve Size (bbls millions)	\$12.00	\$15.25	\$18.50
595	399	685	1,104
917	975	1,677	2,936
1038	1,247	2,292	4,213

NPV (real @ 10%)	Oil Price/bbl (international prices)		
Reserve Size (bbls millions)	\$12.00	\$15.25	\$18.50
595	108	205	330
917	271	463	822
1038	337	603	1,170

25. In order to estimate the impact of uncertainties surrounding some key economic variables, especially on the benefit side, a probability (or risk) analysis was carried out. As for the analysis of the project as a whole, the assumed underlying probability distributions are of two types: 'beta' for the production profile (a surrogate for sales) and 'lognormal' for the international price of oil. The Monte-Carlo simulation results for the NPV (based on about 10,000 runs) are illustrated by the following cumulative probability distribution. This figure shows that the expected mean net present value of Chad's revenues is about US\$ 446.31 million, there is a 50% chance that the NPV will exceed US\$ 428 million, and there is a 30% chance that it will exceed US\$ 497 million.



26. Similarly, the probability distribution of the economic rate of return (IRR analysis) shows that there is a 50% chance that the rate of return will exceed 66% and about a 30% chance that it will exceed 70% (see following figure). The risk of having less than a 40% rate of return is negligible and this rate could be considered a minimum. On the other hand, the probability of having a rate of return higher than 70% is 25%. The mean rate of return is about 64.94%, indicating an expected 64.94% rate of return for Chad.



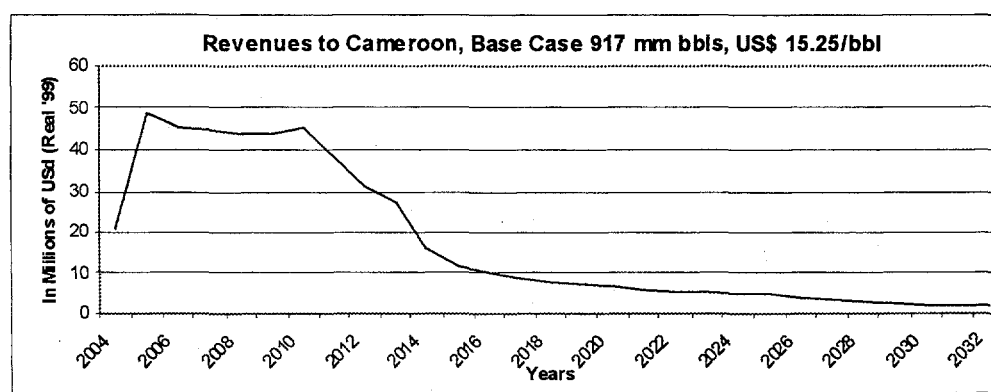
F. Economic Benefits to Cameroon

27. Costs to Cameroon. Cameroon would incur the cost of acquiring its equity participation as a shareholder in COTCO, estimated at US\$ 70 million. Like Chad, Cameroon will face additional costs, including: (a) expenses incurred in overseeing the execution of the Environmental Management Plan by COTCO (for which support would be provided by IDA under the Petroleum Environment Capacity Enhancement Project, described in Annex 18, Part C); (b) the cost of acquiring the land required by COTCO for the pipeline right-of-way (estimated at US\$ 1.5 million); and (c) other incremental environmental and social costs. Their impact is assessed as part of the sensitivity analysis under Part I of this Annex.

28. Benefits to Cameroon. The implementation of the project would generate important economic benefits to Cameroon. These benefits would accrue from three main sources: (a) direct revenues from the project; (b) project investments in infrastructure (roads, railway and port facilities – total investment

estimated at over US\$ 100 million); and (c) spending on the local economy generated during the construction and operation of the project (such as road and rail transport charges, and commissary procurement). The economic analysis focuses only on the direct revenues to Cameroon given that these benefits are large and easily quantifiable. Cameroon will receive the following direct revenues from the project: (i) a fixed transit fee of US\$ 0.41 for every barrel of project oil transported through the pipeline in Cameroon (this tax has been set in nominal terms and is not subject to escalation); (ii) dividends from Cameroon's equity participation in COTCO; and (iii) a corporate income tax on COTCO.

29. Total revenues to Cameroon in the Base Case are expected to be US\$ 505 million; this represents an average of about US\$ 18 million per year, but the amounts are significantly larger in the initial years as compared to later years – see diagram below. The cash flow profile for Cameroon in the Base Case is shown in the chart below.



It is estimated that the transit fees would represent about 66% of Cameroon's total expected revenues. The corporate income tax on COTCO would represent about 9%, and Cameroon's share of dividends in COTCO about 25% (see following table).

Cameroon Direct Revenues (US\$ Million)

	Transit Fee	Corporate Income tax on COTCO	Cameroon share of COTCO's Dividends	Total
Real (99\$)	334	44	127	505

30. The importance of these revenues is best highlighted by comparing these revenues to key macroeconomic aggregates of the Cameroonian economy. Although Cameroon's fiscal revenues totaled about US\$ 1.5 billion in FY1998, the size of funding for discretionary non-wage primary expenditures totaled about US\$ 570 million (about 38%). By comparison, the project would generate additional annual resources over the first five or so years of about US\$ 45 million (real) per year, that would represent about 8% of such discretionary non-wage expenditures.

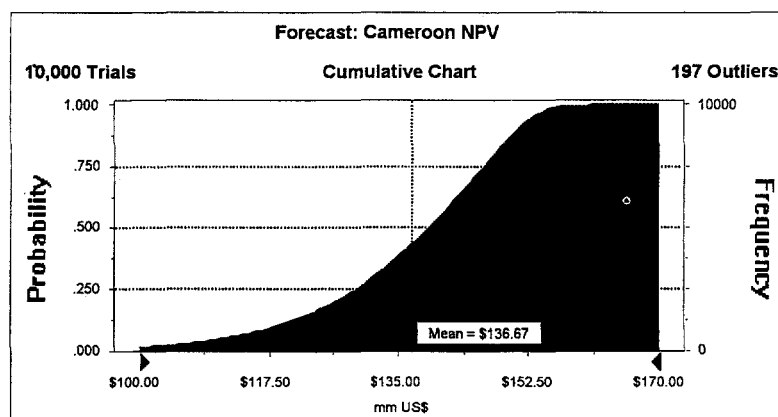
31. Economic NPV and IRR. In the Base Case, the NPV at 10% of Cameroon's investment is expected to be about US\$ 144 million, and the rate of return on its investment 39%. A comparative study of oil pipeline transport agreements concluded that the deal is reasonable for Cameroon.

32. Cameroon would not significantly profit from any upside nor would it be materially adversely affected by any downturn in the international prices of oil (absent a dramatic prolonged drop that affected the ability of the project to finance its ongoing operating and other expenses – see discussion below under Part G of this Annex). It would, however, be affected positively or negatively depending on whether the pipeline throughput is higher or lower than originally estimated. The sensitivity of Cameroon's returns to different levels of reserves is set out below.

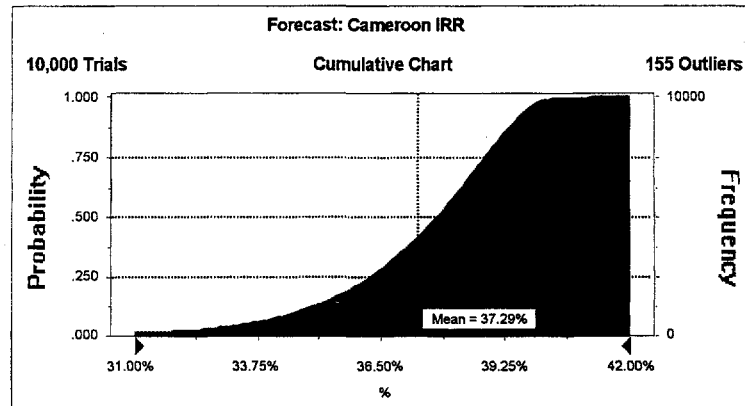
Reserves and Returns to Cameroon
(at international price of crude oil of US\$ 15.25/bbl.)

Reserve Size (Millions of Barrels)	Total Revenues (Real, US\$ Million)	NPV @10%	IRR
595	382	104	35
917	505	144	39
1038	549	158	40

33. In order to estimate the impacts of uncertainties surrounding key economic variables, especially on the benefit side, a probability (or risk) analysis was carried out. Again, the assumed underlying probability distributions are of two types: 'beta' for the production profile (i.e., sales) and 'lognormal' for the international price of oil. The Monte-Carlo simulation results for the NPV (based on about 10,000 runs) are illustrated by the following cumulative probability distribution. This following figure shows that the expected mean net present value is about US\$ 136.67 million, there is a 50% chance that the NPV will exceed US\$ 139 million, and there is a 30% chance that it will exceed US\$ 145 million.



34. Similarly, the probability distribution of the rate of return in the following figure shows that there is a 50% chance that the rate of return will exceed 38% and about a 30% chance that it will exceed 39%. The risk of having less than 31% rate of return is negligible and this rate could be considered a minimum. On the other hand, the probability of a rate of return higher than 39% is only about 10%. The mean rate of return is about 37.29%; this analysis indicates that the project would be expected to yield a 37.29% rate of return for Cameroon.



G. Returns to the Private Sponsors

35. Returns to the Private Sponsors have, for comparative purposes, also been analyzed on a real basis (although a financial analysis, using nominal figures and actual debt service obligations, is arguably more pertinent from their perspective). The analysis indicates that the Private Sponsors would, as a group, generate a positive NPV of US\$ 706 million in the Base Case. Furthermore, it indicates that at constant oil prices of \$12/bbl (real), the Private Sponsors have a negative return in the 917 million barrel case. At these low levels of oil prices, the NPV to the Private Sponsors would become positive as the developed reserves levels increase beyond 1,000 million barrels (see Attachment 1 to this Annex). As in the case of Chad, the Private Sponsors are most vulnerable to low oil prices. They are most likely to be influenced by low price projections before they begin to make their substantial investment, but as they expend more funds over the construction period, their sensitivity to lower oil prices in making additional investments can be expected to diminish. For example, while in the 917 million barrel case, the Private Sponsors would require a long-term oil price of about US\$ 14-15/bbl (nominal) to generate a positive NPV, following completion of construction, a price closer to US\$ 8/barrel (nominal) would be sufficient to generate a profit on an ongoing basis.

H. Other Economic Benefits for Chad and Cameroon

36. Economic benefits from the project, other than direct revenues, have not been incorporated into the Base Case analysis described above. Such other benefits include infrastructure improvements and local employment creation. For example, the project will upgrade over 100 km of roads in both Chad and Cameroon to facilitate the movement of project supplies. The project will also invest about US\$ 10 million in upgrading railways infrastructures in Cameroon and about US\$ 3 million at the Port of Douala for storage/transit facilities. During the construction phase, the project will create about 2,000 jobs in Chad for Chadian residents and about 1,000 in Cameroon for Cameroonian residents, and the project will create during the operations phase about 350 permanent jobs in Chad for Chadian residents (employment generation in Cameroon during the operations phase will be negligible). The project will also procure a variety of goods and services locally, including rail and truck freight services.

I. Incremental Environmental, Social and Implementation Costs for Chad and Cameroon

37. The environmental assessment (EA) and the documentation provided by the Private Sponsors identify different environmental impacts, such as biological, hydrological, geological, public health (see

e.g., discussion in Annexes 14 and 15 on environmental assessment, the Environmental Management Plans, and the resettlement/compensation plans). Many of these effects are of the nature of negative externalities and therefore could constitute an additional cost to Chad and Cameroon. However, these costs remain costs to Chad or Cameroon largely only insofar as they are not compensated for directly by the project (e.g., through the Private Sponsor-funded elements of the Compensation and Resettlement plans -- see Annex 15). Although there is uncertainty in estimating incremental environmental and social costs, it is expected that these externalities would be small compared with the project's direct costs and benefits, in particular given the mitigation actions proposed (see Annexes 14-17).

38. The main potential incremental environmental and social costs to Cameroon and to Chad are: (a) oil spill costs; (b) health costs; (c) agriculture production losses; (d) livestock fodder losses; and (e) forest and bush product losses. In addition, the project will emit a small amount of greenhouse gases. Chad and Cameroon will also incur costs regarding implementation of the Environmental Management Plans (including in overseeing performance by COTCO/TOTCO/Esso Chad).

39. Oil Spills. One of the most important environmental costs is related to potential damage from oil spills. In this analysis, only 'use' values are estimated, i.e. the 'non-use' values (option and existence values) that are attached to an oil-spill free environment by the international community are not estimated. The magnitude of potential 'use' values lost is larger for Cameroon, due to the great length of the pipeline in that country (880-km on-shore), and because of the additional risk for marine pollution at the end of the pipeline (11-km off-shore).

40. The method for arriving at a damage estimate is based on an assessment of the statistical risk for a spill. This is done with reference to experience gathered in the USA and Europe, as such data are not available for the countries concerned. Given the volume handled and based on data provided by the Private Sponsors, the estimated range of annual spill rates is 0.5% to 4% for a "large" spill (more than 1,000 barrels). Given the difficulty of estimating economic damage, the cost of such an event is based on the actual clean-up costs from experience in the USA as the "price" per spill on land (about US\$ 700,000 per spill). Multiplying the risk of an annual spill with the unit clean-up cost gives us the annual average expected cost. For marine spills, the risk assessment is similar, but the unit price is based on: (i) an assessment of damage to fisheries, and (ii) an assessment of damage to the hotel industry along the shoreline. Discounted (at a discount rate of 10%) over the 28-year life of the project, the expected value of total oil spill costs has been estimated at about US\$ 2.5 million for Cameroon and US\$ 0.4 million for Chad. It should be noted that COTCO, TOTCO, Esso Chad and the other members of the Upstream Consortium are obligated to pay for clean up and compensate for losses (as provided, for example, by the TOTCO and COTCO Conventions and the oilfield development agreements).

41. Health Risks. It is expected that there will be an increase in STDs/AIDS, mostly in the zones near project facilities and to a lesser extent in construction areas. There also will be an increase in trauma (i.e., accidents), especially during construction. Moreover, if population density increases due to the project, it could remain higher after the end of construction than before the project started, which would also impact on health issues in the area. Under the Environmental Management Plan (described in Annex 14) and the petroleum environmental capacity building operations for Chad and Cameroon (see, Annex 18, Parts A and C), various steps are planned to mitigate these impacts. Other effects may develop, not so much as a direct impact of the project, but rather as a consequence of increased revenues; these include: increased tobacco use with subsequent respiratory problems and alcoholism. Respiratory problems might also increase

during the construction period, but there is very little documented evidence of causal links between dust due to construction and respiratory diseases. Proper quantification of such health risks is a very difficult task. While additional health costs may be associated with the implementation of the project, as indicated above, specific activities addressing health risks will be carried out by the Private Sponsors and by Chad and Cameroon and should produce net health benefits. Use of oil revenues in key social sectors, particularly in the health sector, should also lead to important, yet unquantifiable, health benefits.

42. Agricultural Losses. Some agricultural production will be displaced temporarily (one season) during construction, primarily in the pipeline corridor, and there will be some permanent displacement, primarily due to production activities in the oilfield area. The project expects to use some 5,500 ha of land, of which about 4,000 would be required for a short period (essentially to permit the laying of the pipeline) and then would be made available for most agriculture activity (see discussion in Annex 15, paras. 2 and 19 for more detail). The value of agricultural production losses per year is estimated as the loss in producer surplus (the difference between the gross output value and the cost of labor valued at its opportunity cost), and has been calculated separately for traditional rain-fed agriculture and fruit and vegetable gardens. The shadow wage rate has been assumed to be half of the market wage. In addition, the transaction cost of negotiating land adjustments has been valued as equal to the loss in producer surplus. These agricultural losses related to the project would be fully compensated and the cost absorbed by COTCO, TOTCO and Esso Chad under the compensation and resettlement plans (see Annex 15), which provide for compensation for temporary or permanent loss of land on substitution values (total financing under these plans has been estimated at about US\$ 2.5 million for activities in Chad and about US\$ 5 million for activities in Cameroon). Cameroon's share of these costs does not exceed its compensation financing (estimated at about US\$ 1.5 million). As noted above, most agricultural activities would be permitted on these lands following the construction period and the cost borne by Cameroon primarily reflects the cost of acquiring title to privately registered land, rather than changes in agricultural use patterns. In Chad, compensation and resettlements costs are fully borne by TOTCO and the Upstream Consortium members.

43. Livestock Fodder Losses. For livestock, the economic losses are estimated with reference to losses of fodder from pasture or crop residues from agricultural land affected by the project. In the case of Chad, the area concerned is 1,800 hectares, almost all under traditional agriculture. In the case of Cameroon, the area concerned is about 2,100 hectares, mostly under traditional agriculture, but with about one quarter under pasture/savanna. The livestock fodder losses related to the project are estimated to be about US\$ 1.9 million in Cameroon and US\$ 1.2 million in Chad.

44. Forestry and Bush Product Losses. The value of bush meat and other non-timber products that will be lost as a result of the project has been estimated at about US\$ 100,000 on the basis of surveys that have been done specifically for the project and other studies in the *Korup* area in Cameroon. The areas concerned are limited: about 131 hectares in Cameroon and about 1,100 hectares in Chad. The types of bush products are likely to include herbs, nuts, and fruits consumed as food, or flora used for medicinal purposes. No deduction is made for the cost of collecting these products, primarily labor costs. Transaction costs for the negotiation and regulation of changes in forestry and bush utilization are assigned a value equal to the direct economic loss. The Private Sponsors will compensate local communities for the permanent loss of communally owned trees of economic value. While marketable timber, cut as a result of clearing for the pipeline corridor and for some ancillary facilities, will be sold by the Government, and non-marketable trees will be cut and stacked for use by local communities, there will still be long-term costs

associated with this loss of forest resources. The corridor selection and the pipeline alignment within the corridor have been designed to minimize the impact on forestry generally – see discussion in Annex 14. Residual biodiversity losses in the semi-deciduous and coastal rainforest areas of Cameroon will be compensated by the creation and effective protection of two new national parks, one in each area. The Private Sponsors will contribute US\$ 2.9 million to a private Environmental Foundation to help underwrite the costs of conservation activities in the two biodiversity offsets (see Annex 14). The Cameroon Government will also cover certain costs, estimated at US\$ 0.9 million discounted over the life of the project.

45. Greenhouse Gas Emissions. The production of crude oil from the Doba fields and its export through the pipeline to international markets will involve various activities that will generate greenhouse gas emissions. These aspects are described in the Environmental Assessment.¹¹ In addition, the project is expected to deliver to markets for consumption 800-1,000 million barrels over the 28-year production life of the fields. However, given existing consumption levels, this supply of oil is expected to have a minimal impact, if any, on the global level of oil consumption.

46. Implementation of the Environmental Management Plan: Costs borne by Chad and Cameroon. Chad and Cameroon will incur additional costs, particularly to monitor the implementation of the Environmental Management Plan and, in the case of Chad, to mitigate social impacts in the producing region. The net present value (NPV at 10%) of these and other project implementation costs are estimated at about US\$ 15 million for Chad and the same amount for Cameroon (about \$35 million on an undiscounted basis).

47. In summary, although there is uncertainty in estimating incremental environmental and social costs, most of these potential costs will be mitigated and/or compensated for by the Private Sponsors, and any remaining impacts are expected to be negligible in comparison to the large benefits that both Chad and Cameroon stand to gain from the project. Over the life of the project, the net (discounted) incremental environmental and social costs to Chad and to Cameroon (i.e., those that are not financed by the Private Sponsors as part of project costs or will not be compensated directly by the project) are estimated to be less than US\$ 10 million for Chad and the same amount for Cameroon. The impact of these costs, together with the estimated US\$ 15 million project implementation costs borne directly by each country, would reduce Chad's NPV in the Base Case from US\$ 463 million to US\$ 438 million, and Cameroon's NPV in the Base Case from US\$ 144 million to US\$ 119 million. Consequently, even after factoring in these costs, the project remains attractive for both Chad and Cameroon.

¹¹ The present value of these carbon emissions (using a discount rate of 10%), valued at US\$ 20/ton would equal about US\$ 30 million.

Attachment 1 to Annex 4 Scenario Analysis (NPV and IRRs), in Real 1999 US\$'s

NPV (Real @ 10%); in millions of US Dollars

<u>Reserves v/s Brent Oil Prices</u>			
<u>595 million bbls*</u>	<u>US\$ 12</u>	<u>US\$ 15.25</u>	<u>US\$ 18.50</u>
Chad	108	205	330
Cameroon	92	104	101
Private Sponsors	(917)	(344)	235
<u>917 million bbls**</u>	<u>US\$ 12</u>	<u>US\$ 15.25</u>	<u>US\$ 18.50</u>
Chad	271	463	822
Cameroon	148	144	141
Private Sponsors	(98)	706	1,361
<u>1038 million bbls</u>	<u>US\$ 12</u>	<u>US\$ 15.25</u>	<u>US\$ 18.50</u>
Chad	337	603	1,170
Cameroon	162	158	156
Private Sponsors	198	1,045	1,614

IRR (in %)

<u>Reserves v/s Brent Oil Prices</u>			
<u>595 million bbls*</u>	<u>US\$ 12</u>	<u>US\$ 15.25</u>	<u>US\$ 18.50</u>
Chad	42	60	75
Cameroon	34	35	35
Private Sponsors	<0	<0	13
<u>917 million bbls**</u>	<u>US\$ 12</u>	<u>US\$ 15.25</u>	<u>US\$ 18.50</u>
Chad	56	70	84
Cameroon	39	39	39
Private Sponsors	9	18	25
<u>1038 million bbls</u>	<u>US\$ 12</u>	<u>US\$ 15.25</u>	<u>US\$ 18.50</u>
Chad	60	75	90
Cameroon	41	40	40
Private Sponsors	12	21	27

* IFC base case.

** Bank base case

Annex 5

Project Financial Summary - 917 Million Bbls, Bank Oil Price Projections (Nominal, US\$ Millions)

	00-32	Pre-97	97-99	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Shipped Crude Sales Volume millions bbls	883	0	0	0	0	0	0	42	81	81	81	81	79	65	51	39	32	28	25	23	20	19	17	15	14	13	12	11	10	9	7
Crude Sales Revenue	13,721	0	0	0	0	0	0	600	1,186	1,197	1,210	1,219	1,201	993	794	608	508	450	405	365	331	306	281	254	235	222	208	192	181	156	126
Equity Investments																															
CMs - Upstream	1,459	661	115	100	274	412	379	155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CMs - Downstream	713	59	266	-133	134	199	180	244	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chad	42	0	0	9	6	9	8	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cameroon	70	0	0	13	10	15	14	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Equity Investments	2,285	721	381	-11	424	635	580	429	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Debt Financing	1,400	0	0	315	312	467	283	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Cash Inflow	3,685	721	381	304	736	1,101	864	452	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Capital Investment																															
Exploration & Pre-Development	0	635	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chad Upstream Development	1,597	48	108	100	274	412	379	222	134	16	13	13	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Chad & Cameroon Export Pipeline	2,140	9	266	204	462	689	485	296	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Investment Expenditures	3,737	691	381	304	736	1,101	864	519	137	16	13	13	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total Operating Costs	3,813	0	0	0	0	0	0	100	184	174	175	182	181	166	151	137	131	125	122	120	119	150	115	113	111	109	109	106	106	101	95
Project Operating Cash Flow	9,857	30	0	0	0	0	0	433	894	1,007	1,022	1,024	1,019	826	642	470	376	324	281	244	212	154	164	139	122	111	98	84	74	54	29
Total Debt Service	1,909	0	0	0	0	0	0	205	348	337	249	191	148	106	83	66	57	46	37	29	8	0	0	0	0	0	0	0	0	0	0
Distributable Returns	8,125	0	0	0	0	0	0	405	547	670	774	833	871	720	559	404	319	277	244	215	204	154	164	139	122	111	98	84	74	54	29
Chad Royalty	1,017	0	0	0	0	0	0	22	55	70	81	89	96	78	59	41	32	39	39	36	35	28	29	26	24	22	20	18	17	14	11
Chad Upstream Tax	553	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	74	66	62	43	47	39	33	30	25	21	20	15	5	
Chad Pipeline Tax	166	0	0	0	0	0	0	1	14	8	5	2	22	26	22	19	17	8	4	3	2	2	2	1	1	1	1	1	1	1	
Chad Share of ROE	82	0	0	0	0	0	0	8	11	10	10	10	8	6	6	5	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Chad Revenue	1,818	0	0	0	0	0	0	31	80	88	96	100	125	110	87	65	54	119	117	106	99	72	78	66	59	53	47	41	39	31	17
Cameroon Transit Fee	362	0	0	0	0	0	0	17	33	33	33	33	32	27	21	16	13	12	10	9	8	8	7	6	6	5	5	4	4	4	3
Cameroon Pipeline Tax	48	0	0	0	0	0	0	0	1	0	0	0	1	11	10	8	7	3	2	1	0	0	0	0	0	0	0	0	0	0	0
Cam. share of ROE	138	0	0	0	0	0	0	12	18	16	15	15	14	12	11	10	9	3	1	1	1	0	0	0	0	0	0	0	0	0	0
Total Cam. Revenue	548	0	0	0	0	0	0	29	53	49	48	48	48	49	41	34	29	17	12	11	9	8	8	7	6	6	6	5	5	4	3
CMs Upstream Revenue	3,904	0	0	0	0	0	0	19	141	369	448	498	543	425	304	189	132	113	112	101	95	66	72	60	52	46	40	33	25	15	5
CMs Share of ROE	1,855	0	0	0	0	0	0	166	243	218	214	209	179	149	135	121	110	32	6	6	8	7	7	6	6	6	5	5	5	4	3
Total Cons. Revenue	5,759	0	0	0	0	0	0	185	384	587	662	706	723	574	439	310	242	146	118	107	103	73	79	66	58	52	45	38	30	19	9

Annex 6

Procurement and Disbursement Arrangements

Table A: Project Costs by Procurement Arrangements
(in US\$ million equivalent)

Expenditure Category	ICB	N.B.F.	Total Cost Including Contingency
1. Civil Works			
1.1. Field System		341	341
1.2. Export System Pipeline Installation	495 (71)		495 (71)
1.3. Other Export System Civil Works		230	
2. Goods			
2.1. Field System Equipment, Generators, etc.		444	444
2.2. Export System Materials, Equipment, etc.	12		12
2.3. Other Export System Civil Works		438	438
3. Services			
3.1. Field Upstream Engineering, Project Management, etc.		646	646
3.2. Export System Engineering, Project Management, etc.		10	10
3.3. Other Export System Civil Works		294	294
3.3. Field System Freight		89	89
3.4. Export System Freight		89	89
Sub-Total	517	2,571	3,088
4. Miscellaneous		635	635
Total	517	3,206	3,723

Note: N.B.F. = Not Bank-financed. The items listed under "N.B.F." will be procured in accordance with the procurement practices of Exxon/Esso Chad described below in this Annex.

Figures in parenthesis are the amounts to be financed by the Bank loan.

Annex 6, Table B: Thresholds for Procurement Methods and Prior Review

Expenditure Category	Contract Value (Threshold)	Procurement Method	Contracts Subject to Prior Review / Estimated Total Value Subject to Prior Review
	US\$ million		US\$ millions
1. Works	All (Single contract)	ICB	All (Single contract)
Total value of contracts subject to prior review:			Over US\$ 300,000,000

The contract for the installation of the pipeline has been awarded through International Competitive Bidding (ICB), in accordance with the Bank's *Guidelines for Procurement under IBRD Loans and IDA Credits* (January 1995). Esso Chad is managing the procurement process on behalf of TOTCO and COTCO, with the general corporate support of Exxon. Four joint-venture contracting groups were pre-qualified and bid packages were distributed late 1996. Submissions were received in 1997 and evaluation and final award made mid-1997. Esso Chad has employed the Bank's standard bidding documents, with modifications agreed upon between Esso Chad and the Bank. No other contract will be financed from proceeds of the IBRD loans. 100% of Bank-financed contracts are subject to the Bank's prior review procedures.

All other contracts (both for the Export System, on behalf of TOTCO and COTCO, and for the Field System, on behalf of the Upstream Consortium) are to be procured through Exxon's regular commercial procurement procedures. These procedures were reviewed by the Bank (including the Regional Procurement Advisor, Africa), and found to be acceptable. Pursuant to these procedures, solicitations are sent to a list of pre-selected potential eligible bidders, normally numbering 15-20. This is followed by distribution of bid packages to a list of pre-qualified suppliers, generally numbering at least 3, with worldwide representation. A selection is made on the basis of competitive bidding, taking into account price and quality. Exxon has had extensive experience in managing large-scale procurement actions.

Disbursement**Table C: Allocation of Proceeds of Loans**

Expenditure Category	Amount in US\$ million			Financing Percentage
	Chad Loan	Cameroon Loan	Total IBRD	
1. Civil Works				
(a) COTCO	24.000	43.500	67.500	100% of foreign expenditures and 90% of local expenditures
(b) TOTCO	8.500	-----	8.500	
Subtotal	32.500	43.500	76.000	
2. Front End Fee	0.395	0.534	0.929	100%
3. Interest During Construction and Other Loan Charges	3.070	4.026	7.096	100%
4. Premium	--	5.340	5.340	100%
5. Unallocated	3.535	--	3.535	100%
Total	39.500	53.400	92.900	3%

Use of statements of expenses (SOEs): SOEs will not be used.

Special account: There will be no special accounts.

Annex 7

Project Processing Budget and Schedule

A. Project Budget (US\$ 000)	<u>Planned</u> (At EPS* stage)	<u>Actual</u> 2,600
B. Project Schedule	<u>Planned</u> (At EPS stage)	<u>Actual</u>
Time taken to prepare the project (months)	36	72
First Bank mission (identification)	11/95	11/95
Appraisal mission departure	3/96	6/99
Negotiations	6/96	11/99 – 3/00
Planned Date of Effectiveness	1/97	9/00
*Project processing began under EPS system that preceded PCD system.		
Prepared by: Private Sponsors: Exxon; GoT: MMEP; GoC: SNH		
Preparation assistance: PPFs and PHRD Grants to Chad and Cameroon		
<p>Bank staff who worked on the project included:</p> <p>Philippe Benoit and Michel Layec, Ignatius A. Menezes, Pankaj Gupta, Eugen Scanteie, Aaron Amundson, Gracia Sorensen, Cyprian Fisiy, Cynthia C. Cook, Jean-Charles de Daruvar, Andrew Fitchie, Mohammed A. Bekhechi, Robert Goodland, Brendan Horton, Jean Roger Mercier, Robert Robelus, Pushpa N. Schwartz, Michelle Keane, Georges Minang, Mary Barton-Dock, Lucienne M'Baipor, Charles Donang, Robert Lacey, Paul Lignieres, Chakib Khelil, Thomas O'Connor, Ian Morisson, Anthony Gorman, Ionnis Balafoutis, Pierre Yourougou, Jerome Chevallier, Valerie Asfour, Myrina Harris, Jean-Jacques Raoul, Sunil Bhattacharya, Neil Roger, Fatimata Sy, Suman Babbar, Richard Wong, Robert Tillman, Eavan O'Halloran, Connie Luff, Noureddine Bouzaher, Phou Chanthavongsa, Amadou Cisse, Marie-Claude Bonhomme, Alain W. D'Hoore, Eric Daffern, Anil Malhotra, Bertrand Ah-Sue, David Freese, Van Vu Nichols, Monique Amany, Marilyn Manalo, Hemant Baijal</p>		
<p>IFC staff who worked on the project included:</p> <p>Shahbaz Mavaddat, Eric Siew, Younes Maamar, Ahmed Kebaili, Elsie Moses, Annie Dizon, Farid Dossani, Avrum Hofman, Glen Armstrong, Ronald Anderson), Eric Brusberg, Lee Doran , Helen Chandran, Fernando Cabezas, Motoko Aizawa, Jean-Michel Attlan, Francois Grossas, Mark Constantine, Ludwina Joseph, Clive Armstrong</p>		

Annex 8

Documents in the IBRD Project File*

A. Project Implementation Plan and Other Project Sponsor Documentation

1. Chad Development and Export System Project, Project Execution Plan, Class III Basis, March 1996.
2. Chad Development and Export System Project, Design Basis Memorandum, Class III Basis, March 1996.
3. Chad Management System Descriptions, May 1996.
4. Preliminary Information Memorandum, July 1997.
5. Chad Doba Development Project, Project Development Memorandum, Updated Class Vs, March 1995.
6. Chad Export Project:
 - (i) Environmental Assessment and Appendices, Chad Portion, October 1997.
 - (ii) Environmental Assessment and Appendices, Cameroon Portion, October 1997.
 - (iii) Environmental Management Plan and Appendices, Chad Portion, February 1998.
 - (iv) Environmental Management Plan and Appendices, Cameroon Portion, February 1998.
 - (v) Compensation and Resettlement Plan, Chad, February 1998.
 - (vi) Compensation Plan, Cameroon, June 1998.
7. Environmental Economic Impact, Chad Export Project -- Chad Portion, Cameroon Portion, October 1997.
8. Chad Export Project: Environmental Assessment, Management Plan and Supporting Documents (19 volumes), May 1999.
9. General Oil Spill Response Plan, September 1999.

B. Other Project Documentation

1. Independent Technical Review of the Chad-Cameroon Transportation System Project, September 17, 1998.
2. Project Cost Certification Report – Chad Field Development, July 1996.
3. Oil reserves and Development Study of the Kome, Bolobo and Miandoum Fields, July 1996.
4. Exxon Background Procurement Documentation.

C. Country Materials

1. Cameroon: *Declaration de Strategie de Lutte Contre la pauvreté*, dated December 15, 1998.
2. Chad: Petroleum Revenue Management Law, adopted December 30, 1998.
3. Report of the Information Seminar on the Chad Petroleum Project, Donia Chad, January 1998.
4. Memorandum, Overview and Final Declaration of the Consultative and Action Group for the Chad/Cameroon Petroleum Development and Pipeline Project, August 1998.
5. Cameroon/Chad Bilateral Treaty, dated February 8, 1996.
6. Cameroon Law on Transport of Hydrocarbons from Third Party Country, dated August 5, 1996.
7. Cameroon Implementation Decree for Transportation by Pipeline Law, dated July 7, 1997.

8. Cameroon Law Approving COTCO Convention of Establishment, dated August 7, 1997.
9. Chad Petroleum Code, dated April 15, 1962.
10. Chad Law Approving TOTCO Convention of Establishment, No. 015/PR/98, dated August 7, 1998.
11. Bebedjia (NGO) Declaration, April 1999.

D. Bank Documents

1. Overview of Upstream Concessions, dated November 25, 1997, supplemented February 9, 1998.
2. Overview of Pipeline Transportation Agreements, dated April 16, 1996.
3. Economic Analysis, Background, dated May 1997.

E. Other

1. Financial Model for Project

*Including electronic files.

Annex 9
Part A.1: Chad
Status of Bank Group Operations in Chad
IBRD Loans and IDA Credits in the Operations Portfolio

Closed Projects 25

Board Date Fiscal Year	Active Projects	Purpose	Original Amount in US\$ Millions				Difference Between expected and actual disbursements a/			Last PSR Supervision Rating b/	
			IBRD	IDA	Cancel.	Undisb.	Orig	Frm Rev'd	Dev Obj	Imp Prog	
Active Projects											
1991	P000528	ENGINEERING	0.00	10.78	0.00	4.02	4.11	4.23	S	S	
1993	P000517	BASIC EDUCATION	0.00	19.03	0.00	6.40	6.38	0.00	S	S	
1993	P000530	TRANSPORT SECTOR II	0.00	47.77	0.00	1.37	-12.34	-0.09	S	S	
1994	P000509	HEALTH & SAFE MOTHER	0.00	29.16	0.00	6.55	-4.97	4.08	S	S	
1995	P000501	AG SERVICES	0.00	22.91	0.00	8.06	1.49	0.00	U	U	
1995	P035601	POP. & AIDS	0.00	19.11	0.00	7.71	2.92	0.00	S	S	
1996	P035623	CAPACITY BUILDING	0.00	8.79	0.00	0.15	0.79	0.00	S	S	
1998	P000532	HOUSEHOLD ENERGY	0.00	5.50	0.00	4.90	1.97	0.00	S	S	
2000	P062840	MANAGEMENT OF THE PET. ECONOMY	0.00	17.19	0.00	17.19	0.00	0.00	S	S	

a. Intended disbursements to date minus actual disbursements to date as projected at appraisal.

b. Following the FY94 Annual Review of Portfolio performance (ARPP), a letter based system was introduced (HS = highly Satisfactory, S = satisfactory, U = unsatisfactory, HU = highly unsatisfactory): see proposed Improvements in Project and Portfolio Performance Rating Methodology (SecM94-901), August 23, 1994.

Annex 9
Part A.2: Chad
STATEMENT OF IFC's
Committed and Disbursed Portfolio
(In US Dollar Millions)

FY Approval	Company	Committed				Disbursed			
		IFC				IFC			
		Loan	Equity	Quasi	Partic	Loan	Equity	Quasi	Partic
Total Portfolio:		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Approvals Pending Commitment							
		<u>Loan</u>	<u>Equity</u>	<u>Quasi</u>	<u>Partic</u>				
Total Pending Commitment:		0.00	0.00	0.00	0.00				

Annex 9
Part B.1: Cameroon
Status of Bank Group Operations in Cameroon
IBRD Loans and IDA Credits in the Operations Portfolio

Project ID	Fiscal Year	Borrower	Purpose	Original Amount in US\$ Millions				Difference Between expected and actual disbursements a/		Last PSR Supervision Rating b/	
				IBRD	IDA	Cancel.	Undisb.	Orig	Frm Rev'd	Dev Obj	Imp Prog
Number of Closed Projects: 62											
Active Projects											
CM-PE-411	1995	GOVERNMENT	HLTH/FERT/NUTRITION	0.00	39.67	0.00	31.57	27.17	1.06	U	U
CM-PE-41553	1996		PE/TA	0.00	11.83	0.00	5.87	6.51	0.00	S	S
CM-PE-393	1996	GOVERNMENT	TRANSPORT SECTOR	0.00	55.84	0.00	30.73	19.19	0.00	S	S
CM-PE-55684	1998	GOVERNMENT OF CAMEROON	IUT DOUALA (LIL)	0.00	4.98	0.00	4.68	2.46	-0.04	S	S
CM-PE-54443	1998	GOVERNMENT OF CAMEROON	SAC III	0.00	192.83	0.00	103.71	64.58	68.81	S	S
CM-PE-45348	1999	GOVERNMENT OF CAMEROON	AG.EXT.&RES. SUPPORT	0.00	15.33	0.00	14.03	3.91	0.00	S	S
Total				0.00	320.48	0.00	190.59	123.82	69.83		

a. Intended disbursements to date minus actual disbursements to date as projected at appraisal.

b. Following the FY94 Annual Review of Portfolio performance (ARPP), a letter based system was introduced (HS = highly Satisfactory, S = satisfactory, U = unsatisfactory, HU = highly unsatisfactory): see proposed Improvements in Project and Portfolio Performance Rating Methodology (SecM94-901), August 23, 1994.

Note:

Disbursement data is updated at the end of the first week of the month.

Annex 9
Part B.2: Cameroon
STATEMENT OF IFC's
Committed and Disbursed Portfolio
(In US Dollar Millions)

FY Approval	Company	Committed				Disbursed			
		IFC				IFC			
		Loan	Equity	Quasi	Partic	Loan	Equity	Quasi	Partic
1979	Alucam	0.00	.93	0.00	0.00	0.00	.93	0.00	0.00
1986	CICAM	2.05	0.00	0.00	0.00	2.05	0.00	0.00	0.00
1992/94/97/98	Pecten Cameroon	57.27	0.00	0.00	181.35	25.24	0.00	0.00	79.94
1994/96	AEF Proleg	.71	0.00	0.00	0.00	.71	0.00	0.00	0.00
1994/96	AEF United Trspt	.48	0.00	0.00	0.00	.48	0.00	0.00	0.00
1995	AEF Comp Avicole	.29	0.00	0.00	0.00	.29	0.00	0.00	0.00
1996	AEF Notacam	.74	0.00	0.00	0.00	.74	0.00	0.00	0.00
Total Portfolio:		61.54	.93	0.00	181.35	29.51	.93	0.00	79.94
Approvals Pending Commitment									
		<u>Loan</u>	<u>Equity</u>	<u>Quasi</u>	<u>Partic</u>				
1999	AEF LUNA	.25	0.00	0.00	0.00				
Total Pending Commitment:		.25	0.00	0.00	0.00				

Chad at a glance

POVERTY and SOCIAL

1998

Population, mid-year (millions)	7.3	628	3,515
GNP per capita (Atlas method, US\$)	230	480	520
GNP (Atlas method, US\$ billions)	1.7	304	1,844

Average annual growth, 1992-98

Population (%)	2.5	2.6	1.7
Labor force (%)	2.5	2.6	1.9

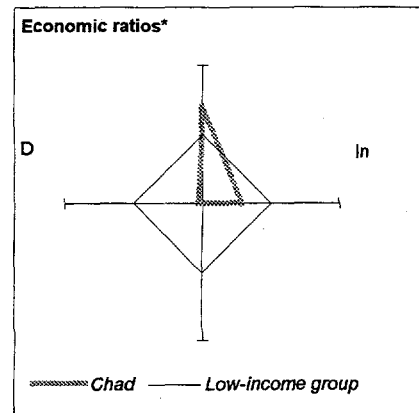
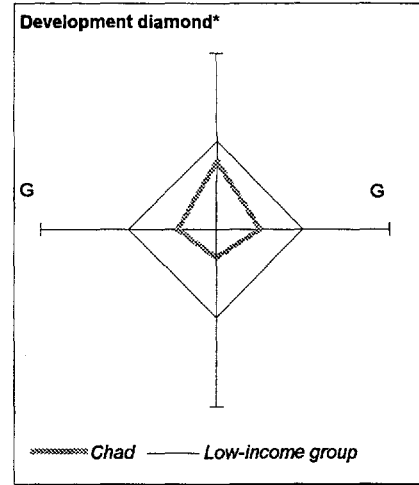
Most recent estimate (latest year available, 1992-98)

Poverty (% of population below national poverty line)	80	40	..
Urban population (% of total population)	23	33	31
Life expectancy at birth (years)	49	51	63
Infant mortality (per 1,000 live births)	100	91	69
Child malnutrition (% of children under 5)	39	..	..
Access to safe water (% of population)	24	47	74
Illiteracy (% of population age 15+)	52	42	32
Gross primary enrollment (% of school-age population)	55	77	108
Male	74	84	113
Female	36	69	103

KEY ECONOMIC RATIOS and LONG-TERM TRENDS

	1977	1987	1997	1998
GDP (US\$ billions)	0.94	1.2	1.5	1.7
Gross domestic investment/GDP	18.5	9.1	16.9	16.9
Exports of goods and services/GDP	15.4	15.4	19.1	19.2
Gross domestic savings/GDP	..	..	0.1	1.9
Gross national savings/GDP	..	..	2.8	4.0
Current account balance/GDP	-14.0	-13.0	-14.1	-12.9
Interest payments/GDP	0.1	0.3	1.0	1.0
Total debt/GDP	15.8	27.9	54.9	51.6
Total debt service/exports	2.7	4.0	12.2	13.7
Present value of debt/GDP	..	..	..	..
Present value of debt/exports	..	..	..	..

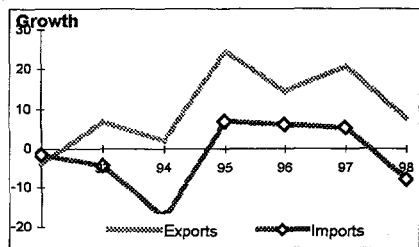
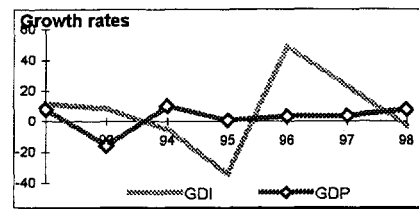
	1977-87	1988-98	1997	1998	1999-03
(average annual growth)					
GDP	2.1	2.0	4.1	8.1	3.4
GNP per capita	-0.2	-0.8	3.5	2.8	..
Merchandise exports	0.8	3.0	20.7	8.0	8.0



STRUCTURE of the ECONOMY

	1977	1987	1997	1998
(% of GDP)				
Agriculture	35.2	33.1	37.4	38.6
Industry	13.6	14.6	14.7	13.9
Manufacturing	10.8	11.4	12.4	11.7
Services	51.5	52.3	47.9	47.5
Private consumption	77.7	95.8	88.9	88.7
General government consumption	16.9	15.8	10.9	9.4
Imports of goods and services	28.4	36.4	35.9	34.3

	1977-87	1988-98	1997	1998
(average annual growth)				
Agriculture	0.1	4.4	5.1	11.2
Industry	2.1	1.6	9.4	10.4
Manufacturing	..	..	12.5	10.9
Services	3.0	-0.2	1.5	4.0
Private consumption	4.1	0.6	1.7	8.6
General government consumption	-1.3	-4.3	-6.1	-6.6
Gross domestic investment	-8.0	0.1	..	-2.9
Merchandise imports	4.3	-2.5	5.4	-7.8
Gross national product	2.1	1.7	4.3	8.4



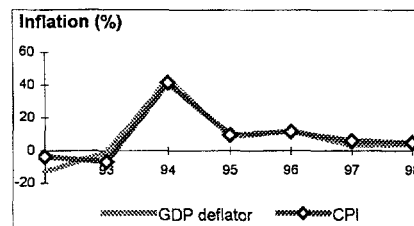
Note: 1998 data are preliminary estimates.

* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

Chad

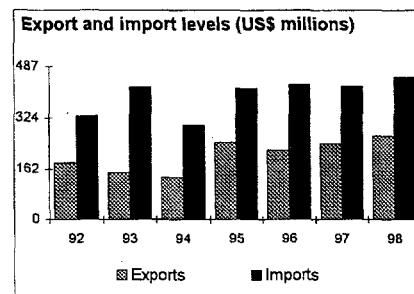
PRICES and GOVERNMENT FINANCE

	1977	1987	1997	1998
Domestic prices				
(% change)				
Consumer prices	..	-6.0	5.9	4.4
Implicit GDP deflator	8.6	-3.1	2.8	4.1
Government finance				
(% of GDP, includes current grants)				
Current revenue	..	5.6	8.4	7.6
Current budget balance	..	-2.3	0.2	0.1
Overall surplus/deficit	..	-18.0	-9.5	-7.7



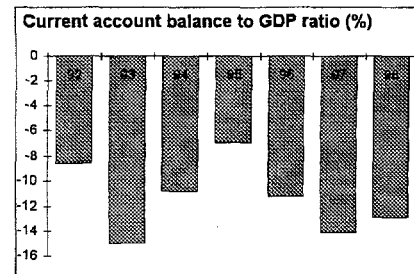
TRADE

	1977	1987	1997	1998
(US\$ millions)				
Total exports (fob)	..	109	243	267
Cotton	..	41	115	146
Meat	..	42	61	64
Manufactures	..	4	..	..
Total imports (cif)	..	366	424	454
Food	..	18	18	19
Fuel and energy	..	38	18	33
Capital goods	..	90	158	169
Export price index (1995=100)	..	81	96	100
Import price index (1995=100)	..	74	104	110
Terms of trade (1995=100)	..	109	92	91



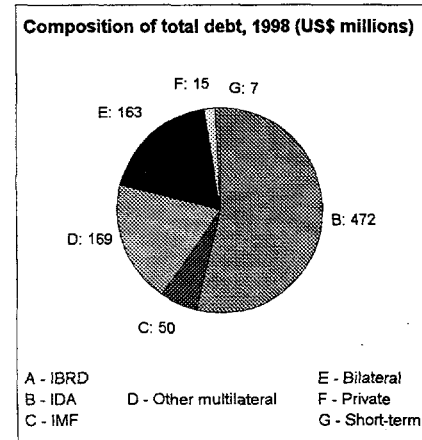
BALANCE of PAYMENTS

	1977	1987	1997	1998
(US\$ millions)				
Exports of goods and services	131	180	293	326
Imports of goods and services	246	424	550	582
Resource balance	-115	-244	-257	-256
Net income	-2	-11	-35	-32
Net current transfers	..	..	76	69
Current account balance	-131	-151	-216	-219
Financing items (net)	127	180	172	197
Changes in net reserves	4	-30	44	22
Memo:				
Reserves including gold (US\$ millions)	20	57	145	124
Conversion rate (DEC, local/US\$)	246	301	583	589



EXTERNAL DEBT and RESOURCE FLOWS

	1977	1987	1997	1998
(US\$ millions)				
Total debt outstanding and disbursed	148	325	842	876
IBRD	0	0	0	0
IDA	24	61	457	472
Total debt service	4	7	35	47
IBRD	0	0	0	0
IDA	0	1	5	7
Composition of net resource flows				
Official grants	..	..	..	..
Official creditors	30	38	42	94
Private creditors	7	3	0	-1
Foreign direct investment	..	..	-6	23
Portfolio equity	0	0	0	0
World Bank program				
Commitments	2	19	25	16
Disbursements	8	13	48	29
Principal repayments	0	1	2	3
Net flows	8	12	46	26
Interest payments	0	1	3	4
Net transfers	8	12	43	22



Cameroon at a glance

9/22/99

POVERTY and SOCIAL

1998

	Cameroon	Sub-Saharan Africa	Low-income
Population, mid-year (millions)	14.3	628	3,515
GNP per capita (Atlas method, US\$)	610	480	520
GNP (Atlas method, US\$ billions)	8.7	304	1,844

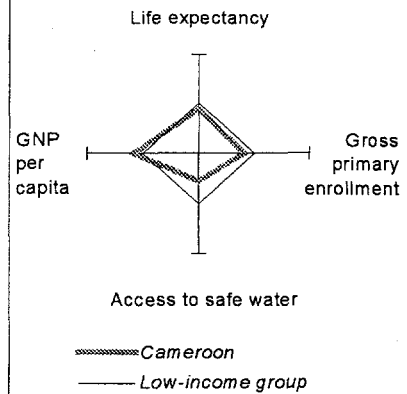
Average annual growth, 1992-98

	Cameroon	Sub-Saharan Africa	Low-income
Population (%)	2.8	2.6	1.7
Labor force (%)	3.2	2.6	1.9

Most recent estimate (latest year available, 1992-98)

Poverty (% of population below national poverty line)	..	..	..
Urban population (% of total population)	47	33	31
Life expectancy at birth (years)	57	51	63
Infant mortality (per 1,000 live births)	52	91	69
Child malnutrition (% of children under 5)	..	..	..
Access to safe water (% of population)	41	47	74
Illiteracy (% of population age 15+)	28	42	32
Gross primary enrollment (% of school-age population)	89	77	108
Male	93	84	113
Female	84	69	103

Development diamond*



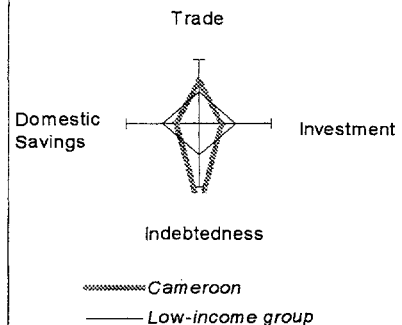
KEY ECONOMIC RATIOS and LONG-TERM TRENDS

	1977	1987	1997	1998
GDP (US\$ billions)	3.4	12.3	9.1	8.7
Gross domestic investment/GDP	28.5	24.7	16.2	18.4
Exports of goods and services/GDP	25.1	15.7	26.8	26.8
Gross domestic savings/GDP	25.7	21.0	20.6	20.2
Gross national savings/GDP	3.2	20.0	14.9	15.9
Current account balance/GDP	-7.6	-5.0	-1.3	-2.5
Interest payments/GDP	0.9	1.5	2.1	3.6
Total debt/GDP	31.4	33.2	101.9	110.3
Total debt service/exports	7.9	30.4	20.4	27.2
Present value of debt/GDP	..	..	87.0	94.7
Present value of debt/exports	..	..	314.5	339.6

(average annual growth)

	1977-87	1988-98	1997	1998	1999-03
GDP	7.5	-0.6	5.1	5.0	5.3
GNP per capita	6.4	-3.8	1.7	3.7	2.4
Exports of goods and services	13.4	-1.8	11.5	4.7	3.3

Economic ratios*



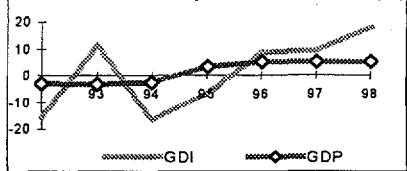
STRUCTURE of the ECONOMY

(% of GDP)	1977	1987	1997	1998
Agriculture	33.6	24.8	42.1	42.4
Industry	18.4	30.1	22.1	21.6
Manufacturing	9.0	13.2	10.6	10.7
Services	48.0	45.1	35.8	35.9
Private consumption	64.4	66.9	71.2	70.6
General government consumption	9.8	12.2	8.2	9.2
Imports of goods and services	27.8	19.4	22.4	25.0

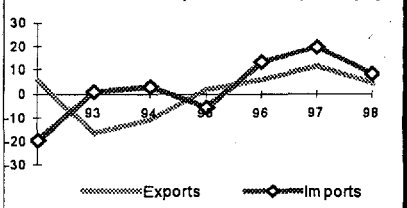
(average annual growth)

	1977-87	1988-98	1997	1998
Agriculture	5.0	3.9	7.5	6.8
Industry	15.4	-4.3	7.7	7.7
Manufacturing	11.5	-1.6	8.2	8.2
Services	6.0	-1.7	-0.9	-0.8
Private consumption	6.1	0.9	11.2	3.3
General government consumption	9.5	-0.9	-15.4	16.1
Gross domestic investment	9.9	-3.3	9.5	17.9
Imports of goods and services	10.8	0.5	19.5	8.3
Gross national product	9.5	-1.0	4.6	6.7

Growth rates of output and investment (%)



Growth rates of exports and imports (%)



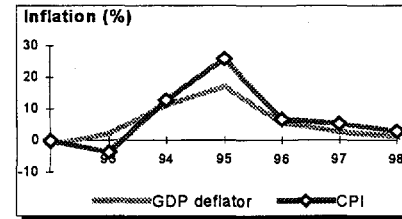
Note: 1998 data are preliminary estimates.

* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

Cameroon

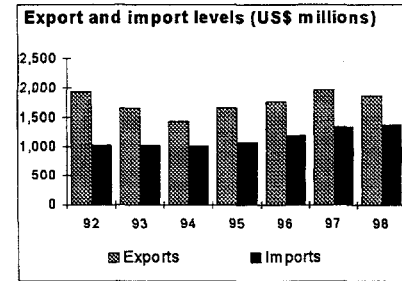
PRICES and GOVERNMENT FINANCE

	1977	1987	1997	1998
Domestic prices (% change)				
Consumer prices	14.8	13.2	5.2	2.8
Implicit GDP deflator	5.9	-2.4	2.7	1.1
Government finance (% of GDP, includes current grants)				
Current revenue	0.0	18.4	15.1	16.2
Current budget balance	0.0	4.7	0.8	1.3
Overall surplus/deficit	0.0	-13.0	-0.7	-1.6



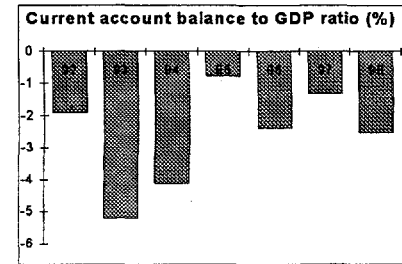
TRADE

	1977	1987	1997	1998
(US\$ millions)				
Total exports (fob)	809	1,729	1,968	1,875
Fuel	..	843	743	592
Cocoa	..	291	245	298
Manufactures	..	230	291	423
Total imports (cif)	..	1,853	1,347	1,379
Food	..	133	155	173
Fuel and energy	..	16	136	149
Capital goods	..	580	399	403
Export price index (1995=100)	..	60	104	105
Import price index (1995=100)	..	46	97	101
Terms of trade (1995=100)	..	131	108	104



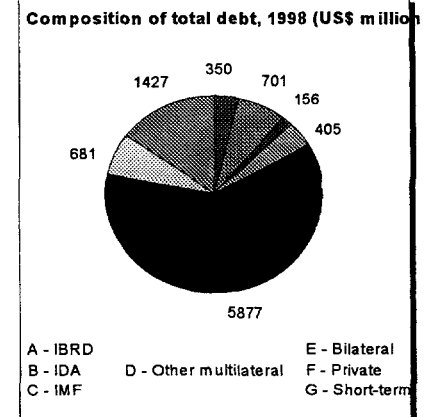
BALANCE of PAYMENTS

	1977	1987	1997	1998
(US\$ millions)				
Exports of goods and services	851	2,054	2,443	2,343
Imports of goods and services	944	2,538	2,041	2,185
Resource balance	-93	-484	402	158
Net income	-197	-159	-609	-471
Net current transfers	34	31	86	95
Current account balance	-257	-611	-120	-218
Financing items (net)	255	1,168	263	180
Changes in net reserves	2	-557	-142	39
Memo:				
Reserves including gold (US\$ millions)	45	..	11	11
Conversion rate (DEC, local/US\$)	247.8	318.7	541.1	602.1



EXTERNAL DEBT and RESOURCE FLOWS

	1977	1987	1997	1998
(US\$ millions)				
Total debt outstanding and disbursed	1,057	4,081	9,293	9,597
IBRD	72	545	410	350
IDA	88	239	609	701
Total debt service	68	652	513	659
IBRD	6	70	113	97
IDA	1	3	9	10
Composition of net resource flows				
Official grants	37	50	137	..
Official creditors	209	158	18	-62
Private creditors	145	17	-28	-40
Foreign direct investment	9	12	45	50
Portfolio equity	0	0	0	0
World Bank program				
Commitments	0	0	0	218
Disbursements	36	82	126	82
Principal repayments	1	30	81	74
Net flows	35	52	45	8
Interest payments	5	43	41	33
Net transfers	29	9	4	-25



Annex 11

Petroleum Revenue Management Program: Republic of Chad

Part A: Summary

1. Petroleum revenues would present Chad with a unique opportunity to reduce poverty, but with tangible risks. Drawing on international experience, Chad is aware of the systemic transformation of the economy frequently brought about by injection of substantial petroleum resources and the need for a longer term perspective for poverty reduction. To achieve its objective of poverty reduction given these factors, the Government has worked closely with the Bank to delineate a petroleum revenue management program (the Revenue Management Program) and has articulated a *Strategy for the Management of the Petroleum Economy*. The Program seeks to reduce poverty by isolating the petroleum revenues and targeting their use to the priority poverty sectors in the context of Chad's overall sectoral programs and global Government expenditure patterns.

2. The thrust of the Government's strategy is to target the bulk of oil revenues for incremental poverty alleviation activities in a transparent manner. It relies on several key features.

- A framework guiding the use of oil revenues (namely royalties on the sale of oil, dividends from GoT's equity investment in the project, and income taxes on the pipeline and oilfield activities), which provides, *inter alia*, for quantitative targets for the allocation of the bulk of oil revenues to priority poverty reduction activities, mandatory long-term savings of a portion of the revenues, explicit commitment and disbursement norms, and oversight and monitoring mechanisms, including non-Governmental mechanisms.
- Initiatives to build Government's capacity to use oil revenues effectively within key sectors and to manage their impact on the economy, including the development of sectoral expenditure programs. These include the IDA operation for revenue management (approved by the Executive Directors of IDA on January 27, 2000, and summarized in Annex 18, Part B).
- Bank support and monitoring throughout implementation to promote the allocation of resources to effective development activities, as well as reporting/auditing requirements.

3. The Government is strongly committed to broadening and deepening economic reforms and strengthening financial discipline; strengthening sector strategies and designing and implementing effective poverty reduction programs and activities; and developing national implementation capacities. The Government's strategy enjoys broad political support from the country's leadership and legislature, attempts to address various concerns raised by civil society, and hinges on the support of Chad's external partners. It is consistent with and builds on the ongoing economic reform objectives.

4. The Program: The Revenue Management Program agreed with the Bank contains the following detailed elements:

(i) petroleum revenues (net of financing costs for the IBRD and EIB loans – see discussion above in sections C.6 and C.8) will be channeled through project off-shore escrow accounts, which will be audited;

(ii) royalties and dividends (representing about 85 percent of expected revenues over the first ten years of production) will be invested as follows:

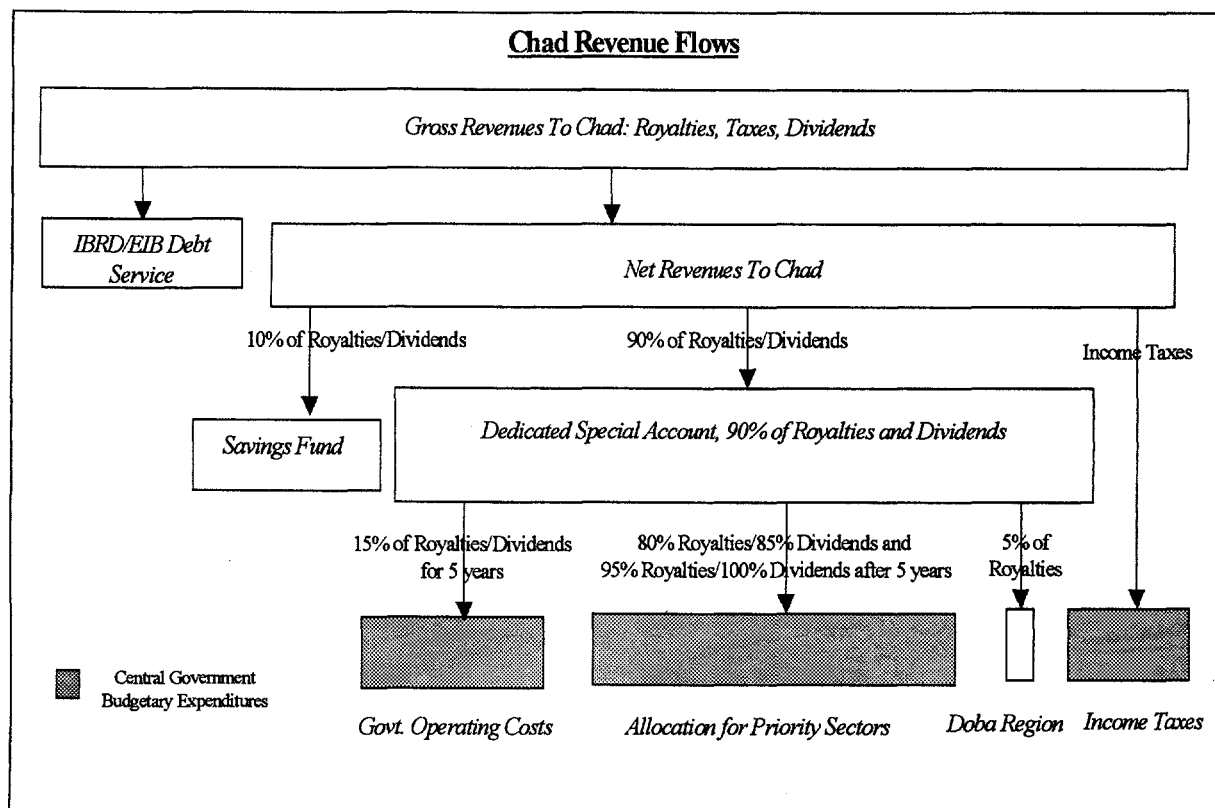
(a) 10 percent of this revenue stream will be invested with an external financial institution in long-term investment instruments, and upon liquidation would be used to benefit poverty reduction objectives of future generations (the “Future Generations Fund”); and

(b) 90 percent of these revenues will transit through special Treasury accounts held in one or two private commercial banks in Chad (the “Special Petroleum Revenues Accounts”) to be used to finance incremental expenditures in the five specified priority sectors relating to poverty alleviation, distributions to the producing region and Government recurrent expenditures as described below; and

(iii) income taxes on the oilfield operations (which begin accruing around the seventh year of production or thereafter, depending in part on oil prices) and on the pipeline company TOTCO will be used to support increased development expenditures generally.

5. The Special Petroleum Revenue Account(s) will operate under the following modalities:

- 80 percent of royalties and 85 percent of dividends deposited into the Special Petroleum Revenue Accounts will be devoted to expenditures in key poverty reduction sectors (education, health and social services, rural development, infrastructure, and environment and water resources).
- Expenditures from oil revenues in these sectors will be incremental to Government spending in these sectors prior to the arrival of oil revenues.
- In addition, 5 percent of royalties deposited into such accounts will be allocated as a supplement to the oil producing region to be programmed by local authorities.
- During an initial five-year period (i.e., before oilfield income taxes provide another possible source of revenues), the residual 15 percent of royalties and dividends can be used to finance general Government expenditure in the civil sectors to help meet pressing Government operational needs; after this initial period, this portion will be added to the 80 percent of royalties and 85 percent of dividends used to finance the priority poverty reduction sectors.
- Revenues which cannot be used efficiently for the agreed objectives, or the mobilization of which would jeopardize macroeconomic stability, will be sterilized under arrangements acceptable to the Bank).



6. Control and audit mechanisms include the following:

- The Future Generations Fund will be held with a financial institution acceptable to the Bank and the Special Petroleum Revenue Accounts will be held in private commercial banks in Chad acceptable to the Bank.
- Disbursements from the special petroleum accounts will be made only on the basis of detailed annual expenditure programs designed to reduce poverty, agreed upon with the Bank and approved by the Parliament as part of the budget.
- Disbursements will be made following review by an independent oversight committee including representatives of the Government, Parliament and civil society (an NGO and a trade union representative) to determine their conformity with the agreed expenditure program. The oversight committee will authorize and verify disbursements and issue quarterly reports, under terms of reference satisfactory to the Bank.
- Ex-post controls will include annual audits of the Petroleum Revenues Accounts and of the Future Generations Fund by auditors mutually acceptable to Chad and the Bank operating under terms of reference acceptable to the Bank.
- The audits and reports of the oversight committee will be published.
- The Bank will support Chad in monitoring the effectiveness of its programs, including through periodic public expenditure reviews to be carried out jointly with the International Monetary Fund.
- The Government will, in conjunction with the Bank, develop investment criteria for the Future Generations Fund.

7. Link to Bank Portfolio. Government performance under this Petroleum Revenue Management Program will be a central criterion in determining future levels of World Bank support to Chad. In addition, implementation of this Revenue Management Program will be a key contractual undertaking of the Chad Government under the proposed IBRD loan to be provided to Chad for the project (see Part C of this Annex for terms and conditions), as well as under: (i) the proposed EIB financing for the pipeline, (ii) the IDA credit for the parallel Management of the Petroleum Economy Project, and (iii) the IDA credit to be provided for the parallel Petroleum Sector Management Capacity-Building Project. Breach of this covenant will permit suspension of disbursements under these four loans/credits, and would also permit acceleration of these four loans/credits, with repayment to be made directly from the project's oil revenues through the escrow account securing the IBRD loans (described in Section C.6 above).

8. The Law: As a first step, the Chad Parliament approved, on December 30, 1998, a law that sets out the key elements of the Revenue Management Program. It contains provisions: (a) allocating 10% of royalty and dividend revenues to the future generations fund; (b) directing the balance of royalties and dividend revenues to special accounts to be held in local banks; (c) allocating 80% of these funds to the above enumerated 5 priority sectors in accordance with Parliamentary approved budgets; (d) allocating 5% of royalties to the producing region; (e) allocating during the first five years 15% of royalties and dividends to financing Government expenditures; (f) establishing the Government/civil society oversight committee; and (g) various auditing and reporting mechanisms, including audits of the special accounts and the future generations fund.

9. Producing Region. International experience has indicated that the sound operation of oil and other large scale projects depends in large part on ensuring that local populations see tangible benefits and are treated equitably. To this end, special attention has been given to the treatment of local populations in the Doba producing region and to the elaboration of mechanisms to increase local capacity, to enhance development in the region and to increase local participation in the development process.

- Revenue Sharing. The revenue management law earmarks 5 percent¹ of royalties to be programmed by local authorities in the producing region; this is contemplated by Article 212 of the Chad Constitution. This would be provided as a supplement to the portion of revenues the producing region would receive through usual government allocations (including its share of the portion of oil revenues allocated to the priority poverty sectors under the Revenue Management Program). These 5 percent are not expected to constitute the main source of financing for development activities in the producing region, but, based on international experience, are expected to become a visible and symbolic attribute of the Revenue Management Program. Accordingly, transparency in the use of these funds and their effective utilization for the benefit of populations in the producing region will be an important part of the Revenue Management Program and the Bank will support GoT in developing sound accounting and distribution systems.

¹ The 5 percent as specified in the law represents, without rounding, 4.5 percent since the "5 percent of royalties" is based on royalties after deducting the 10 percent to be deposited into the Future Generations Fund.

- Project Improvements. The pipeline project and other activities of the oil consortium in the project area would generate benefits for the producing region, including road improvements, employment generation, and local procurement of food and other services. The oil companies are also financing additional activities, such as a community outreach health activities and the drilling of water wells for use by local communities.
- Social Development Fund and Emergency Measures under IDA Capacity Building Project. The Bank is working with Chad under the planned petroleum/environmental capacity building operation (see Annex 18, Part A) to help it: (a) to address the short to medium-term impacts of the pipeline project (including the impact of expected in-migration of workers); (b) set the foundation for a sound longer term development program; and (c) to increase NGO capacity and participation in the delineation of development activities in the region. Specific activities include:
 - Supporting an information campaign to limit the amount of inflow of migrants to the region.
 - Preparing the region for a sudden increase in population by upgrading essential infrastructure and services at the greatest pressure points before the migration flow gathers momentum (about US\$ 5 million from IDA).
 - Establishment of a decentralized and participatory pilot development fund (FACIL - Fund for Actions based on Consensus and Initiated Locally) to finance local projects, proposed and to be implemented by communities and NGOs, in the fields of social infrastructure, income-generating activities and capacity building (about US\$ 3.5 million from IDA).
- Regional Development Plan. The government has initiated a process, working with civil society in the project area, to develop a regional development plan that would help prepare the region for the impacts during the construction period, as well as ultimately when revenues flow. This is being undertaken in a participatory manner. Local NGOs have expressed concern that the plan was being developed too quickly; the government, in part in response to these concerns, is ensuring that the development of the plan is an iterative process, that is expected to extend over several years; the above-cited IDA capacity building project will support this effort.

10. Revenue Estimates and Allocations: The following table sets out Chad's expected revenues on an annual basis over the first ten years of production in the Base Case (i.e., development of 917 million barrels and Brent oil price of US\$ 15.25/bbl in 1999 US\$'s – see discussion in Annex 4) and under various alternative scenarios. The subsequent table illustrates how Chad's revenues are allocated to the various sources under the Revenue Management Program. All revenue figures are provided in nominal terms.

Table 1: Chad—Nominal Revenues: Scenario Analysis
(US\$ millions; Based on Oil Prices in 1999 US\$'s,
and Bank Inflation Projections)

Case	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total (2004-13)	Total (2004-32)
917 mm bbls, US\$ 12.00	17	47	55	62	67	92	82	65	48	40	575	1033
917 mm bbls, US\$ 15.25	31	80	88	96	100	125	110	87	65	54	837	1818
917 mm bbls, US\$ 18.50	46	113	122	130	135	269	350	110	83	239	1597	3229
1038 mm bbls, US\$ 15.25	43	85	94	101	106	135	147	119	96	156	1083	2510

Table 2: Chad Revenues: Royalties, Taxes and Dividends
(Nominal, in US\$ Millions; Based on Oil Prices in 1999 US\$'s
and Bank Inflation Projections)

Scenario	595 mln bbls, US\$ 15.25	917 mln bbls, US\$ 15.25		1038 mln bbls, US\$ 15.25	917 mln bbls, US\$ 12.00	917 mln bbls, US\$ 18.50
	<u>2004-13</u>	<u>2004-13</u>	<u>2004-32</u>	<u>2004-13</u>	<u>2004-13</u>	<u>2004-13</u>
Royalties	245	624	1017	788	362	896
Taxes	103	136	719	217	136	625
Dividends	70	77	82	78	77	76
Total	419	837	1818	1083	575	1597
Estimated Debt Service to WB/EIB	60	60	60	60	60	60
Net Revenues	359	777	1758	1023	515	1537

Table 3: Distribution of Net Revenues
as per the Revenue Management Program
(in US\$ millions)

Scenario	595 mln bbls, US\$ 15.25	917 mln bbls, US\$ 15.25		1038 mln bbls, US\$ 15.25	917 mln bbls, US\$ 12.00	917 mln bbls, US\$ 18.50
	<u>2004-13</u>	<u>2004-13</u>	<u>2004-32</u>	<u>2004-13</u>	<u>2004-13</u>	<u>2004-13</u>
Priority Sectors	191	490	830	625	290	696
Doba Region Supplement	11	29	47	36	17	41
Gen. Budget Expenditures	131	194	778	281	170	708
Savings Fund	26	64	104	81	38	91
Total	359	777	1758	1023	515	1537

Part B: Law on Revenue Management

Translation

**Act No. 001/PR/99 concerning
Oil Revenues Management**

Having regard to the Constitution,

The National Assembly discussed and adopted the above-cited Act on December 30, 1998;

The President of the Republic hereby promulgates this Act, which reads as follows:

CHAPTER I: GENERAL PROVISION

Article 1: The objective of this Act is to establish the procedures for managing oil revenues from the exploitation of three (3) fields, namely Kome, Miandoum, and Bolobo.

Article 2: Oil revenues shall consist of direct and indirect income.

Direct income shall consist of dividends and royalties;

Indirect income shall include taxes, charges, and customs duties levied in connection with oil exports.

Article 3: The direct income referred to in the second paragraph of Article 2 shall be deposited in an offshore escrow account opened specifically for this purpose by the Government of Chad at an international financial institution.

The funds shall be divided as follows:

- Ninety percent shall be deposited in special treasury accounts situated in one or two local banks;
- The remaining ten percent shall be deposited in a savings account opened

in accordance with the provisions of Article 9 of this Act.

Article 4: Indirect income, namely taxes, charges, and customs duties, shall be deposited directly with the Treasury.

Article 5: The various types of income referred to in Article 2 of this Act shall be accounted for in their entirety in the general state budget.

Article 6: Revenues shall be allocated in accordance with the criteria set out in Chapter II of this Act.

CHAPTER II: ALLOCATION OF REVENUES

SECTION 1: PRIORITY SECTORS AND REGIONAL DISTRIBUTION:

Article 7: Direct income shall be allocated primarily to priority sectors.

The following are considered priority sectors: public health and social affairs, education, infrastructure, rural development (agriculture and livestock), environment, and water resources.

Article 8: Indirect income comprising dividends and royalties which have been deposited in the special accounts referred to in the second paragraph of Article 3 above shall be allocated as follows:

- (a) Eighty percent (80%) for expenditures in the priority sectors listed in the second paragraph of Article 7 above;

(b) Fifteen percent (15%) for current Government operating and investment expenses for a period of five years as from the date of production;

(c) Five percent (5%) of royalties shall be allocated to decentralized communities in the producing region in accordance with the provisions of Article 212 of the Constitution;

This amount may be changed by decree at five-year intervals in the light of available resources and the needs and absorptive capacity of the region;

Procedures for management and monitoring of these funds shall be developed in accordance with existing instruments regulating Government accounting.

SECTION 2: SAVINGS

Article 9: Ten percent (10%) of the direct revenues, i.e., the royalties and dividends referred to in Article 3 of the present Act, shall be deposited in a savings account opened in an international financial institution for the benefit of future generations, in accordance with the regulations of the Bank of Central African States (BEAC).

CHAPTER III: MECHANISMS FOR MANAGING SPECIAL ACCOUNTS

SECTION 1: OPERATIONS

Article 10: The mechanism for managing special accounts shall conform to the conventional budget wisdom of the State, namely respect for procedures relating to approval, disbursement, monitoring, and control of the general state budget.

Article 11: The special accounts shall be established in one or two primary local

commercial banks certified by COBAC, the regional bank supervision agency. They shall be funded directly from the escrow account referred to in the first paragraph of Article 3 of the present Act.

SECTION 2: DISBURSEMENT CRITERIA

Article 12: Funds deposited in special accounts to defray expenditures in priority sectors shall be earmarked in accordance with the public expenditure program prepared annually by the Government.

The program is one element of a triennial development process and is a reference point for the Finance Act. The Government shall review the program annually.

In accordance with the principle of additionality, expenditures from oil revenues paid in respect of priority sectors shall be additional to items in the general budget for the fiscal year preceding the initial oil receipts.

Article 13:

Requests for disbursements from the approving officer of the general state budget shall be made in accordance with the procedures set out in the Finance Act and shall require the express authorization of the Oil Revenues Control and Monitoring Board (CCSRP).

CHAPTER IV: SUPERVISORY INSTITUTIONS

Article 14: The mobilization and use of oil revenues shall be monitored separately or jointly by the Comptroller of the Ministry of Finance and Economy, CCSRP, the Audit Office of the Supreme Court, and Parliament.

SECTION 1: OIL REVENUES CONTROL AND MONITORING BOARD (CCSRP)

Article 15: An Oil Revenues Control and Monitoring Board (CCSRP) is hereby established.

Article 16: CCSRP shall include the following members:

- one magistrate serving on the Supreme Court
- one deputy
- one senator
- the national director of BEAC
- the Central Treasurer
- the Director of Issues Relating to Oil Revenues
- the Director of Planning and Development
- one representative of local NGOs
- one trade union representative.

Article 17: Members of CCSRP representing Parliament, the Supreme Court, national NGOs, and trade unions shall be designated and appointed for a term of three (3) years which shall be renewable once.

Article 18: It shall be the responsibility of CCSRP to:

(a) ensure that commitments for funding from the special accounts meet the requirements of the Finance Act;

(b) authorize and monitor disbursements from the special accounts and the appropriation of funds.

Article 19: The operational and organizational procedures of CCSRP and the conditions governing its control and supervisory functions shall be set out by decree.

SECTION 2: ADDITIONAL INSTITUTIONS EXERCISING CONTROL

Article 20: Parliament shall control the allocation of oil revenues by adopting and monitoring the implementation of the general state budget.

Article 21: The Audit Office of the Supreme Court shall monitor the legality of state expenditures by reviewing official revenue accounts and monitoring legislation concerning the allocation of resources between the general state budget and the decentralized communities as well as provisions governing the establishment of reserves or the placement of surplus income overseas.

SECTION 3: MONITORING PROCEDURES

Article 22: The mobilization, allocation, and use of oil revenues shall be monitored via periodic audits and reports prepared for the Government, including:

- annual audits of special accounts and the savings account for future generations;
- periodic management reports on the savings account for future generations and savings accounts for possible surplus income;
- periodic reports by CCSRP;
- reports and audits by COBAC of primary banks responsible for managing specific special accounts;
- annual audits of general state budget performance prepared by the Audit Office.

The Government shall publish these reports and audits annually.

CHAPTER V: FINAL PROVISIONS

Article 23: The present Act shall be duly recorded, published in the Official Gazette of the Republic, and implemented as an Act of the State.

Done in N'Djaména on January 11,
1999.

Part C: Annex to Loan Agreement on Petroleum Revenue Management Program

1. The objective of the petroleum revenue management program (the Program) is to assist in reducing poverty in the Republic of Chad (Chad). To that end, it contemplates the set aside of the petroleum revenues received by Chad under the Petroleum Development and Pipeline Project (the Project) and to target their use to priority poverty sectors in the context of Chad's overall sectoral programs and global Government expenditure patterns, and in a manner consistent with sound macro-economic management. For the purposes of this Annex, the term "Petroleum Revenues" shall consist of amounts (net of the financing costs of the loans made to Chad by the Bank and the European Investment Bank) to be received by Chad under the Project as follows:

(a) royalties (the Royalties) due to Chad under the Agreement dated December 19, 1988, as amended at the date hereof, between Chad and Esso Chad, Petronas Chad and Chevron Chad;

(b) dividends (the Dividends) received by Chad as shareholder respectively of Cameroon Oil Transportation Company (COTCO) and Tchad Oil Transportation Company (TOTCO); and

(c) taxes (the Taxes) levied on TOTCO, Esso Chad, Petronas Chad and Chevron Chad.

2. As part of the Program, Chad agrees that Law No. 0001/PR/99 dated January 11, 1999 governing the petroleum revenue management (the Law) shall not be amended or waived so as to materially and adversely affect the implementation of the Program.

3. Chad shall cause the Petroleum Revenues to be paid by any entity which has payment obligations to Chad in relation to the Project (the Obligor) into the Off-shore Accounts (as such term is defined in the Loan Agreement). Chad shall cause the proceeds of the Off-shore Accounts to be distributed as follows:

(a) 10 percent of the Royalties and Dividends shall promptly be deposited and invested in long-term investment instruments with a financial institution, satisfactory to the Bank, (the Future Generations Fund);

(b) 90 percent of the Royalties and Dividends shall be deposited in special accounts in one or more private commercial banks in Chad, satisfactory to the Bank (the Special Petroleum Revenue Accounts), in the name of the Chad Treasury; and

(c) taxes shall be paid directly from the Off-shore Accounts to the Treasury.

4. Use of Funds:

(a) Moneys deposited in the Future Generations Fund shall be invested, under prudential rules and investment arrangements satisfactory to the Bank, in long-term investment instruments. Upon their liquidation, the proceeds of such investments shall be used to benefit poverty reduction objectives. Chad shall adopt not later than December 31, 2000, such

prudential rules and investment arrangements satisfactory to the Bank, as amended from time to time in substance satisfactory to the Bank.

(b) Moneys deposited in the Special Petroleum Revenue Accounts shall be allocated as follows:

(i) 80 percent of Royalties and 85 percent of the Dividends shall be allocated to expenditures, acceptable to the Bank, for the following priority poverty reduction sectors in support of the Chad's objective of regional balance: health and social affairs, education, infrastructure, rural development (agriculture and livestock) and environment and water resources.

(ii) Expenditures to be financed with the Royalties and Dividends referred to in paragraph 4 (b) (i) above, in these priority poverty reduction sectors shall be incremental to expenditures reflected in Chad budget for fiscal year 2002 in respect of these sectors.

(iii) 5 percent of Royalties shall be allocated to decentralized authorities in the petroleum producing region (as defined below) as a supplement to the allocation referred to in paragraph 4 (b) (i) above to finance expenditures, acceptable to the Bank, to reduce poverty. For purposes of this paragraph, "petroleum producing region" means the area within the boundaries delineated in the map attached to this part of annex 11.

(iv) Up to and including December 31, 2007, 15 percent of Royalties and Dividends can be used to finance general recurrent expenditures for the non "Sovereign" sectors. After December 31, 2007, this portion shall be used to finance expenditures in priority poverty reduction sectors referred to in paragraph 4 (b) (i) above in accordance with the same terms and conditions applicable to expenditures under such paragraph (including those set out in paragraphs (5)-(7) below).

(c) Taxes shall be used to finance increased development expenditures generally.

5. Modalities:

(a) The following modalities shall apply in respect of expenditures under paragraph 4 (b) (i) above:

(i) By not later than September 15 of each year, Chad shall prepare a plan satisfactory to the Bank containing the detailed allocation of resources under paragraph 4(b)(i) from the Special Petroleum Revenue Accounts to the priority poverty reduction sectors referred to in such paragraph; such annual expenditure program shall be reflected in the draft Chad budget to be submitted annually for approval to the Chadian Parliament.

(ii) In accordance with Article 18 of the Law, the independent "Collège de Contrôle et de Surveillance des Ressources Pétrolières" (CCSRP) shall authorize and verify the disbursements from the Special Petroleum Revenue Accounts.

(iii) Amounts under paragraph 4 (b) (i) above, which cannot be used for the agreed objectives, or the use of which would jeopardize Chad macroeconomic stability, shall be held in the Special Petroleum Revenue Accounts, under arrangements to be agreed upon by the Bank, for their subsequent use in financing priority poverty reduction sectors referred to in paragraph 4 (b) (i) above.

(b) Chad shall develop, not later than January 31, 2003, recordkeeping, auditing, and distribution mechanisms acceptable to the Bank regarding the distribution and application of funds pursuant to paragraph 4(b)(iii), including by the decentralized authorities.

6. Public expenditure reviews:

Chad shall conduct with the Bank, under terms of reference acceptable to the Bank, annual public expenditure reviews (with a particular focus on the use of Petroleum Revenues).

7. Record-keeping, Reporting and Audits:

(a) Chad shall require the financial institution referred to in paragraph 3 (a) above and the commercial banks referred to in paragraph 3 (b) above, to maintain records and accounts adequate to reflect, in accordance with sound accounting practices, the operations and financial condition of the Special Petroleum Revenue Accounts and the Future Generations Fund, respectively.

(b) Chad shall:

(i) require the financial institution and the commercial banks referred to in the preceding paragraph to have the records, accounts and financial statements (balance sheets, statements of income and expenses and related statements) for the Special Petroleum Revenue Accounts and the Future Generations Fund, respectively, for each fiscal year audited, in accordance with appropriate auditing principles consistently applied, by independent auditors acceptable to the Bank, under terms of reference satisfactory to the Bank;

(ii) furnish to the Bank as soon as available, but in any case not later than three (3) months after the end of each such year: (A) certified copies of the financial statements for such year as so audited; and (B) the report of such audits by said auditors of such scope and in such detail as the Bank shall have reasonably requested; and

(iii) furnish to the Bank such other information concerning said records, accounts and financial statements as well as the audits thereof, as the Bank shall from time to time reasonably request.

(c) Chad shall require such financial institution and commercial banks to issue quarterly reports regarding the management of the Future Generations Fund and the Special Petroleum Revenue Accounts, respectively, which Chad shall furnish to the Bank as soon as available;

(d) Chad shall furnish to the Bank as soon as available certified copies of any reports issued by “Commission Bancaire de l’Afrique Centrale” (COBAC) regarding the private commercial banks referred to in paragraph 3 (b) above;

(e) Chad shall require CCSRP to issue quarterly reports regarding its activities, which Chad shall furnish to the Bank as soon as available;

(f) Chad shall furnish to the Bank as soon as available certified copies of the audit report of the General Auditor’s Office regarding the execution of Chad annual budgets; and

(g) Chad shall, in accordance with Article 22 of the Law, publish the reports and audits referred to in paragraphs 7 (b) (i), 7 (c), 7 (e) and 7 (f) above.

8. Chad shall issue by not later than December 31, 2001, all the necessary implementation decrees relating to the Law including the decree regarding CCSRP, referred to in Article 19 of the Law.

CHAD PRODUCING REGION ZONE COVERED BY THE REGIONAL DEVELOPMENT PLAN



REGIONAL DEVELOPMENT PLAN
(PRODUCING REGION)

- PREFECTURE ADMINISTRATIVE CENTER
- SUB-PREFECTURE ADMINISTRATIVE CENTER
- OTHER COMMUNITIES
- PREFECTURE BOUNDARIES
- INTERNATIONAL BOUNDARIES

0 50 100
KILOMETERS



CAMEROON

MAYO-KEBBI

TANDJILÉ

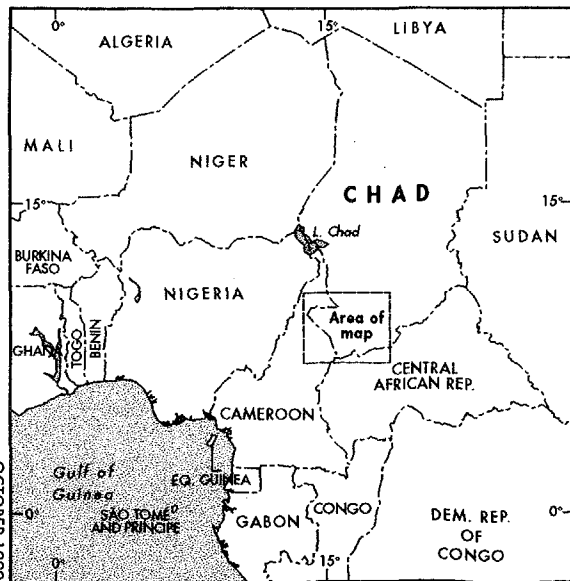
MOYENNE-CHARI

LOGONE OCCIDENTAL

LOGONE ORIENTAL

CENTRAL AFRICAN REPUBLIC

This map was produced by the Map Design Unit of The World Bank. The boundaries, colors, denominations and any other information shown on this map do not imply, on the part of The World Bank Group, any judgment on the legal status of any territory, or any endorsement or acceptance of such boundaries.



OCTOBER 1999

IBRD 30540

Part D: Letter on Revenue Management

[Unofficial Translation]

Republic of Chad
Ministry of Planning and Regional Development
Cabinet of the Minister
No. 643/MPAT/CAB/99

N'Djamena, July 7, 1999

THE MINISTER OF PLANNING AND REGIONAL DEVELOPMENT
TO
MR. SERGE MICHAILOF
DIRECTOR FOR CEMAC STATES
AFRICA REGION
WASHINGTON - DC

Mr. Director,

Please find attached the strategy for the management of the petroleum economy, articulated by the Government in anticipation of the forthcoming exploitation of the Doba deposits.

I would like to highlight the fact that this strategy has been articulated following two and a half years of intense consultations which associated numerous domestic partners, in particular within the Civil Society.

The Law No. 001/PR/99 of January 11, 1999 concerning the management of petroleum revenues is one of the concrete results of these consultations.

Please accept my regards.

MAHAMAT ALI HASSAN

Cc: PR
PM

CHAD
STRATEGY FOR THE MANAGEMENT OF THE PETROLEUM ECONOMY

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I. DEVELOPMENT CONTEXT

1. Foreword

1. Chad is confronted with serious development constraints. The country is huge and landlocked, has a low density of population, and less than favorable climatic conditions. Its economy is not diversified, the formal economy is small, and regional differences are important. Almost 30 years of civil war have had a severe impact on Chad's economy and human resources. Compared with other African countries, development is a more arduous task, and sustainable actions and programs cost more.

2. These development constraints notwithstanding, Chad has considerable potential. Development of its important human and natural resources could accelerate economic growth and reduce poverty. In addition to petroleum, Chad has important deposits of gold, iron, bauxite and other minerals. Agricultural and livestock potential, equally considerable though underutilized, could further accelerate development.

3. Despite this development potential, Chad is among the poorest countries in the World. The UN 1997 World Report on Human Development ranks it 164th among 175 countries surveyed. This ranking reflects real human distress, including serious problems of food security and limited access to basic health and education. Rapid population growth further worsens this situation. The country is confronted by a major poverty problem. A *Poverty Assessment* carried out by the World Bank in 1997 documents poor living standards (education, health care, access to safe water and sanitation, housing, nutrition, mortality and morbidity), generally below the average standards in sub-Saharan Africa. Their impact is felt in low labor productivity, especially rural, and low incomes. Social indicators are significantly lower for women. The *Poverty Assessment* found that Chad could significantly reduce poverty by using efficiently external resources and revenue to be generated by development of petroleum resources for poverty reduction, in the context of adequate public expenditure policies.

4. In recent years, the Government made important efforts to address the aftermath of the past 30 years of civil strife. These efforts are yet to make a visible impact on social standards and poverty reduction. Since 1994, political liberalization and economic reconstruction took precedence. This allowed restoring social peace, organizing free general elections, and making progress towards the rehabilitation of basic infrastructure, public administration, economic production, and a viable macroeconomic situation. Progress towards poverty reduction, however, remains slow. Chad must accelerate economic growth and invest more in its human resources. Sustainable poverty reduction requires economic reform and changes in mentality, additional financial resources, and considerable strengthening of absorptive capacities.

5. The Government intends to pursue aggressively this objective by: (i) continuing the ongoing financial consolidation and economic reform program; (ii) articulating and implementing a new medium to long term development strategy; (iii) rethinking the role of the State and sharing of responsibilities with its partners; (iv) improving the institutional framework for development; and (v) strengthening national capacities. These activities will be undertaken in the context of developing petroleum resources, and the main objective is poverty reduction.

2. Financial Stabilization and Economic Reform

6. Since 1994, Chad has been firmly committed to a program of structural reform, which seeks to accelerate economic growth and curtail poverty. In September 1996, the Government adopted a *Policy Framework Paper* for the 1997-99 period; this framework was updated in March 1998 for the 1998-2000 period. Chad's partners support this strategy.

7. The Government's resolve to implement the adjustment program has reversed past trends of economic stagnation, deterioration of macroeconomic balances, and degradation of social standards. Progress was made in several areas:

- Chad's economy is more vigorous. Growth averaged 5.2% p.a. between 1994-97, despite adverse climatic conditions. GDP grew by 6.5% in real terms in 1997. The projected objective of 6% annual growth in the medium term appears feasible and could even be exceeded once petroleum resources are developed. Together with the Government's objective of reducing population growth to 2% p.a. by 2005, this would allow an increase of per capita income of up to 4% p.a. in the medium term, which would double per capita income in less than one generation. Inflation is low.
- Public management has improved. Fiscal revenue increased from 4.9% of GDP in 1994 to 7.3% in 1997 (6.9% and 9.5%, respectively, on the basis of previous national accounts estimates). It still covers, however, only 43% of the government's total expenditure, and only 91% of current expenditure. The Government has strengthened the management of the civil service staffing and payroll, and has drastically downsized the military. Domestic and external arrears are being reduced. This progress notwithstanding, additional efforts must be made to improve the management of public expenditure and attain a sustainable budget balance.
- The role of the State is decreasing. The Authorities have undertaken to privatize most State-owned enterprises. The next stage concerns mainly the privatization of the production and distribution of water and electricity, of telecommunication, of public financial institutions, of road maintenance, and of the cotton and sugar sectors. The Government has made specific commitments in these areas under the economic program for 1998-2000.
- The economy has become more open. External trade and prices have been liberalized. However, the current account deficit of the balance of payments (before grants), remains high, at 20.2% of GDP in 1997, compared with 20.9% in 1994.

8. The Government is firmly determined to continue the program of economic reform and restore macroeconomic balances. Chad is implementing successfully a structural adjustment program with the Bretton Woods Institutions.

3. Poverty Reduction Strategy

9. A ten-year indicative program – *Chad in the Year 2000* – has underpinned Chad's long term development policy. This document served to prepare the Fourth Round Table held in Geneva in October 1998, and will be reinforced by the articulation of a global strategy for poverty reduction, which the Authorities have already initiated. The Government will associate the civil society and development partners to the definition of new development vision and appropriate sector strategies. The current state of sector strategies is summarized in the following paragraphs.

10. The rural sector provides employment and income to an estimated 80% of the population, and holds the key to Chad's economic development. Effective poverty reduction can only be achieved by increasing the incomes and improving the social standards of the rural population. The Government will encourage private initiative to foster an increase in rural productivity, especially by gradually eliminating monopolistic arrangements, liberalizing marketing structures, and favoring the creation of producers' associations which could assume increased responsibility for managing bank credit and marketing agricultural inputs. The State will focus on research, diversification and promotion of high value added crops, improved access to agricultural markets (roads, removal of traffic hindrances, circulation of economic information, etc.), safe water and rural credit, environmental protection, basic education and health services, and strengthening of the legislation and the judiciary.

11. Women, who supply most of the rural labor, will receive special attention. The Government will review the legislation with a view to eliminating eventual obstacles to women's access to land ownership, and will encourage the girls' access to education.

12. Cotton and sugar are the main cash crops. Cotton generates 8.1% of GDP, 60% of the merchandise exports, important fiscal revenue, and a large part of farmers' monetary income. The Government intends to improve the efficiency of this sector by gradually opening it to competition, and by improved performance and efficiency incentives. It is thus determined to pursue the reform of the cotton sector and spin off oil and soap activities in anticipation of their privatization. The Government also intends to initiate as soon as possible the articulation of a strategy for the liberalization of this sector. In the same spirit, producer prices will be more closely indexed on world market prices for cotton. In the sugar sector, the Government has lifted in January 1997 the monopoly of SONASUT and has initiated its privatization, with the objective of completing it in 1999.

13. Livestock plays an important role in generating employment and incomes in the rural sector. The Government's policy in this sector aims at a sustainable increase in herders' production and incomes through measures focused mainly on animal health and hygiene, liberalization of veterinary products, creation of herders' associations, rural water supply, and export regulatory reform.

14. Animal health is an important element of the Government's livestock policy. Priority actions include implementation of a national program to address livestock diseases, systematic identification and eradication of vectors transmitting endemic diseases, and increased efforts to immunize the animal stock against major outbreaks. In this context, the Farcha laboratory will contribute to the production of antiviral vaccines.

15. Poverty reduction measures include food security, replenishment of food security stocks, and adequate nutrition. The Government will focus on maximizing local production and removing barriers to domestic trade, by eliminating bottlenecks and hindrances to producers' ability to meet local demand. This strategy will build among others on the encouraging results of agro-pastoral projects in implementing more productive approaches based on the promotion of producers' associations. Particular attention will be given to rural hydraulics and the integration of agriculture, livestock and environmental concerns.

16. Environmental concerns are focused on the rational utilization of natural resources, and ecological equilibrium. The dwindling Lake Chad and desertification, partly due to the intensive exploitation of forestry resources in suburban areas, will receive particular attention. Specific

projects will seek to improve safe water supply and sanitation (which combine environmental and public health concerns), and fight deforestation. Among others, the Government has implemented an IDA-financed Household Energy Project which addresses N'Djamena's sustainable supply in fuelwood. This project supports the transfer of the management of wood resources to villagers, improved efficiency in the production of charcoal, and the introduction of less costly alternative energy sources.

17. In the education sector, the Government has defined an education and training strategy linked to employment (EFE) for the 1990-2000 period, which has been endorsed by the international community. In this context, it increased the recurrent budget for primary education five-fold and recruited about 700 new teachers between 1994-98. At the same time, it has sought to improve the utilization of teachers and equipment, reduce the rates of repetition, reform teachers' training, and increase the access of girls to education. These efforts are important but will not suffice.

18. A new education strategy now being prepared will seek to improve significantly literacy and school attendance rates, now among the lowest in Africa. Under this strategy, the Government would (i) increase the share of public expenditure for basic education, (ii) develop a partnership between the State, parents' and students' associations, local communities, and the private sector, and (iii) improve efficiency in the sector. As an example, an increasing proportion of primary school teachers could be hired directly by parents' associations, with the role of the State limited to budget subsidies. The Government intends to focus its resources on improving teaching standards, including the reduction of class size.

19. The *Program Policy Paper* dated June 4, 1997, reaffirmed the priority to be given to the health sector. The Government considers that higher quality basic health services are a fundamental element of its poverty reduction strategy. Future progress will build on recent measures, including: (i) the restructuring of the health sector and mapping of health services; (ii) the "sanitary district" approach, which combines the provision of "minimum activities packages" through the health centers, and of "complementary activities packages" through district hospitals; and (iii) the adoption of a drug supply policy which has improved access to essential generic drugs for the public sector, private enterprises, and non-profit organizations.

20. The Government is currently reviewing the National Health Policy and setting new objectives for the next ten years. The main priorities are as follows: (i) development of human resources, especially mid-level medical staff. On the average, the number of medical technicians in Chad is one tenth of that in other countries in sub-Saharan Africa. The shortage of human resources is a major hindrance to the provision of health services; (ii) decentralization of planning and budgeting at regional and district level, contingent on strengthening technical and human capacities; (iii) sector financing reform, to harmonize and strengthen community participation to the management and financing of health services, and develop contractual partnerships to improve sanitary coverage; and (iv) strengthened capacity of the central administration to coordinate and manage. The pursuit of these objectives is essential to the implementation of sector expenditure programs to be financed by petroleum revenue. In addition, health and hygiene services would benefit from measures to improve sanitation and garbage collection, and access to safe water.

21. According to the *Population Policy Statement* it adopted in May 1994, the Government will seek to encourage population control and reduce the size of families, with a view to reducing the rate of population growth from 2.5% in 1994 to 2% by year 2005. It will strengthen its efforts to inform

and educate religious, traditional and administrative leaders, carry out social communication campaigns for family planning, and train health agents in family planning, to make it a real component of the “minimum activities packages”. The extension of family planning services to the whole country will be facilitated by the increased operational responsibilities of the health districts, and by improving the availability of contraceptives in the health centers, through the Central Drug Purchase Agency. The Government would also continue to support the fight against AIDS, and the ongoing program of social marketing of prophylactics. Finally, the Government will pursue its objective of reducing family size by encouraging the education of girls, supporting women’s and children’s rights, and improving the social status of women and their contribution to development.

22. Because Chad is landlocked and has a vast area, transports are costly and difficult. This is why this sector is one of the economic development priorities. The Government will define and implement a medium to long term strategy which will accompany the liberalization of the transport sector, especially air transport, and encourage private investment. Public investment in this sector will be directly associated with rural development and poverty reduction objectives. Its execution and management will be shared with decentralized entities, local communities, and the private sector.

23. Rural development and food security hinge on the development of road infrastructure and storage facilities. The Government will articulate a road transport investment program whose main objective will be to improve all-season road access of as many Chadians as possible to health and education services, markets for agricultural and other essential products, and food security. The Government will implement incentives for private investment in transports, storage and marketing infrastructure and equipment.

24. The cost of energy is high. The cost of electricity is among the highest in the world, because of the high cost of imported fuel, and unsatisfactory management and marketing systems. The Government is currently finalizing negotiations to privatize the management of STEE, with a view to reducing production costs and improve technical performance. A more sustainable reduction in production costs may be possible if the Sédigui petroleum project is realized.

25. Urban development must contend with a rate of urbanization projected to increase from 21.5% in 1993 to 34% by year 2010. The Government will: (i) foster community participation in the design and financing of activities; (ii) favor investment in key regional centers; (iii) focus on road infrastructure, water supply and sanitation; (iv) extend basic social services to poor neighborhoods; and (v) strengthen the capacity of municipalities to collect revenue et user fees.

26. Priorities for the urban habitat include (i) finalizing the urban master plan for N’Djamena, (ii) developing sites and services in certain neighborhoods of the capital city, and (iii) articulating a national habitat policy and a strategy for the development of municipalities.

27. The Government is aware of the impact of the development of petroleum resources on the human and natural environment in the Doba region. An environmental impact study initiated in 1993 was made public on October 24, 1997, and was disseminated through a broad public information campaign. The petroleum consortium drafted an environmental mitigation plan, which was reviewed and completed by an external panel of independent experts, by the Government, and by IDA. The Government will request IDA financing of technical assistance to manage the impact of the petroleum project on the local population.

4. The Changing Role of the State and Private Sector Development

28. Since 1994, the Government has implemented a policy aimed at liberalizing the economy by reducing the role of the State, and promoting the private sector. This policy has yielded promising results, but many obstacles still remain. The private sector in Chad is not yet able to fully play its role. An ongoing debate on the limitations and roles of the State in the area of economic and social development is taking into account the experience of other countries, the evolving world economy, and Chad's own experience. The Government's strategy is to transfer certain State functions to local communities and the private sector, while strengthening its capacity to deliver core State functions.

29. The role of the State will focus on: (i) administration of security, justice and other sovereignty attributes; (ii) implementation of appropriate economic policies and of a stable macroeconomic situation, with a view to maintaining an economic environment conducive to development; and (iii) investment in education, health, basic infrastructure, rural development, and environmental protection. The Government is determined to encourage the private sector to take more responsibilities for the delivery of traditionally public services, especially telecommunications, water, electricity and transports. In the areas where the State will continue to act, it will compete with the private sector and will be subject to oversight by taxpayers.

30. Chad's institutional framework has evolved in recent years. The Government has the objective of transparency and sound governance, and has organized a constitutional referendum, the first democratic presidential elections, and legislative elections, which led in March 1997 to the establishment of pluralist political institutions. The Government is convinced that these institutions are the best guarantor of external credibility and for winning the confidence of domestic partners. It will pursue this approach by implementing other institutions foreseen by the Constitution, especially the Auditor General's Office in the Supreme Court, the Senate, and decentralized institutions.

31. National capacity building is central to Chad's development effort. Capacity is lacking in almost all areas. The Authorities have decided to devote more resources and attention to institutional reform and human resource development. They have reoriented public expenditure to increase expenditure for education and health, restructured ongoing projects, and prepared new capacity building operations. A National Secretariat for Capacity Building (SENAREC) was created in May 1997, and is currently preparing a national business plan for capacity building which could benefit from the African Capacity Building Initiative.

32. The Government is convinced that the private sector remains the engine of economic growth. To foster competitiveness, it has lifted controls on prices and commercial margins, with the exception of essential generic drugs, petroleum products, water, and electricity. The parliament has adopted a new Labor Code which gives social partners the right to set minimum wages, and encourages them to improve consultations in sectors and enterprises. The Government will improve the availability of economic information and will facilitate the access of local firms to public procurement. It will also extend tax incentives to encourage employment creation and exports, as well as provision of technical training by enterprises, albeit without jeopardizing fiscal objectives. Together with employers, it will simplify the procedures for creating new enterprises, and will review the Investment Code with a view to harmonizing it with regional agreements. It will strengthen the judiciary, in order to improve the settlement of commercial disputes. The Parliament will examine a new Social Security Code in 1999.

33. Investment in the petroleum sector, even though consisting mostly of imported equipment, is expected to bolster private activity. The Government will take advantage of petroleum development to accelerate and strengthen its strategy of private sector development. In particular, it will seek to suppress hindrances generated by legal and administrative bottlenecks, and by structural dysfunctions. The latter concerns mainly factor costs other than labor (power, telecommunications, industrial plant, credit, transports, storage), which are higher in Chad than in most African countries. This makes private investment less profitable or too risky, and requires high capitalization, often beyond the reach of Chadian business. The Sédigui petroleum project and the liberalization of telecommunications should help lower tariffs in these sectors. The upgrading of the road network and transport sector reform should help lower transports costs. Additional efforts will be needed to improve access to land, industrial buildings, and bank credit.

34. Private sector development is hindered by the inadequate skills of national entrepreneurs and difficult access to economic, financial, legal and technical information. The Government intends to support the Chamber of Commerce and Industry under the National Business Plan for Capacity Building. Together with other employers' or professional associations, this Chamber could also seek external support to train entrepreneurs, especially in management in marketing.

5. Development of Petroleum Resources

35. On November 22, 1996, Chad completed negotiations with a consortium grouping Exxon, Shell and Elf, and signed an agreement on the financial, legal and operational framework for developing petroleum resources. This agreement concerns two projects:

- Development of the Sédigui field North of Lake Chad and construction of a pipeline to link it to a small-scale refinery in N'Djamena. The production of this field, relatively modest but of high quality crude will meet domestic demand, especially for electricity generation. This would save foreign exchange now used to import petroleum products, and would allow lowering significantly power tariffs;
- Development of the Doba fields in the South of Chad, about 485 km from N'Djamena. This project will develop three petroleum fields with recoverable reserves estimated at 900 million barrels. It will require drilling about 300 oil wells. Their production would be exported through a 1,100 km pipeline ending at a marine terminal in Kribi, on Cameroon's coastline. The project will cost about three billion dollars, half of which invested in Chad.

36. The development of petroleum resources will drastically alter Chad's economic environment, and entails both opportunities, and risks. Chad could count on additional revenue and potential economic benefits consisting on new markets for goods and services, and employment creation. Petroleum revenue is projected at about 2.5 billion dollars between 2000-2025 (in current prices), i.e., about 100 million dollars a year on the average. These relatively conservative projections would increase government revenue by about one third. Petroleum activities are therefore an exceptional opportunity to attain a viable fiscal situation and underpin sustainable development. At the same time, as demonstrated by international experience, it will be difficult to contain inflation, preserve the international competitiveness of non-oil activities, especially rural, and deploy oil revenue efficiently.

37. The Government intends to seize the opportunity provided by the development of petroleum resources, and is aware of the risks and difficulties involved. The following chapters will review

measures to use efficiently oil revenue to reduce poverty, and to mitigate the risks associated with petroleum development.

II. GUIDING PRINCIPLES FOR MANAGING THE PETROLEUM ECONOMY

38. Poverty reduction is the Government's key objective for the management of the petroleum economy in general, and of petroleum revenue in particular. This objective meets the needs of the vast majority of population, and will allow building consensus and containing excessive expectations. The Government has retained five fundamental principles for the management of the petroleum economy: (i) priority utilization of oil revenue to reduce poverty; (ii) prudence and protection of the interests of future generations; (iii) participatory policy formulation and implementation of actions; (iv) transparent, efficient and rigorous utilization of oil revenue; and (v) regional balance.

1. International Experience

39. The Government intends to draw on international experience in managing the petroleum economy. This experience demonstrates the importance of strict discipline in managing public revenue and expenditure. All petroleum economies face structural difficulties in this area. Petroleum revenue is often the object of excessive claims by diverse groups of interests, leading to unsustainable pressure and tension. This is particularly true when development strategies are lacking, economic management capacities are weak, and transparency and control mechanisms are insufficient. No matter how legitimate these claims may be taken individually, collectively they may exceed available resources. Pressure to over-spend may lead to macroeconomic imbalances and affect the competitiveness of non-oil activities, sidetrack priority uses of revenue, and foster poor management and waste of resources. Countries that have enjoyed petroleum income often have an economic and development performance inferior to countries lacking oil or mineral resources, to the point where one talks about a "resource curse" or a "poisoned gift".

40. The positive results achieved by some countries can be traced to their determination and capacity to implement appropriate macroeconomic and revenue management policies: current expenditure consistent with long term revenue trends, rather than short term income; saving of the surplus; arbitration between domestic and external investment on the basis of real returns. Successful countries demonstrate the steady commitment of political institutions, sound public management within a transparent democratic system, a public expenditure policy favoring education, health, and basic infrastructure, a saving policy protecting the interests of future generations, strict and cautious macroeconomic policies.

41. The Government will take into account this experience in implementing adequate mechanisms to avoid over-spending and low-return investment. In particular, it will:

- establish a direct link between revenue and economic and social development objectives. Given the key objective of poverty reduction, petroleum revenue will finance in priority essential expenditure in education, health, rural development, and basic infrastructure;
- insulate petroleum revenue from pressure to use it for lower priority (or even wasteful) expenditure, ensure efficiency, and save surpluses for future generations; and
- oversee and control closely the objectives for efficient utilization of oil revenue.

2. Priority Utilization of Petroleum Revenue for Poverty Reduction

42. The Government is determined to use incremental oil revenue to finance sustainable development, and more specifically activities directly linked to poverty reduction. To avoid using petroleum revenue to finance past or current public deficits, the Government will accelerate and broaden measures to improve public financial management, and will pursue and complete the ongoing structural reform agenda.

43. Upon reviewing the experience of other petroleum or mineral exporters, the Government has retained the following policy for oil revenue management:

- Public financial management will be consolidated and strengthened. The Government will reduce, or even eliminate, the structural budget deficit. The Finance Law will consolidate the current and capital budgets (including externally financed expenditure), and will replace investment projects with sector expenditure programs, where possible, and as soon as possible. The Government will strengthen budget procedures and the control of public expenditure.
- Petroleum revenue will be utilized within a budget consistent with the macroeconomic framework, with a view to avoiding distortions associated with the appreciation of the effective exchange rate.
- Chad will neither mortgage nor seek advance payments on future petroleum revenues. In consultation with external partners, the Government may seek an exception to this rule in order to address unexpected and serious events, or to finance development actions presenting adequate guarantees on returns and social or economic importance. Such exceptions should respect the principle of annual budgeting. The *Policy Framework Paper* stipulates that the Government could resort to non-concessional borrowing to finance investment directly linked to development of oil resources.
- The Government will allocate the majority of oil revenue to finance development expenditure, giving priority to the sectors directly linked to poverty reduction objectives, and taking into account the objective of efficient utilization of revenues. Oil revenue will be allocated therefore in priority to financing public health and social services, education, infrastructure, rural development (agriculture and livestock), environmental protection, and water resources.
- Oil revenues will finance both investment and recurrent expenditure, within development programs.
- The expenditure to be financed by oil revenue will be incremental to projected budget expenditure in these sectors, before oil exports come on stream. They will therefore be incremental to the general budget of the fiscal year preceding the first oil revenues.
- The Government will increase fiscal mobilization from other sources and will seek to preserve development aid to the extent possible.
- The Government will continue the ongoing program under the Enhanced Structural Adjustment Facility (ESAF) arrangement with the IMF, with a view to containing the eventual negative impact of petroleum sector investment during construction.
- During oil production, the Government will strengthen its macroeconomic management and forecasting capacities, apply rigorously economic efficiency criteria, and sterilize eventual financing surpluses, to avoid macroeconomic slippage.

3. Prudence and Protection of the Interests of Future Generations

44. The non-renewable nature of petroleum resources, world market uncertainties and fluctuations, and the risks associated with a too rapid consumption of petroleum revenue justify prudent management of this revenue. The Government has rejected the fallacy of a “petroleum windfall”, and intends to use the additional revenue generated by oil exports according to Chad’s capacity to invest it efficiently. This implies, among others, that the level and composition of expenditure will be constantly evaluated on the basis of the absorptive capacity of the economy. The Government will implement an analytical and forecasting capacity before petroleum resources are developed. Chad must also articulate a long term vision of its development objectives in general, and poverty reduction objectives in particular, in a participatory process associating all development partners.

45. The Government has decided to use the experience of other countries that have developed natural resources, with a view to mitigating economic and social risks, and realizing expected benefits. The commitment of budget revenue generated by oil exports will reflect the absorptive capacity of the economy, in order to avoid the appreciation of the exchange rate, and preserve the competitiveness of non-oil activities. The interests of future generations will be protected through programs for human resources development, and by saving surpluses. These questions will be further discussed in chapter III.

4. Participatory Approach

46. Chad has successfully put in place democratic political institutions. In the same spirit, the Government intends to prepare and implement its development policy in a participatory and consensual framework. The Government is firmly determined to adhere strictly to this approach in managing public resources in general, and oil revenue in particular. It also intends to make use fully of the constitutional mandate of the National Assembly concerning the adoption of the State budget, and the control of its execution. If necessary, the Government will provide the Parliament with the technical competence needed to oversee the approval and execution of the budget. Elected officials will have access to all the information needed to oversee the correct implementation of the agreed management principles, and will be associated to the decisions on the utilization of petroleum revenues. The Government will render public all the documents concerning development policies, business cycle management, and management of revenues. It is its conviction that transparency is the best way to guarantee the support of all Chadians for sound development policies, and their participation in the implementation of these policies.

47. The Government is determined to implement participatory mechanisms concerning the articulation of development policies, decisions on the allocation of public resources, and execution of public expenditures. These mechanisms will apply to the: (i) definition of strategies in the priority sectors for poverty alleviation; (ii) adoption of public expenditure programs and government budgets; (iii) civil service reform; and (iv) implementation of publicly-financed projects and programs in partnership between the State, decentralized entities, local communities, NGOs, the private sector, and external partners.

5. Transparency

48. The Government is convinced that consultation and transparency are the best way to prevent excessive claims and populist initiatives that have undermined the situation of other petroleum

exporters. Upon signing the agreement on the Doba project in November 1996, it initiated an information and communication campaign. A first public information seminar in December 1996 was followed by exchanges with the civil society, the media and interest groups, as well by information sessions for the Parliament. The Government has adopted a comprehensive information and communication program for 1998-2000, with a view to pursuing consultations with political institutions, the public sector, non-governmental organizations, the private sector, trade unions and professional associations, the media, local communities, external partners, and population in general.

49. In 1997-98, two opinion surveys carried out in N'Djaména, Abéché and Moundou provided good indications on the public opinion. The Government's decision to render public the petroleum dossier has been well received. People interviewed are aware of the potential risks of oil development and favor transparent management. They perceived the information provided by the Authorities as an expression of the will to guarantee transparency, and are eager to pursue the dialogue and participate in policy formulation. The surveys have also revealed that most Chadians remain skeptical about the expected benefits of petroleum development, essentially because they lack confidence in national management capacities. Chadians fear that oil revenue will accrue primarily to privileged groups, or to foreigners. Most of them favor transparent revenue management overseen by democratic institutions. According to these surveys, the support of the Chadian population to the program for the management of the oil economy hinges on the implementation of mechanisms to manage oil revenues fairly, efficiently and transparently, and on a credible program of capacity building for economic management.

6. Regional Balance

50. The Government reaffirms its commitment to balanced regional development, and will pursue by decentralizing resources and State responsibilities for development. The Law on oil revenue management, adopted by the National Assembly on December 30, 1998, stipulates that five percent of petroleum royalties will be allocated to decentralized entities in the producing region, according to the provisions of article 212 of the Constitution. A draft law on decentralization is under preparation.

51. The Government will put in place a system to monitor regularly poverty indicators at national, regional and local level, and by social categories. This statistical information and household surveys will allow adapting expenditure programs in the priority sectors to country realities, and will help address regional and social disparities. In the same spirit, the Government will monitor the impact of public expenditure in the priority sectors.

III. MANAGEMENT OF PETROLEUM REVENUE

52. The Government will implement an oil revenue management program by the fiscal year preceding the arrival of oil revenues, according to the following basic principles: (i) priority allocation of oil revenues for poverty reduction; (ii) efficient and transparent management of these revenues; (iii) macroeconomic and budgetary discipline, and protection of the competitiveness of non-oil activities; (iv) protection of the interests of future generations; and (v) association of political institutions and the civil society to decisions on oil revenue utilization. This chapter incorporates the provisions of the Law on oil revenue management, approved by the National Assembly on December 30, 1998.

1. Mobilization and Uses

53. The Government intends to implement a rigorous and transparent accounting system in the petroleum sector. National staff in charge of managing relations with the petroleum consortium is already being trained. The Government has decided to include in the general budget all direct and indirect revenues generated by oil exports (royalties, direct and indirect taxes, dividends, and eventual payments in kind), both from the Doba project, and from other petroleum development projects. Budget forecasts and execution will take into account production, operating costs and marketing terms. They will cover not only production per se, but also upstream activities (exploration, development), downstream activities (transportation, refining, marketing), sub-contracting (for both investment and operation), and revenue derived from financial investments or the liquidation of these investments. The Authorities have requested the support of the World Bank in strengthening their capacity to manage the petroleum sector.

54. The overall utilization of oil revenues will take into account the effective absorptive capacity of the economy. Excessively rapid absorption could put pressure on the prices for non-tradable goods and services, relative to the prices for tradable goods. This would have a negative impact on the competitiveness of non-oil economic activities, especially rural. The Government intends to strengthen its capacity for economic analysis, management of the business cycle, and forecasting, with a view to preventing and mitigating the economic and social costs associated with this risk. It is also determined to avoid injecting excessive amounts of financial resources into the economy, and develop new sources of budget revenue that would complement, or later substitute for, petroleum revenue.

55. As a non-renewable resource, petroleum exploitation is equivalent to capital depletion. Oil revenue will therefore be allocated primarily to replenish investment in a broad sense, with a view to underpinning Chad's sustainable and equitable development. The Government will favor two uses of oil revenues: (i) public expenditure programs in the priority sectors (education, public health, rural development, environment, water resources, and basic infrastructure); and (ii) incentives to the private sector, to promote investment and generate employment.

56. A *Poverty Reduction Strategy*, under preparation with the civil society and Chad's partners, will articulate specific policy options and will determine resources to be allocated to the priority sectors. The implementation of this strategy will be underpinned by a system of poverty indicators, and by the assessment of the impact of public expenditure programs on poverty reduction. Private sector promotion will be systematically examined in all the priority sectors, with a view to identifying actions and measures to increase private investment and the participation of enterprises to the execution of public expenditure, and to technical training activities.

57. The Government has retained the following sector orientations, which are being discussed with the development partners:

- in the education sector, oil revenue will improve the access to basic education, will help close the gap in the education of female population, and adapt the education system to the real needs of the economy;
- in the health sector, the use of incremental revenue will focus on preventive and basic health care, and include better access to safe water;

- rural development will encourage private investment to introduce more efficient agricultural methods and modern inputs, and strengthen food security and the functioning of financial mechanisms, including rural micro-credit;
- environmental protection concerns primarily the management of water resources, and the fight against desertification;
- development of basic infrastructure using the new resources will be directly linked to the objectives in the education, health and rural development sectors.

2. Flow of Funds and Allocation

58. The Government has decided to place 90% of the royalties and dividends to be paid by the petroleum companies in dedicated special accounts located in one or two local commercial banks, with a view to pursuing the poverty reduction objective and protecting the interests of future generations. The balance of 10% will be placed in a savings fund for the benefit of future generations, for a period of about 25 years. The fund will be located in an international financial institution, subject to the regulations of the Bank of the Central Africa States (BEAC). Taxes and duties, which represent ordinary State revenue, will be paid directly into the accounts of the public Treasury.

59. The Government intends to select the commercial bank(s) which will manage the dedicated special accounts according to strict criteria, in order to protect the interests of the Chad's population. These banks must be sound and in a satisfactory financial condition. Their certification by COBAC must be particularly strict. Since publicly-owned banks are to be privatized, the selected banks will be in principle private institutions. Their principal shareholders must offer satisfactory experience and reputation guarantees. The flow of resources from the escrow accounts to the selected commercial banks will be carried out in a prudent manner, to avoid an excess increase in credit, which could undermine the health of the financial sector, and accelerate inflation.

60. The royalties and dividends placed in the dedicated special accounts will be allocated as follows: (i) 80% will be allocated to finance expenditures in the priority poverty reduction sectors; (ii) 15% will be allocated to finance investment and recurrent State expenditure during the first five years of petroleum production. After this period, this amount will be allocated to the priority sectors; and (iii) 5% of royalties will be allocated to local entities in the producing region, according to the provisions of the article 212 of the Constitution, and will be used to finance development activities. The modalities for the allocation, management, and control of the funds allocated to local entities in the producing region will be determined by implementation decrees of the Law on the management of oil revenue. The use of these funds will be strictly overseen and controlled in a transparent fashion, following the example of the general rules for the management and control of oil revenues.

61. The saving account for the benefit of future generations will be managed according to strict prudential rules and its future commitment will take place in the priority sectors. The taxes and duties generated by petroleum activities will be allocated to the general budget with a view to increasing development expenditures in the broad sense.

62. The expenditures to be financed by petroleum revenues in the priority sectors will be incremental to the expenditures projected by the Government for these sectors taken as a whole, prior to oil exports coming on stream. They will therefore be additional to the general budget of the fiscal year

preceding the first oil revenues, and will not substitute for other government revenues in financing development expenditures.

63. The Government is concerned with the sustainability of public investment. It intends to use oil revenue to finance both investment expenditures, and recurrent costs, in the framework of development programs.

3. Disbursement and Saving

64. The oil revenue allocated to the priority sectors will be disbursed from the special accounts according to the principle of preserving the integrity of the State budget. These disbursements will be carried out under a consolidated budget aggregating recurrent and investment expenditures, irrespective of their financing source. This is consistent with the principles of budget integrity and comprehensiveness, as well as with the measures to improve budget management under the ongoing structural adjustment program.

65. The specific allocation of resources from the special accounts to the priority sectors will take into account the full amount of each sector's expenditures, and the congruence with the general budget. Sector expenditure programs in the main priority sectors will be implemented where possible, and as soon as possible, bearing in mind that generalizing this approach may be difficult and require some time. Disbursement applications lodged by the budget paymaster in the banks managing the special accounts must: (i) comply with the Finance Law approved by the Parliament; (ii) be based on specific expenditure programs for revenues allocated to the priority sectors; and (iii) receive an ex ante visa from an independent institution – the Petroleum Revenue Oversight and Control Committee (CCSRP) to be created under the Law on the management of oil revenue.

66. The CCSR will verify the consistency of special accounts commitments with the Finance Law, and authorize and control disbursements from the special accounts, and the allocation of funds. The Government will draft operational guidelines for CCSR as soon as possible, and will seek to avoid any duplications with the normal roles of the administration and the Parliament. The CCSR will have the following composition:

- a Supreme Court judge;
- a member of the National Assembly;
- a senator;
- the National Director of B.E.A.C.;
- the Director of Treasury;
- the Director of Petroleum;
- the Director of Planning and Development;
- a democratically-designated representative of local NGOs;
- a trade union representative.

67. The CCSR members representing the Parliament, the Supreme Court, NGOs and the trade unions will be designated and appointed for a three year term, once renewable.

68. These mechanisms for the allocation and disbursement of oil revenues will be accompanied by strengthening of the public expenditures selection and evaluation criteria. The selection of public investments will be based on rigorous norms of economic and financial return, on an evaluation of execution, management and maintenance national capacities, and on the prospects for financing recurrent costs and the eventual replacement of the initial investment.

69. The Government intends to ask Chad's partners for support in implementing the strategy for the management of the petroleum economy. It intends to carry out annual public expenditure reviews, and will seek the participation of the World Bank in these reviews. At the same time, it will mobilize external support to: (i) train national staff and strengthen the institutions in charge of macroeconomic management and forecasting, public financial management, preparation of sector strategies, projects and programs in the priority sectors, and evaluation of the results of these projects and programs; and (ii) closely associate political institutions and the civil society to the management of oil revenue.

70. The Government is hopeful that the implementation of these policies and actions will allow Chad to absorb efficiently all the oil revenues, with the exception of the long term saving account. The base case retained during the appraisal of the petroleum project projects net annual revenue at about 50 billion CFA. This amount is not excessive given Chad's immense needs in the priority sectors. The Government intends to sterilize in saving accounts or other financial investment instruments the eventual surpluses generated by more favorable prices for oil exports, or by a lower than expected pace of absorption of resources in the priority sectors. It will examine the choice of effective saving instruments with BEAC and other partners.

4. Control and Oversight

71. The control of the mobilization and utilization of oil revenue will be exercised at several levels: (i) internal control of the Ministry of Finance and Economy, of spending departments, and decentralized entities; (ii) oversight and control carried out by legislature, and by the Petroleum Revenue Oversight and Control Committee; and (iii) ex post control by the State Control and the Auditor General's Office in the Supreme Court. Capacities in these areas will be strengthened with IDA support.

72. The system for controlling the mobilization, the allocation and the use of oil revenue includes the following:

- Control of the mobilization of financial resources, on the basis of production criteria (quantities, costs, marketing), and fiscal provisions.
- Internal public expenditure control covering financial management, and justification of expenditures. Sector public expenditure programs will ensure consistency between development objectives and expenditure forecasts in the priority sectors. The Government intends to monitor the impact of public expenditure on sector and poverty reduction objectives.
- Parliamentary approval of oil revenue allocation and utilization, through approval and monitoring of the general budget, using information provided by the administration and the Auditor General's Office, as well as analysis carried out by its own technical office to be established in the near future;

- The Auditor General's Office in the Supreme Court, to be established as soon as possible under the provisions of article 133 of the Constitution, will control the legitimacy of expenditures through: (i) the official certification of revenue accounts (execution of the accounts of past fiscal years, estimates of the accounts for the current fiscal year, forecast for the following year); and (ii) the control of legal requirements on the allocation of resources between the general budget and decentralized entities, as well as of the requirements and rules for the establishment of reserves, and the placement abroad of excess resources.
- The Petroleum Revenue Oversight and Control Committee will verify the conformity of commitments from the special accounts with the Finance Law, and will authorize and control disbursements from the special accounts according to the specific allocations in the annual expenditure programs in the priority sectors.

73. The Law on oil revenue management requires monitoring of the mobilization, allocation and utilization of oil revenue. This will be done through regular audits and reports submitted to the Government, and in particular:

- Annual audits of the dedicated special accounts and of the saving account for the benefit of future generations.
- Quarterly statements for the dedicated special accounts.
- Regular reports on the management of the saving account for future generations, and on the saving accounts where eventual financing surpluses will be placed.
- Regular reports of the Petroleum Revenue Oversight and Control Committee.
- COBAC audits and reports on the commercial banks managing the special accounts.
- Annual reports issued by the State Control.
- Auditor General's annual audits of the execution of the general budget.

74. The Government will make public the operating results of the petroleum accounts, with a view to associating the population to the development of petroleum resources, and the use of oil revenues. It also intends to share the audits and reports with the Bretton Woods institutions, and to associate these institutions to annual public expenditure reviews. These reviews will examine: (i) the macroeconomic framework of public expenditures; (ii) their congruence with overall economic policies, sector policies, and poverty reduction objectives; (iii) the respect of economic and financial efficiency criteria; and (iv) the technical and financial sustainability of activities. Their conclusions will guide the Government in its decisions on the allocation and use of oil revenue.

IV. SUSTAINABILITY OF POLICIES AND RISK MANAGEMENT

1. Strengthening National Capacities

75. During the transition to the petroleum economy, the Government intends implementing the institutions, skills, technical means, and the information, analysis, incentives and control systems which could allow Chad to use efficiently oil revenue and manage their impact on the economy and public finances. The Authorities are currently reviewing the roles of the state, the organization and management of public administration, including decentralized entities, and the civil service statutes.

They have also initiated the preparation of a Petroleum Economy Management Project (GEEP), and intend to seek IDA financing for it. This project will build on the achievements of the ongoing project supporting economic management capacities (under IDA financing) and will be part of the national business plan for capacity building, led by SENAREC.

76. The objective of GEEP is to support the Government's policy on the efficient and transparent use of oil revenue to reduce poverty. This objective will be pursued by strengthening Chad's macroeconomic management and forecasting capacity, and public financial management, and by promoting increased transparency in public management. The main activities of GEEP include:

- participatory articulation of a Strategy for Poverty Reduction, and implementation of a system to monitor poverty indicators, and the impact of public expenditures in the priority sectors for poverty reduction;
- implementation of a national capacity for macroeconomic analysis and forecasting;
- integration of sector expenditure programs in the general budget and in a medium term public expenditure framework, as well as integration of the current and capital budgets, and of budget flow of funds;
- modernization of the services of the Ministry of Finance and Economy (budget, treasury, taxes, customs, public debt, financial control), and implementation of an integrated public financial management system;
- support to the institutions which will exercise control functions under the Law for oil revenue management (CCSRP, Auditor General's Office, State Control, Parliament), and for an information and consultation campaign aiming to associate the civil society to the formulation of development policies.

77. Urgent training in petroleum sector operational activities started in January 1998, with special emphasis on developing national skills in: (i) petroleum taxation; (ii) financial analysis and Anglo-Saxon accounting methods (used by the consortium); (iii) energy and petroleum market economics; and (iv) technical controls of production. The Ministry of Mines, Energy and Petroleum is currently preparing a capacity building operation, for which the Government will seek IDA financing.

2 Risk Management

78. The Government is aware of the economic and social risks. They include overestimation of resources and unforeseen fluctuations; uncertainties on the world capital markets; environmental degradation; social impact; impact on the competitiveness of economic activities; overestimation of the absorptive capacity, and waste of resources.

79. Given uncertainties about oil world market prices and production levels, the Government intends to be prudent in committing oil revenue. Public expenditure programs will be based on conservative assumptions about export prices, pace of production, and efficient absorptive capacity. The Government will also examine the scope for investing eventual surpluses.

80. This document will not discuss environmental risks. However, it is worth noting that the Government has: (i) adopted a mitigation plan using preparatory work carried out by the petroleum consortium, its own experts, independent experts, and the World Bank; (ii) will control the

implementation of the environmental impact mitigation plan by the consortium; (iii) prepared an environmental capacity building operation under IDA financing; and (iv) initiated a national information and consultation campaign.

81. The Government intends to address the risk of the falling competitiveness of non-oil activities, common in countries that have developed rapidly oil exports. This risk could materialize in Chad during construction, and would increase during the production phase. It could affect traditional rural activities such as livestock, cotton, or sugar, hinder industrial development, and accelerate inflation:

- The cotton and sugar sectors are among the most vulnerable. Oil will be produced in the cotton region, and there is a real risk that farmers could leave their fields in the hope of finding employment in the oil sector. The same could happen in the sugar sector. The Government will pursue and expand the ongoing strategy of liberalizing and diversifying production, with a view to increasing farmers' productivity and incomes, and mitigating these risks.
- Financial administration will be strengthened in order to contain the inflationary impact during construction and exploitation. The Government intends to adopt a medium term action plan to strengthen the production of national statistics and its capacity for economic analysis and forecasting, within the global program of capacity building.
- The Government will follow closely the impact on poverty. The recent household survey of consumption, incomes, and informal activities (ECOSIT) will be followed as soon as possible by a system of permanent monitoring of poverty indicators. This will allow measuring the impact of economic and investment policies, and regional disparity. The Government will thus be able to monitor the implementation of its Poverty Reduction Strategy, and review it as necessary.

82. The overestimation of absorptive capacities can lead to the waste of the resources generated during the production phase. The Government has decided to accelerate the articulation of sector strategies, the administrative and civil service reform, the capacity building program, and the program to improve the management of public expenditures. It also intends to share with decentralized entities and the private sector the responsibility of managing the expenditure programs financed by oil revenue. The following measures have already been taken, or will be taken before the arrival of oil revenue:

- The presentation in 1997 of a budget grouping current and capital expenditure according to an improved nomenclature, to increase transparency. This process will continue with the implementation of a consolidated budget based on sector expenditure programs, especially in the priority sectors. Budget procedures will be strengthened.
- Civil service reform. A National Commission for Civil Service Reform has been at work since 1997, and submitted its initial recommendations in 1998. The Government intends to: (i) replace automatic seniority promotions with merit promotions; (ii) draft by mid-1999 revised statutes of the civil service, with a view to improve the match between profiles and positions, improve job stability (which would enhance return on investment in human capital), ensure the neutrality of civil servants, and protect them against pressure and arbitrary decisions; and (iii) improve career management and planning, on the basis of an integrated computerized roll, starting in fiscal year 2000.

- Taxation of public procurement. This measure, introduced in September 1997, seeks to fully cost public expenditure, eliminate distortions in the economic and financial analysis of investment projects and other public expenditure, and curtail fiscal evasion.
- Starting in fiscal year 2000, implementation of Settlement Laws which would allow the National Assembly to control the budget execution and subsequently verify the correct application of the provisions governing oil revenue management.
- Reorganization of the Budget department. The objectives are to (i) improve budget preparation and monitoring, (ii) implement uniform and reliable procedures to control and monitor commitments, and (iii) implement additional procedures to monitor payment orders, liquidations, and payments. The Government will accelerate computerization and training, with a view to completing the reorganization and having a fully operational system in place by fiscal year 2000.

3. Managing the Transition to the Petroleum Economy

83. The High Interministerial Committee (HCI) in charge of the implementation of the adjustment program will also monitor the strategy for the management of the petroleum economy. The Council of Ministers will retain responsibility in coordinating the management strategy, in close cooperation with the National Assembly.

84. The HCI has adopted a work program for the 1998-2001 period. This program contains policy formulation actions, technical measures, an information and consultation campaign, and capacity building activities. The HCI will issue annual reports which will be reviewed by the Council of Ministers. These reports will be transmitted to the Parliament and to the World Bank. This would allow validating or reviewing the strategy. The Government intends to consult the World Bank on eventual changes.

Annex 12 Corporate Structures and Financing Plan Diagrams

Diagram 1:

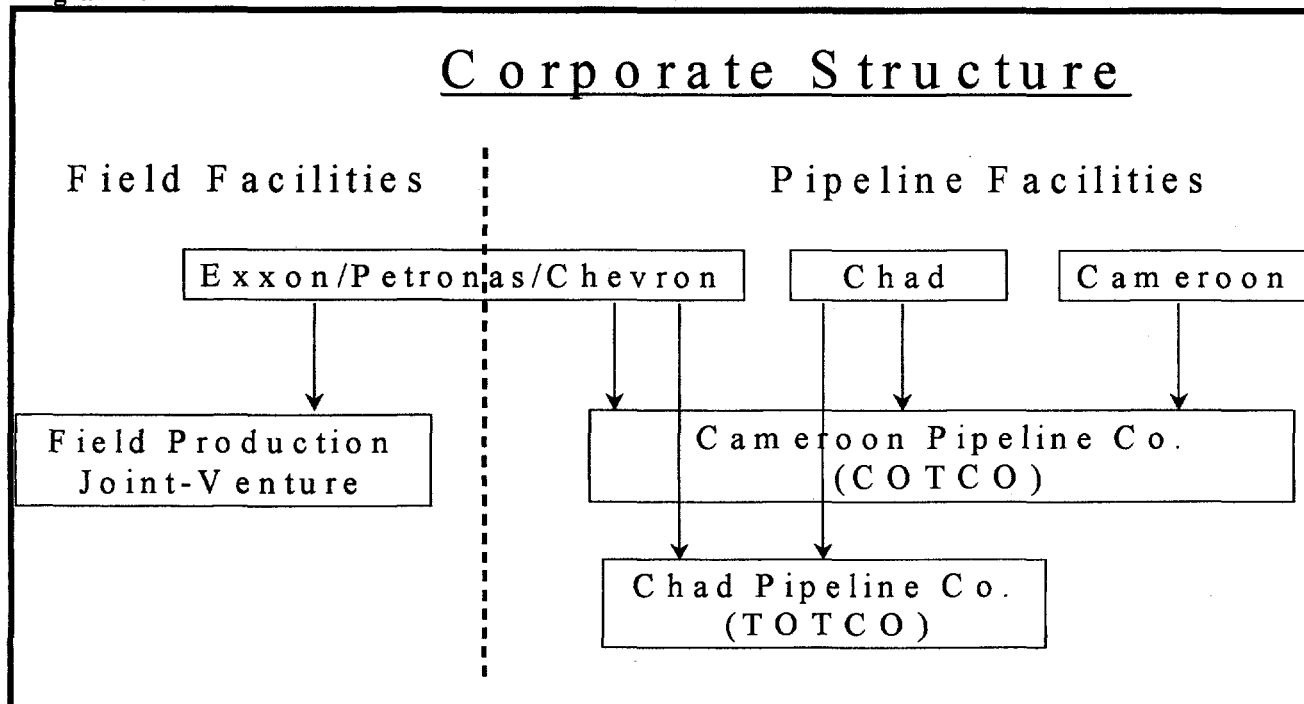


Diagram 2:

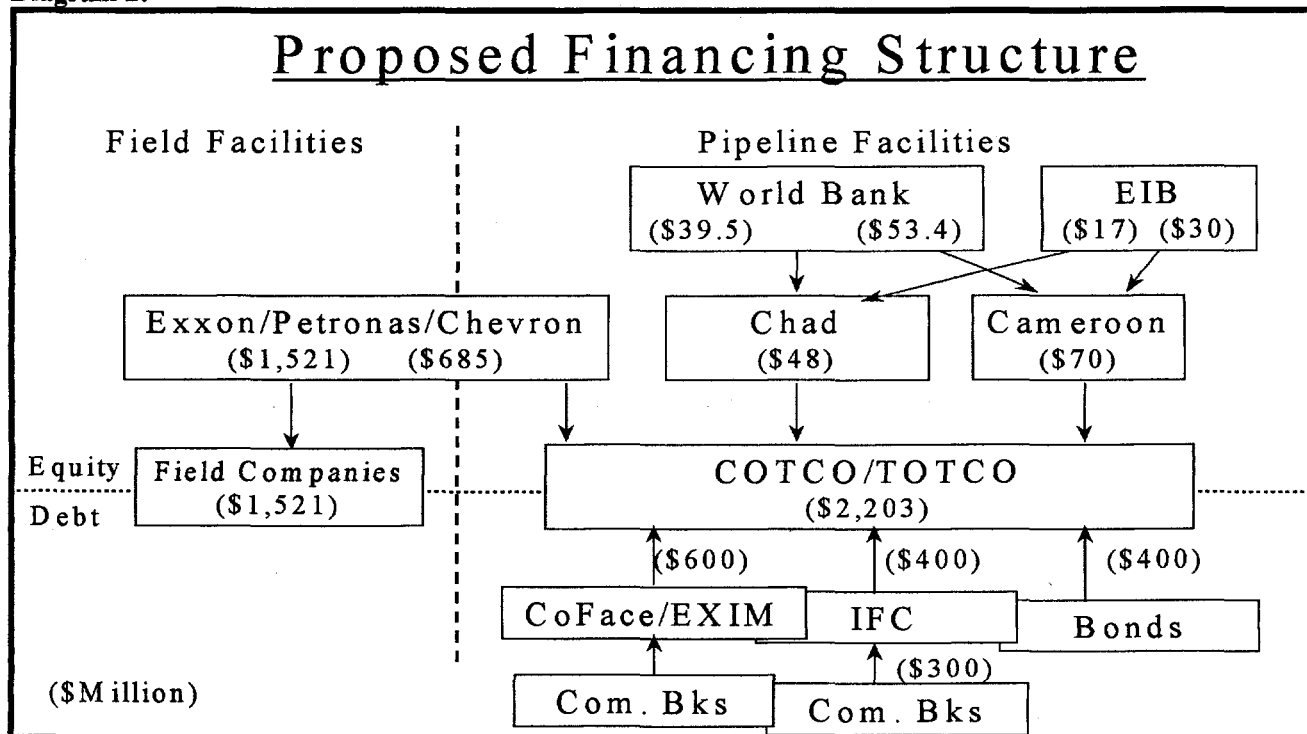
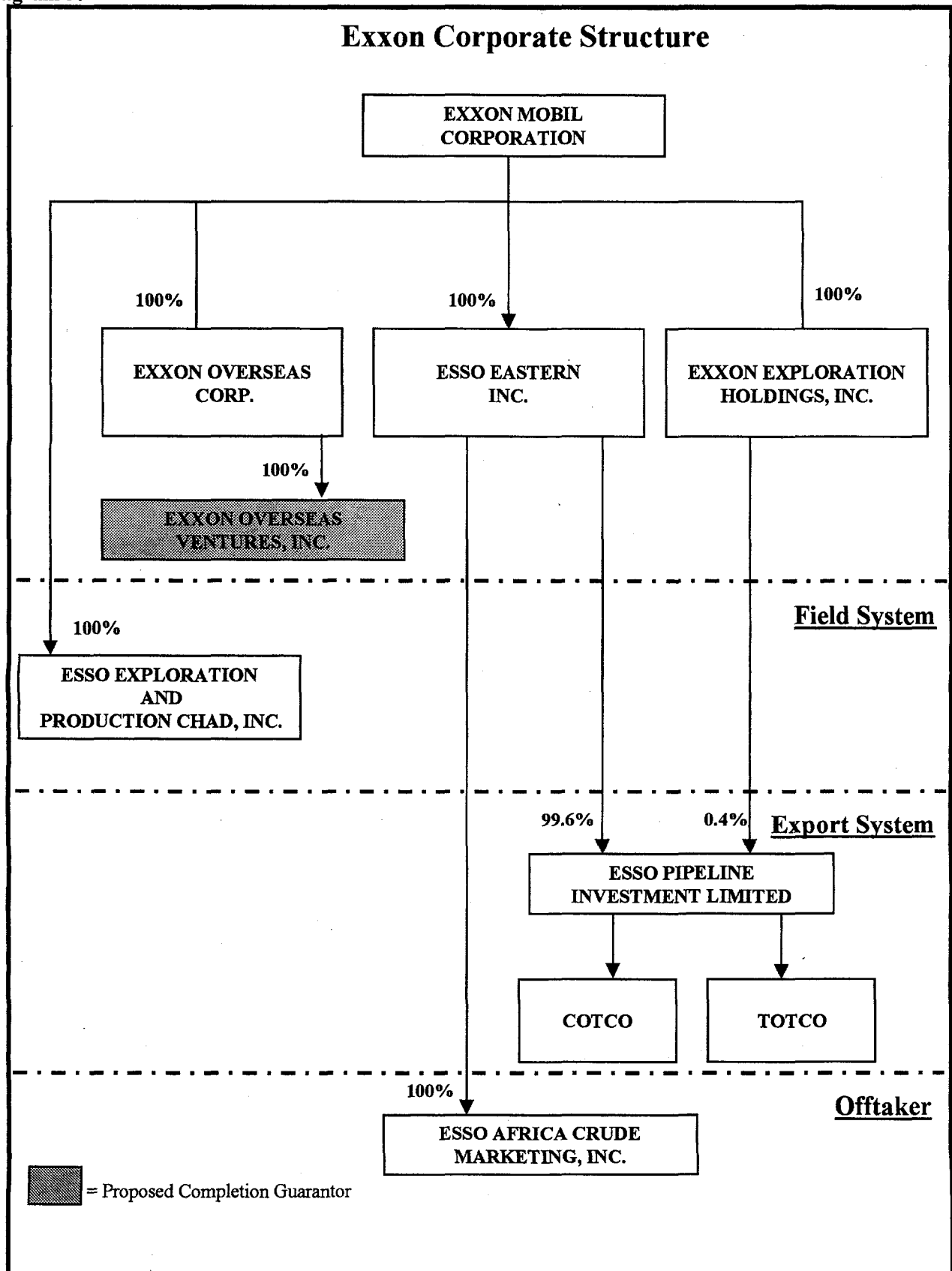
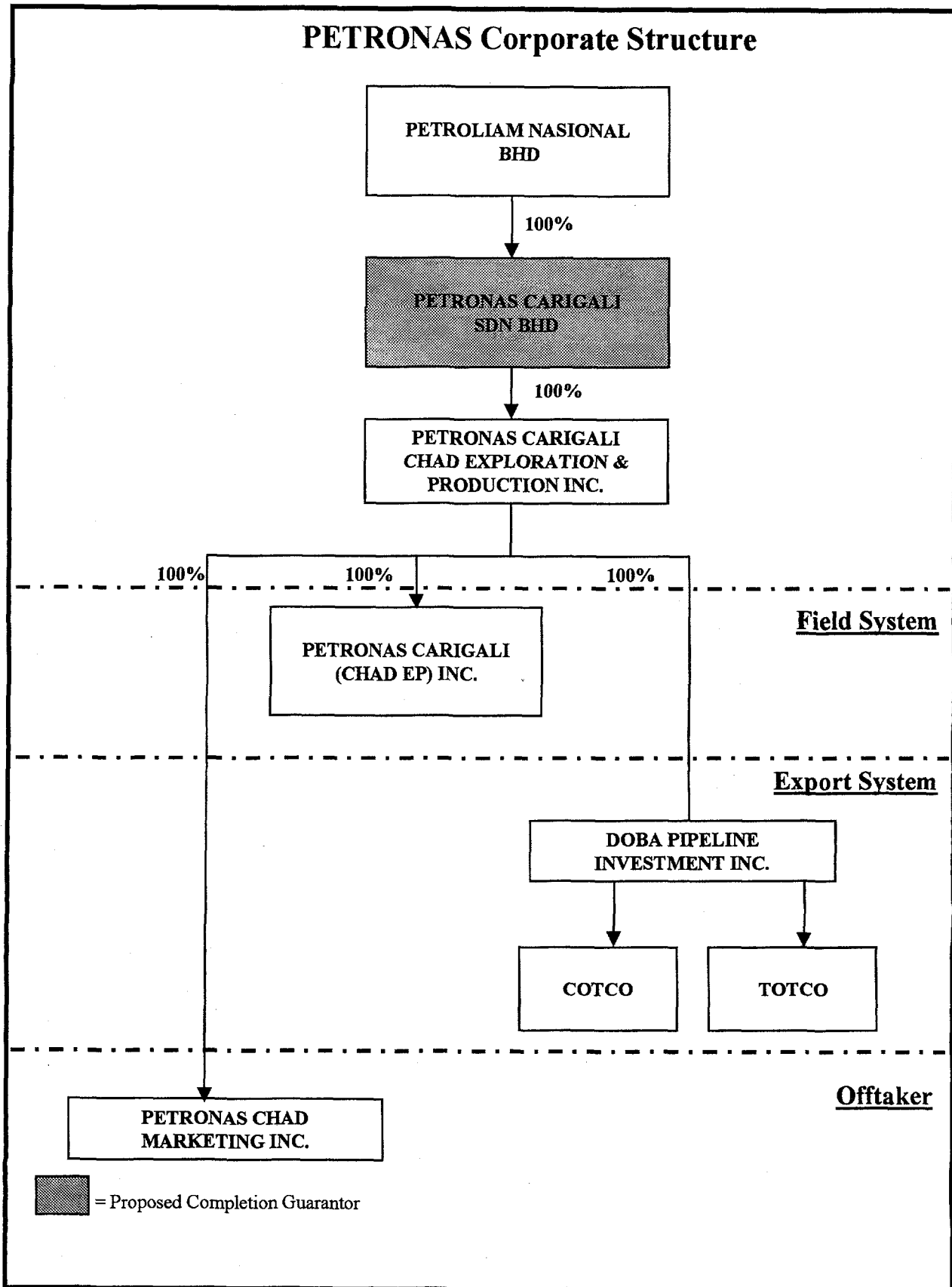
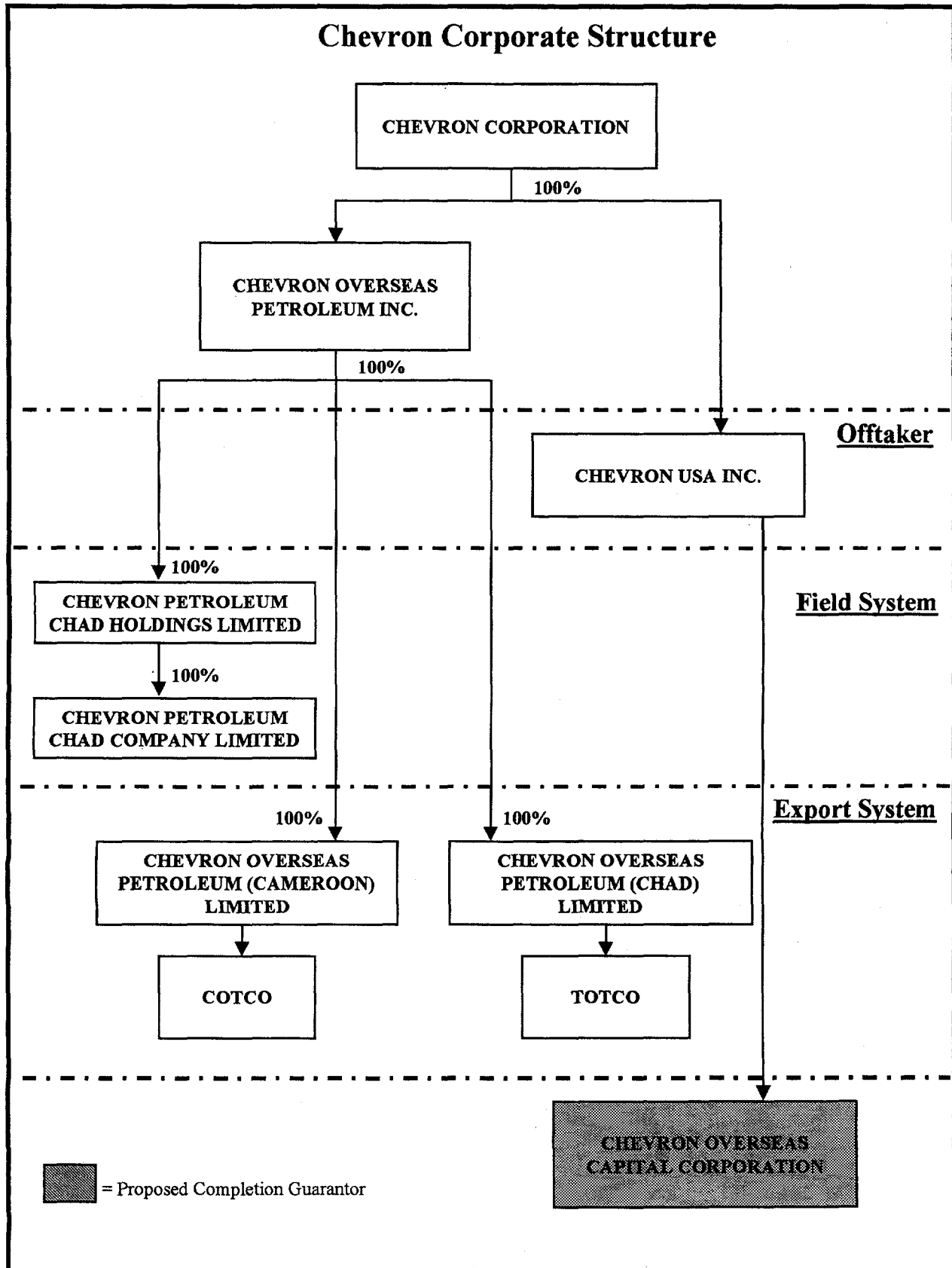


Diagram 3:







Annex 13

Contractual Framework

A. Upstream Agreements:

1. **Chad Operating Agreement:** Agreement among the Upstream Consortium members designating Esso Chad as operator for the upstream operations in Chad with responsibility for project preparation for the upstream and downstream facilities.
2. **Convention for Exploration, Exploitation and transportation of Hydrocarbons in Chad**, dated December 19, 1988, as amended May 19, 1993 and March 12, 1997, and October 16, 1999, and as further amended (to reflect the change in Upstream Consortium members) among the Upstream Consortium and GoT setting out the terms of the concession regarding Doba.

B. Downstream Framework Agreements:

3. **Framework Agreement**, dated January 31, 1995, among GoT, GoC and the Upstream Consortium regarding the financial terms pertaining to the operation of the downstream facilities in Cameroon.

C. COTCO Corporate/Funding Agreements:

4. **COTCO Convention of Establishment:** To define the framework in which COTCO will be able to construct and operate the Cameroon Transportation System (i.e. the pipeline), especially the rights and obligations as well as the legal and fiscal terms applicable to COTCO and the other beneficiaries in connection with the Cameroon Transportation System.
5. **COTCO By-Laws:** The Charter for COTCO, defining the structure and internal regulations of COTCO and the powers and responsibilities of the shareholders and of its various management and executive functions.
6. **COTCO Shareholder Funding Agreements:** Agreement among the shareholders of COTCO relating to the funding by or on behalf of the shareholders and to guarantees.
7. **Chad/COTCO Loan Agreement:** Setting out the principles governing the provision of funds to COTCO, by the Republic of Chad, and the conversion of loans to equity in accordance with Exhibit 2 of the COTCO Shareholder Funding Agreement.
8. **Cameroon/COTCO Loan Agreement:** Setting out the principles governing the provision of funds to COTCO, by the Republic of Chad, and the conversion of loans to equity in accordance with Exhibit 2 of the COTCO Shareholder Funding Agreement.

D. TOTCO Corporate/Funding Agreements:

9. **TOTCO Convention of Establishment:** To define the framework in which TOTCO will be able to construct and operate the Chad Transportation System (i.e. the pipeline).

10. TOTCO By-Laws: The Charter for COTCO, defining the structure and internal regulations of TOTCO and the powers and responsibilities of the shareholders and of its various management and executive functions.

11. TOTCO Shareholder Funding Agreements: Agreement among the shareholders of COTCO relating to the funding by or on behalf of the shareholders and to guarantees.

12. Chad/TOTCO Loan Agreement: Setting out the principles governing the provision of funds to TOTCO, by the Republic of Chad, and the conversion of loans to equity in accordance with Exhibit 2 of the TOTCO Shareholder Funding Agreement.

E. Downstream Operating Agreements:

13. COTCO Project Management Contract: Contract between COTCO and the Export System Project Management Company (an affiliate of Exxon), to supervise and manage the design and construction of the Export Project.

14. TOTCO Project Management Contract: Contract between TOTCO and the Export System Project Management Company (an affiliate of Exxon), to supervise and manage the design and construction of the Export System.

15. COTCO Services Agreement: Agreement between COTCO and an affiliate of Esso Chad to ensure the provisions of administrative and technical services and personnel to COTCO.

16. TOTCO Services Agreement: Agreement between TOTCO and Esso Chad to ensure the provisions of administrative and technical services and personnel to TOTCO.

17. COTCO/TOTCO Cooperation Agreement: Agreement between COTCO and TOTCO relating to (1) the coordination of the two portions of the Export Project as a single unit, and (2) the allocation of costs, asset ownership, and liabilities.

F. Transportation/Offtake Agreements:

18. COTCO Transportation Contract: Agreements between COTCO, the Republic of Cameroon and the Upstream Consortium relating to the transportation of the crude.

19. TOTCO Transportation Contract: Agreements between TOTCO, the Republic of Chad and the Upstream Consortium relating to the transportation of the crude.

20. Off-take Agreement: Agreement committing affiliates of the Private Sponsors to off-take their respective shares of the Chadian crude oil at the Atlantic coast terminal at market prices and to make payments to specified offshore accounts.

G. IBRD Financing Agreements:

21. IBRD/GoC Loan Agreement.

22. IBRD/GoT Loan Agreement.

23. IBRD Project Agreements with (i) COTCO, (ii) TOTCO, (iii) Esso Chad, (iv) Petronas Chad, and (v) Chevron Chad.

24. Completion Guarantees: Separate and several pre-completion guarantees against commercial risks provided by Exxon, Petronas and Chevron companies in favor of IBRD for principal and interest under IBRD's loans to GoC and GoT.

25. GoT/IBRD Escrow Agreement: Agreement governing receipt and administration of crude oil proceeds in support of IBRD's loan to GoT.

26. IBRD Cooperation Agreements: Separate agreement with EIB and memorandum of understanding with the IFC/Senior Lenders group establishing modalities for consultation, cooperation and coordinating actions under the project.

H. Principal IFC/Senior Lenders Financing Agreements

27. IFC/Senior Lenders Loan Agreements: Agreements between IFC/Senior Lenders and COTCO and TOTCO.

28. IFC/Senior Lenders Escrow Agreement: Agreement governing receipt and administration of crude oil proceeds in favor of IFC/Senior Lenders.

29. IFC/Senior Lenders Direct Agreements with (i) GoT and GoC, and (ii) Upstream Consortium.

30. Completion Guarantees: Separate and several pre-completion guarantees against commercial risks provided by Exxon, Petronas and Chevron companies in favor of IFC/Senior Lenders for principal and interest under senior loans to COTCO and TOTCO.

I. Key Legislation/Regulation:

31. Cameroon/Chad Bilateral Treaty, dated February 8, 1996, between the Republic of Chad and the Republic of Cameroon regarding the support of the countries for the construction and operation of the project, including the export of Chad oil through Cameroon.

32. Cameroon Law on Transportation by Pipeline of Hydrocarbons from Third Party Country, dated August 5, 1996.

33. Cameroon Implementation Decree for Hydrocarbon Transportation by Pipeline Law, dated July 7, 1997.

34. Cameroon Law Approving COTCO Convention of Establishment, dated August 7, 1997.

35. Chad Petroleum Code, dated April 15, 1962.

36. **Chad Decree Implementing Petroleum Code**, dated May 10, 1967.
37. **Chad Law Approving TOTCO Convention of Establishment**, dated August 17, 1998
38. **Chad Law concerning Oil Revenues Management**, dated January 11, 1999.

Annex 14

SUMMARY OF ENVIRONMENTAL ASSESSMENTS AND MITIGATION PLANS

Introduction

1. This Annex summarizes the environmental assessment and environmental mitigation plans for this project. Further details are provided in separate annexes on the Compensation and Resettlement Plan in Chad (Annex 15, Part A), the Compensation Plan in Cameroon (Annex 15, Part B), the Indigenous Peoples Plan in Cameroon (Annex 16), and the process of public consultation carried out in connection with this assessment (Annex 17).

2. The full environmental assessment (EA/EMP) is contained in 19 volumes (Box 1) which are available to the public through the Bank's InfoShop. This assessment is backed by extensive reference documents, studies and reports which are available on request from Esso Chad. A General Oil Spill Response Plan and detailed summaries of complementary environmental capacity building projects for Chad and Cameroon have also been made available through the Bank's InfoShop.

Background

3. The Republic of Chad is one of the poorest countries of the world. Landlocked and semi-desertic, its population scattered thinly over the face of the land and surviving mainly through subsistence farming or pastoralism, Chad's resources for development are severely limited. Providing access to services that could promote the development of human capital and increase productivity is, for most areas, prohibitively expensive. Yet Chad sits atop significant petroleum resources that could provide capital for investment in the infrastructure and services needed to alleviate poverty and promote economic growth in the country. The purpose of this project is to mobilize those resources and direct them toward developmental goals.

4. Chad began its effort to develop its oil resources in 1969. Exploration wells revealed the presence of oil by 1975. However, exploration activities were brought to a halt by civil war in the country from 1981 to 1985. In 1988, the legal foundation for the present project was established by signing a Convention between the Republic of Chad and a Consortium of oil companies (led-by Exxon); the Consortium, operating through their pipeline and oilfield company subsidiaries, are hereafter referred to as the "project sponsors". The Convention of 1988 grants to the Consortium an exploration permit (Permit H) valid to the year 2004. It also provides for a long-term (30-year) concession to develop the oilfields around Doba in southwestern Chad and to produce, transport, and market the resulting oil. The Doba project is also included in this environmental assessment.

5. Because ocean transport is the only practical means to move large quantities of crude oil to world markets, the project includes the construction of an underground pipeline to convey crude oil from the fields in southwestern Chad across Cameroon to a marine terminal which will be located 11 kilometers off the coast of Cameroon. The Republic of Cameroon is also a low-income country with relatively low social indicators. It is more highly endowed with natural resources than Chad and contains biodiversity of global significance. The pipeline will transect the country, affecting a number of ecological zones and a variety of socio-economic groups.

Box 1. Contents of the Environmental Assessment

A. Chad and Cameroon

Executive Summary and Update

B. Chad Specific EMP

1. Chad Environmental Management Plan
 - a. Base Document
 - b. Cultural Property
 - c. Handbook for Site Specific Mitigation Actions
 - d. Environmental Monitoring Plan
2. Chad Technical Specifications
3. Chad Compensation and Resettlement Plan
4. Chad Regional Development Plan, Revenue Management and Capacity Building
5. Waste Management Plan
6. Environmental Line List and Alignment Sheets

C. Cameroon Specific EMP

1. Cameroon Environmental Management Plan
 - a. Base Document
 - b. Induced Access Management Plan
 - c. Cultural Property
 - d. Handbook for Site Specific Mitigation Actions
 - e. Environmental Monitoring Plan
2. Cameroon Technical Specifications
3. Cameroon Compensation Plan
4. Cameroon Environmental Foundation Plan
 - Indigenous Peoples Plan
 - Offsite Environmental Enhancement Program
5. Waste Management Plan
6. Environmental Line List and Alignment Sheets

D. Common Supporting Documents

1. Project Description
 - a. Decommissioning Plan
 - b. List of Studies and Reports
 - c. List of Expert Consultants
2. Alternatives Analysis
3. Consultation Report
4. Oil Spill Response
5. Biological Studies
6. Public Health Studies

6. To build and operate the pipeline, two companies with public sector participation have been created, TOTCO (in Chad) and COTCO (in Cameroon). The equity participation of the Chad and Cameroon Governments in TOTCO and COTCO would be financed by IBRD loans as well as loans from the European Investment Bank. IFC would also finance a portion of the project costs related to the pipeline construction. In related activities, IDA is funding a capacity building operations for Revenue Management in Chad, and would finance the petroleum sector/environmental management in Chad (including environmental capacity building and indirect social impact mitigation) and environmental management in Cameroon.

Project Description

7. The project includes (a) the development of three oilfields in the Doba Basin of southwestern Chad, with approximately 300 oil production wells, 25 produced water injection wells, a system of flowlines and gathering pipelines, produced fluids treatment facilities, a 120 MW power plant, a cargo airfield, and operations control center (the Oilfield); and (b) an underground pipeline approximately 1,070 km in length and 76 cm in diameter, from the oilfield to the offshore marine terminal, with associated pumping (3) and pressure reducing (1) stations (the Transportation System). The project also includes infrastructure improvements and limited construction of roads, bridges, and storage facilities.

8. The project is expected to require the permanent acquisition of 742 ha of land in Chad and 117 ha of land in Cameroon. An additional 1,382 ha in Chad and 3,373 ha in Cameroon will be temporarily occupied by construction activities. Appropriate compensation will be paid to land users in both cases (see Annex 15) and land temporarily occupied will be returned to its former users. A pipeline land easement of about 15 meters will be retained for purposes of inspection and control. Agricultural activities will be allowed on the easement, but buildings and trees will not be permitted. Vehicular access to the easement will be controlled in environmentally sensitive areas (see Induced Access Management Plan for Cameroon).

9. Development of the oilfield will require the resettlement of a relatively small number of families in Chad (currently estimated at between 60 and 150 households). The pipeline and fixed facilities in Cameroon have been sited in such a way that no families will be physically displaced from their homes. Compensation entitlements will be determined on the basis of economic losses sustained. In addition to compensation to individuals for individually owned assets, community compensation will be provided for the loss of common property resources. Compensation will be made according to the relevant World Bank Group policy, with Esso Chad/TOTCO bearing the costs in Chad and COTCO providing financing to complement the entitlements that are provided for under Cameroonian law and to be financed by Cameroon.

10. The project sponsors will also create an Environmental Foundation to provide funds for the implementation of an Indigenous Peoples Plan in Cameroon and to support the creation of two environmental offsets in Cameroon to mitigate biodiversity impacts of pipeline construction through the semi-deciduous and Atlantic coastal forest zones of the country.

Baseline Conditions

11. The project area may be described in terms of five ecological zones. The wooded savanna zone extends from the area of the oilfield in Chad to the general vicinity of Mararaba on the pipeline route in Cameroon (485 km). The semi-deciduous forest zone extends from Mararaba to Batchenga (310 km), the mixed forest zone from Batchenga to Ngoumou (80 km), the Atlantic littoral zone from Ngoumou to the coast (195 km), and the marine zone from the coast to the offshore loading facility (11 km).

12. The wooded savanna zone is occupied by a permanent population of subsistence farmers and a transient population of pastoralists who migrate seasonally through the area. Population density is low, although the density in southwestern Chad is higher than in other parts of Chad. The people of this area are poor and have almost no access to health care. Farmers engage in traditional savanna subsistence farming, based on a slash-and-burn fallow rotation system. Cotton is the main cash crop. Malnutrition, inadequate access to water, and poor sanitation contribute to poor health conditions in this area. Primary

education has been largely provided by church schools. Christians and Muslims mingle in this area, which has also been a locus of ethnic conflict and violence in the past.

13. Annual rainfall in this zone ranges from 1,000 mm in the oilfield area to 1,300-1,400 mm in the southwest. The vegetation is a mosaic of grassland broken by scattered trees and shrubs, scattered fields, wooded fallows, and pockets of relatively undisturbed wooded cover. Gallery forests are found along streams, and some emergent wetlands in the vicinity of rivers. The part of this zone located in Cameroon is less densely populated and the savanna ecology is less disturbed. A total of 17 IUCN-listed species were identified in this zone during the biological surveys, which included fish and birds (no IUCN-listed species) as well as terrestrial animals and plants. This zone includes the biologically diverse Mbéré Rift Valley in Cameroon, where the majority of observations of IUCN-listed species took place.

14. **The semi-deciduous forest zone** is generally rural and sparsely populated. Logging activities have been extensive in the area, and bushmeat hunting is a common occupation. Hunting and gathering of bush resources occurs mainly near existing roads and the railway which crosses this zone. Some larger population centers, such as Belabo, have grown up along the roads to support the timber concessions that extract wood from the Deng Deng forest.

15. In the northern part of this zone, above the Lom River, the vegetation represents a transition from savanna to a mosaic of mixed patches of savanna and forest. South of the Lom River, the area is more heavily forested. The quality of the forest has been degraded by logging, but it is still a source of significant biodiversity. Wildlife of the region include species typical of both savanna and forest habitats, and many that occur in the interface between the two types. However, due to heavy poaching pressure in the vicinity of existing infrastructure, these species occur only locally and in low densities.

16. **The mixed forest zone** includes the peri-urban area where the pipeline will pass south of Yaoundé. The area includes urban commercial and industrial activities as well as industrial scale palm oil and cocoa plantations, and peri-urban agriculture. It is more densely populated and has better access to services than the other parts of Cameroon traversed by the pipeline.

17. Near Batchenga, the pipeline encounters the transitional zone between the semi-deciduous forest common to central Cameroon and the evergreen forest typical of the Atlantic littoral zone. Between Yaoundé and Ngoumou, the corridor is heavily disturbed as a result of many years of agricultural and other human uses. The vegetation is a mosaic of fields, fallows, villages, and isolated forest patches. The majority of the remaining forest canopy is underplanted with cocoa. The pipeline route avoids the steep hills where forest remnants remain intact, but does cross several small *Raphia* palm wetlands in this zone. Bird species associated with the transitional forest are more common in this area. The high levels of disturbance in this zone indicate that it has a low importance for larger mammals, though small relict populations may remain in isolated areas which will not be affected by the pipeline.

18. **The Atlantic littoral forest zone** is occupied by a population of mixed Bantu farmers and Bakola pygmies who, according to their traditions, migrated to the area together about a hundred and fifty years ago. The estimated population affected by the project in this zone includes approximately 10,000 Bantus and approximately 1,000 Bakola. Although many Bakola have taken up agriculture and some even own their own land, their traditional lifestyle is still strongly dependent on the forest and its resources. Bakola suffer from social discrimination and are particularly vulnerable to the potential negative effects of the project. Their agricultural productivity is low, their exposure to formal education is limited, and their health is very precarious. Consequently, the project has developed, in consultation with the people of this

zone, an indigenous peoples plan to ensure that the Bakola enjoy at least equal access with their neighbors to the developmental benefits of the project.

19. The zone is generally characterized by moist tropical evergreen forest vegetation. It is traversed by a road built by the original German colonial settlers over a hundred years ago. This road has created a corridor of disturbance through the zone in which the pipeline will be largely located. The disturbed forest supports continuing logging activity as well as active agricultural fields and fallows. A few rare bird species are found in the area at low population densities. Other IUCN-listed species, including elephants, chimpanzees, and gorillas, occur several kilometers away from roads and human settlements.

20. **The marine zone** supports a small coastal population engaged in subsistence and small-scale commercial fishing (supplying the town of Kribi). The density of edible fish in the coastal waters indicates a low potential for commercial fishery. The seabed in the marine zone is flat, soft, and muddy, with occasional rock outcrops in shallow water and with sandy beaches in the intertidal zone. Turbidity is high due to suspended sediments carried down by the Lobe and Kienke rivers. Consequently, there are no reef-building corals located in this zone. The rocky areas of the sea bottom do support a variety of soft branching corals. Marine turtles occur along the coast and are protected by Cameroon legislation.

Analysis of Alternatives

21. The design effort for the present project began in 1993 with the consideration of alternatives:

22. The No Project Alternative. Under this alternative, neither the benefits nor the costs of the project would be achieved. Calculation of the costs and benefits, from the point of view of the Consortium and also from the point of view of the two Governments, including estimates of the value of unavoidable environmental costs and the costs of mitigating measures, indicated that the project would provide net benefits to both Governments as well as to the project sponsors. Thus, it was decided to proceed with project preparation.

23. Oil Development Alternative Scenarios. Permit H, held by the Consortium, identified five potential oil bearing areas. Two were not considered worthy of development (the Salamat and Bongor basins); the Consortium released its rights to them in 1999. Three scenarios were then evaluated: (a) a small-scale development of the lighter oil in the Doba and Doseo basins; (b) a moderate-scale program producing both heavy and light crude oil from the Doba basin; and (c) a large-scale development of both heavy and light crude oil in the Doba, Doseo, and Lake Chad basins. Option (b) was selected and forms the basis for this project. (In an unrelated operation, the Sedigi oilfield in the Lake Chad basin is being developed in part to help to meet domestic needs for power generation.)

24. Siting and Design of Oilfield Facilities. Wells and other oilfield facilities have been sited within the Doba Basin to maximize cost-effectiveness and to limit impacts on households, fields, and populated areas; on cattle movement corridors; and on water, wetland, and vegetation resources. The flowlines between the wells and the processing plant will be buried to a depth that allows continued agricultural activity on the surface. Wells can be clustered to a certain extent, but sandy soils limit the potential use of this technique to minimize surface impacts. For the treatment of produced water, two alternatives were considered: surface discharge and reinjection into the petroleum-bearing stratum. Surface discharge would be more expensive and could also cause significant adverse impacts to the human, biological, and physical environment. Consequently, the reinjection alternative has been selected. ReInjection wells will be double-lined to minimize the potential for leaks into shallow aquifers. The oilfields will also produce a small

amount of natural gas, which will be recovered and used in combination with crude oil as fuel for the oil-field area facilities. No gas will be routinely flared. A pilot flare will be in operation to deal with any emergency release of gas.

25. Oil Transportation Alternatives. A range of alternatives for transporting the crude oil to market has been evaluated, including: (a) a road-rail combination (tanker trucks and tanker railway cars), (b) a road-only alternative, (c) river transportation, (d) a river-rail combination, and (e) a pipeline. The pipeline was the only alternative which provided adequate capacity to handle the projected peak transport requirement of about 225,000 barrels per day. This alternative also offered the opportunity to maximize safety and minimize environmental impacts.

26. Marine Terminal Location. The Cameroon coast was identified as the only coast within the "zone of feasibility" for the project. A location west of Limbe was eliminated as impractical due to the mountainous (and biologically valuable) terrain which would have to be traversed to reach it. Locations in the immediate vicinity of the Port of Douala were eliminated for safety and construction feasibility reasons (shallow depth) as well as environmental reasons (wetlands). South of Douala to the Nyong River was eliminated due to the presence of the Douala-Edea Reserve and the Nyong wetlands/mangrove areas. South of Grand Batanga, reaching the coast would require traversing relatively pristine coastal forest and the Campo Reserve. This process led to the selection of Limbe and Kribi as the only two possible sites for the offshore loading facility.

27. Corridor Alternatives. Based on this definition of possible end points, three 30-km wide corridors were then defined, one of which (Corridor A) ended at Limbe, and the other two at Kribi. All corridors follow the same route in Chad; they diverge in the vicinity of Meiganga in Cameroon. Corridor A would have continued in a westerly direction before dropping down through the western highlands to Limbe. Corridor B corresponds to the presently proposed pipeline location, while Corridor C would have passed further to the south in eastern Cameroon, traversing wetlands and tropical forests. Corridors B and C would follow essentially the same route through the Atlantic coastal forest.

28. In 1994 a field reconnaissance mission conducted initial scoping meetings for the corridor analysis with relevant government agencies and local and international NGOs in Cameroon. The analysis was based on (a) sensitivity factors to be avoided (including areas of high priority for protection, parks, reserves and intact areas of primary forest, terrain with high agricultural land use or potential, steep slopes and erosive soils, and zones with dense, relatively undisturbed vegetation); and (b) opportunity factors avoiding or reducing potential negative impacts (existing road and rail rights-of-way or other already cleared areas, degraded forest zones requiring minimal additional clearing, and flat areas where a cleared right-of-way would not create an obvious visual impact). Other factors taken into account included cost considerations, safety issues such as avoidance of volcanic activity, and ready access from the existing transportation network.

29. The advantages and disadvantages of the three corridors considered are summarized below:

CORRIDOR A	CORRIDOR B	CORRIDOR C
Shortest route Greatest amount of mountainous and steep, erosive terrain Greatest amount of undisturbed forest Six large river crossings Only sporadic road access Near Mount Cameroon, an active volcano	Intermediate length route Greatest amount of built-up areas Second ranking in amount of undisturbed forest Access through existing roads and railroads Terrain generally more conducive to construction	Longest route Greatest amount of swamp and stream crossings Greatest amount of poor soils Least amount of undisturbed forest Access roads may be impassable during the rainy season

A detailed, GIS-based analysis of economic, social, and environmental suitability was carried out for all three corridors, and Corridor B was selected as the most preferable from all points of view.

30. Marine Terminal Design. The Corridor B selection determined the location of the marine terminal to be at or near Kribi. Eight possible sites were identified, and a location south of Kribi, but north of the Lobe Falls, was chosen for both technical and environmental reasons. Both onshore and offshore designs were considered, and the offshore facility (Floating Storage and Offloading (FSO) Unit) was selected as less costly and having less significant potential environmental impacts. The FSO will be a single-hulled tanker refurbished for the purpose and anchored in a fixed location. Its design is industry practice. The FSO will comply with the applicable MARPOL 73/78 (International Convention for the Prevention of Pollution from Ships) Regulation, and will be classified by a classification society. It will be operated in accordance with IMO regulations.

31. Pipeline Route Optimization. The draft Environmental Assessments and Environmental Mitigation Plans for this project were distributed for public review and comment, based on the choices described above. At the same time, the project sponsors undertook a centerline survey on the ground, together with an intensive program of consultation with project affected people and local authorities. Based on field observations, local input, and feedback on the draft EA documents, the proposed alignment was adjusted in many places to avoid sensitive environmental, social, or cultural features. Principal adjustments included: (a) relocating the pipeline on the escarpment above the Mbéré Rift Valley, rather than through the valley; (b) avoiding the Deng Deng forest by relocating the pipeline along the railroad from Belabo to the Lom River crossing, and thereafter through the savanna-forest mosaic to rejoin the original route south of Mararaba; and (c) adjustments in the alignment through the Atlantic littoral forest to minimize impacts on biodiversity, cultural sites, and local, especially indigenous, people. This optimization enabled the complete avoidance of any population displacement in Cameroon.

32. In the process of optimizing the route alignment, nine alternative routings were considered in the Deng Deng area, and five alternative routes (including two ending at Limbe) were considered to take the pipeline from Yaoundé to the coast. Details of the evaluation of all these alternatives are provided in the Alternatives Analysis (Volume 2 of the EA supporting documentation). Highly detailed information on the finally selected alignment is available on the environmental alignment sheets which have also been made available as part of the environmental documentation for the project (incorporated by reference in Volume 6 of the Chad and Cameroon EMPs; see also page 7-30 of the "Executive Summary and Update").

Environmental Impacts, Management and Mitigation

33. The project Environmental Assessments indicate that, in accordance with Bank Group policy, potential adverse impacts would be avoided where possible, mitigated to a non-significant level where they cannot be avoided, and compensated where they cannot be reduced to a non-significant level. Specific measures to ensure that this happens are discussed in the project's Environmental Management Plans.

Socio-Economic Impacts

34. The project will address, in collaboration with the Governments concerned and with the possible participation of NGOs, the direct social consequences of the project. These include land acquisition (temporary or permanent), giving rise to compensation and resettlement; impacts on cultural property; and impacts on indigenous peoples. Special plans have been prepared to address these issues, with the collaboration of Chadian and Cameroonian social scientists. Other issues addressed include worker health and safety, public health, induced development, employment and revenue generation.

35. Compensation and Resettlement. The project will require limited resettlement in Chad (maximum of 150 households) and no resettlement in Cameroon. Land users will be compensated for temporary disturbance during the construction period, on the limited amount of land (2124 ha in Chad, 3500 ha in Cameroon) that will be acquired for the construction activities, the oilfield and pipeline right-of-way, and the fixed facilities. Loss of communal resources, including trees, bush, and forest resources will be addressed through community compensation. Procedures have been developed with extensive public participation to ensure that compensation and resettlement activities are culturally appropriate, bring net benefits to the affected people, and otherwise comply with Bank policy. For more details, see Annex 15, Parts A and B on the Chad and Cameroon plans respectively.

36. Cultural Property. The pipeline has been sited to avoid or minimize impacts on cultural property. A literature review has been carried out and an inventory of sacred sites was completed as part of the centerline survey. Impacts on sacred sites and cultural property have been largely avoided by adjustments made to the pipeline alignment during the centerline survey. An archaeological reconnaissance of the oilfield and the pipeline route is currently underway to identify surface sites and areas which may be of particular interest during construction. Construction crews will be accompanied by local archaeologists where necessary, and procedures have been developed for the monitoring of construction activities, the handling of chance finds, and storage, documentation, and reporting requirements. More information is available in the Cultural Property section of Volume 1 of the Cameroon EMP.

37. Pastoral Groups. The project is not expected to interfere significantly with the movements of pastoral groups in the wooded savanna zone. Impacts on nomadic pastoralists will be minimal and can be managed through local communication and conflict resolution mechanisms. Construction activities will be of limited geographical extent at any point in time, and can easily be avoided by pastoralists through a program of information and communication. Transhumant pastoralists will be able to continue migrating through the area along their traditional routes after pipeline construction is completed.

38. Indigenous Peoples. Impacts on forest dwellers (Bakola pygmies) have been minimized through intensive consultation and careful siting of the pipeline in the Atlantic littoral forest. Nevertheless, project impacts may disproportionately affect these vulnerable people. Consequently, an Indigenous Peoples Plan has been prepared (see Annex 16). Funds will be made available through an Environmental Foundation to

undertake programs which will be selected and, to the extent feasible, designed by the Bakola themselves, with the assistance of a community facilitator.

39. Worker Health and Safety. The project will provide health screening and surveillance, health education (with a focus on HIV/AIDS and other sexually transmitted diseases) and immunizations to workers. Construction specifications will be designed to prevent the creation of vector habitat. The quality of food and water provided to workers will be monitored. An Epidemiological Information System and a Sentinel Surveillance System will be established for workers. Workers will also receive safety training and equipment. Medical teams, including emergency medical technicians, will be on site during construction to provide medical treatment when needed and to supervise health and sanitation conditions in the construction camp.

40. Public Health. Public health is a concern both in the construction worker community and in the project affected communities. The potential spread of HIV/AIDS is of particular concern, as well as the spread of insect- and water-borne diseases such as malaria, onchocerciasis, and schistosomiasis. Tuberculosis, hepatitis, and diarrhea are also common problems in the forest zones. The project will implement a Community Health Outreach Program, targeting selected health issues in communities potentially affected by project personnel and activities. The program will be coordinated with local public and private programs and will focus on information, education, and selected preventive or curative interventions. The Governments of Chad and Cameroon will implement complementary programs to strengthen the capacity of decentralized health services and qualified NGOs to address potential health problems in the project affected communities. These activities will be funded under the respective petroleum/environment capacity building projects (see Annex 18, Parts A and C for summaries; the Project Appraisal Documents for these projects have been distributed).

41. STDs/AIDS. A variety of activities are planned to mitigate the impact of AIDS. For example, the EMP includes a Health Plan under which the project companies and their contractors will regularly screen workers for curable STDs, and will conduct a program of health education and immunizations and a social marketing of condoms program. STDs will be monitored through the Epidemiological Information System and Sentinel Surveillance System established for workers. In addition, the IDA-supported Capacity Building projects in Chad and Cameroon will strengthen Government action against AIDS. Support will be provided: (a) to the respective Ministries of Health to improve statistical data collection; (b) for training local health personnel; and (c) and to improve the delivery of community health services by providing essential drugs, and laboratory services and supplies, to the health facilities serving the project area. In Chad, health care facilities in the project area will be rehabilitated, and health and sanitation infrastructure will be constructed in the communities which are expected to receive an influx of migrant workers. In addition, the capacity building project will provide funding to NGOs to undertake education and condom distribution programs. These actions will complement the ongoing activities under Chad's Population and AIDS Control Project, being supported by IDA. Additional actions are being developed for the Bank's country programs in both Chad and Cameroon.

42. Induced Development. The project is expected to produce significant secondary impacts in the communities in and around the oilfield area. Studies indicate that a temporary, spontaneous in-migration of between 5,000 and 25,000 people may occur. This will put pressure on limited local resources, especially water and woodfuel, and will create a demand for food and housing that may generate local inflationary pressures. There are likely to be major public health concerns that will need to be addressed through improved health care facilities, sanitation, and local market improvements.

43. In addition to those social impacts directly caused by and addressed by the project, there will be indirect impacts on communities due to the economic activity which the project is expected to generate, particularly in southwestern Chad. To address these impacts, Chad is preparing a regional development plan, including both short-term measures to address impacts expected during the construction period, and a longer term planning process to build capacity to utilize the portion of project revenues which will be earmarked for the project area starting in project year 5. The short-term measures envisaged include a program of information, education and communication to minimize spontaneous migration to the project area from other parts of Chad; a health education campaign and reinforcement of health care facilities in the project area; construction of water supply, sanitation, and market facilities; mobilization of local authorities, NGOs, and entrepreneurs to meet identified needs for housing, food, and fuel; and eventually, strengthened land use planning, agricultural, and forest management services based on community participation in the project area. Financing for the implementation of these measures is included in the Chad petroleum environment capacity building project (see Annex 18).

44. In Cameroon, spontaneous in-migration to the Atlantic coastal area is expected to be limited by the low number of jobs available and the relatively unattractive environment in terms of disease and low agricultural productivity. Nevertheless, the resident population, including the vulnerable Bakola people, will be affected by the arrival of construction workers and their camp followers and by the loss of forest resources. Elsewhere in Cameroon, significant social impacts are not expected as a result of pipeline construction or operation.

45. Employment and Revenue Generation. In addition to revenues for the Governments of Chad and Cameroon, the project is expected to generate limited employment benefits. According to the most recent estimates, in Chad the project will create 4,000 jobs during the construction period (including about 2,000 for Chadian residents), and approximately 450 permanent jobs during the operating period (about 350 for Chadian residents). Oilfield activities will also create a demand for secondary services and supplies which will provide a boost to the local economy, especially during the construction period. In Cameroon, the project is currently expected to generate about 2,600 jobs during construction (about 1,000 for Cameroonian residents), and negligible local employment during the operating period.

46. More broadly, the project is expected to generate significant poverty-alleviation benefits in Chad through the application of petroleum revenues to development expenditures in the health, education, transport, water, environment, and rural development sectors. The Government of Chad has developed a Revenue Management Program embodied in a law adopted by the National Assembly in December 1998 and promulgated in January 1999 to ensure that the revenues are actually used for this purpose. Under this program, the bulk of oil royalties and dividends will be allocated to high priority national programs for poverty alleviation, as well as to regional development programs for the communities in the oil-producing region and to a savings account for future generations. This program is described in greater detail in Annex 11 above.

Biophysical Impacts

47. Direct impacts of construction activities. There are potential physical impacts associated with infrastructure projects, upgrades and construction activities, such as soil erosion, loss of vegetative cover, and impacts on waterways. These impacts will be avoided or mitigated to a non-significant level through the technical specifications and contractor environmental management plans, which will be monitored by the project sponsors and by the Governments. The project sponsors will monitor surface water quality at river and stream crossings during construction, and will monitor groundwater quality in the vicinity of the

oilfield throughout the project operating period. Following construction, the project sponsors will maintain a partially cleared 15-meter right-of-way above the pipeline using aerial and ground surveillance.

48. The project will be constructed and operated in accordance with internationally accepted standards and guidelines, which specify a variety of measures for safety and environmental protection. These standards include the applicable environmental and social safeguard policies and guidelines of the World Bank Group, as well as the applicable engineering standards and specifications developed by the American National Standards Institute, the American Society of Mechanical Engineers, the American Petroleum Institute, and the American Society for Testing and Materials, and the Decommissioning, Remediation and Reclamation Guidelines for Onshore Exploration and Production Sites, Exploration and Production Forum. The major project construction contractors will be required to develop their own Environmental Management Plans, which will be subject to review and approval by the project sponsors before construction begins, and to continual monitoring until construction is completed. In sum, the project will comply with a rigorous set of internal environmental management systems and standards which Exxon has developed, called the Operations Integrity Management System (OIMS). An audit by an independent company has concluded that OIMS meets the ISO 14001 standards for environmental management.

49. Oil Spill Prevention and Response. There is a concern about the possibility of an oil spill, whether in the oilfield, along the pipeline under land or water, or at the marine terminal. The project design is in accordance with international standards and, therefore, the risk of spills is low. The Project Sponsors have prepared a General Oil Spill Response Plan which has been made available for public review and comment. More detailed Area Specific Oil Spill Response Plans which will operationalize the General Oil Spill Response Plan across all sections of the project will be put in place prior to the start-up of project operations. The Project Sponsors have also prepared an outline Decommissioning Plan, recognizing that decommissioning lies so far in the future (25 to 30 years) that it is not appropriate to go into great detail at this time. The Project Sponsors will decommission project facilities in accordance with international standards in place at the time of the decommissioning activity.

50. The project has been designed to minimize the possibility of an oil spill. The pipeline and field flowlines will be buried a meter or more underground. The pipeline wall will be high quality carbon steel of variable thickness, up to 0.54" at river crossings. To help prevent leaks due to corrosion, the pipeline's outer surface will be protected with a polyethylene coating and the system will also be covered by cathodic protection. Flowlines will be constructed of fiberglass, which is impervious to corrosion. Mainline valves will be installed in the pipeline approximately every 35 km so that it can be shut down at any point, limiting the amount of a spill, should one occur. In addition, mainline valves will be installed near each side of all major river crossings. No spillage is expected from routine drilling and pipeline maintenance. A control center, manned around the clock, will be equipped with computer-supported leak surveillance systems, covering both the oil field facilities and the pipeline. In addition, frequent airborne and ground patrol inspections will monitor for signs of possible pipeline leakage.

51. Preliminary oil spill response planning is described in the environmental documentation. A General Oil Spill Response Plan has also been prepared and reviewed by the Bank Group, and is available for public review in the InfoShop. It provides details of the project's immediate response and notification procedures, response organization structure and roles, guidelines, and recommended practices and equipment for oil spill response. This information will be used in the development of area specific response plans, covering the oilfield, the marine terminal, and the pipeline in sections. These plans will be developed and approved before oil begins to flow through the pipeline. They will be complemented by national plans to be developed under the two Capacity Building projects. FSO operations will comply with

relevant international conventions such as those on the Safety of Life at Sea (SOLAS) and the Prevention of Marine Pollution (MARPOL). Automated emergency shut-down systems will be installed for the pipeline, the marine terminal, and the oil field. Spill response equipment will be stockpiled at key locations, including the marine terminal. If necessary, local, national, and regional emergency response capacities will be also mobilized. Frequent training exercises will be conducted.

52. The project oilfield operator and the two pipeline companies will carry insurance covering full liability for all onshore and offshore facilities and operations. The conditions of the coverage will meet all regulatory, project sponsor, and lender requirements. The Civil Codes and Conventions in both countries ensure that the project sponsors will be legally responsible for compensation due as a result of an oil spill.

53. Waste Management. Few facilities exist in the project area for handling of wastes and hazardous materials. Therefore, the project will be responsible for constructing and operating many of the needed facilities. Landfills and incinerators will be designed using U.S. Environmental Protection Agency standards and will be put in place early in the construction phase to accommodate construction wastes. Landfills will be constructed using the widely accepted cell technique for covering and isolating waste as it is deposited. Incinerators will be used for the destruction of medical wastes, oily debris, domestic waste, combustible chemicals, and oily process sludge. During decommissioning, landfills will be capped and sealed according to internationally accepted standards. Incinerators will either be turned over for continuing local use or will be dismantled and scrapped with site decontamination as needed.

54. At temporary construction sites, packaged sewage treatment plants or septic systems will be used to process wastewater. At permanent project facilities, wastewater will be processed through constructed facilities or, in some cases, through septic systems. As construction is completed in each project area, disturbed areas will be reclaimed using stockpiled topsoil, returned to natural contours, and revegetated as needed with native seeds and seedlings.

55. Low level radioactive sources are commonly used by the petroleum industry to test pipe integrity and for quality assurance purposes. This technology is a primary tool to prevent future oil leaks. After use, these products will be returned to their country of origin for disposal at a licensed facility specializing in this type of waste.

56. Greenhouse Gases. The project and its produced oil will lead to emissions of two greenhouse gases, carbon dioxide and methane. Within the project area, it is estimated that maximum annual emissions from project facilities and operations will be 218,000 tons of carbon dioxide and 140 tons of methane, less than half the amount that would be expected from a 500 MW natural gas-fired generating plant. The global cost associated with these emissions are described in the project's economic analysis (see Annex 4). It is also estimated that transportation, processing, and consumption of the produced oil will generate approximately 5,500 metric tons of methane and 10,950,000 metric tons of carbon dioxide annually, representing about 0.15% of total global annual carbon emissions. On the assumption that if Chad's oil were not used, a comparable amount of oil would be consumed from other sources, no cost has been attributed to these emissions.

57. Biodiversity. Following the aerial reconnaissance carried out for the corridor selection process, project preparation studies included detailed ground surveys of biological resources, including groundtruthing of the vegetation maps, botanical inventories, bird counts, large mammal surveys, fish surveys in rivers and streams, and village interviews. In Chad, these studies showed that the project, if properly sited and designed, would not be likely to result in substantial impacts on biodiversity. With the

exception of remnant gallery forest along watercourses and herbaceous wetlands in floodplains, the habitat value of the project area has been significantly degraded by human activity. Such sensitive areas, as well as all legally protected areas in the vicinity of the pipeline in Chad, were avoided in setting out the pipeline alignment. Special measures are foreseen to minimize impacts on gallery forests at stream crossings.

58. In Cameroon, the potential impacts of the project on biodiversity are much more significant. These impacts were evaluated separately for the five different ecological zones of the project (ref. paras. 11-20). Significant routing changes were introduced in order to avoid or minimize impacts on the Mbéré Rift Valley in northern Cameroon and the Deng Deng forest in eastern Cameroon (see EA Supporting Documents, Volume 2, Alternatives Analysis for more details). While it was not possible to avoid the Atlantic coastal forest altogether, the route through this forest was optimized to run through land already degraded by human activity, including, for significant stretches, following an existing road. A special study of the bushmeat trade in the vicinity of the pipeline route was carried out in Cameroon to help identify the magnitude of the problem and the mitigating measures that could be implemented by the project.

59. Measures have been and will be taken at several levels to avoid, mitigate or compensate potential project impacts on biodiversity, which could be particularly significant in Cameroon. One of the criteria for locating the pipeline route was the avoidance of all protected areas and/or minimizing impacts on sensitive natural habitats, by routing through degraded areas wherever possible or along existing infrastructure. There has been a concern that induced access resulting from pipeline construction and associated infrastructure improvements could open up new areas for hunting, farming, and logging. This possibility has been addressed through an Induced Access Management Plan to reduce or prevent vehicular access to three sensitive areas: (a) the Mbéré River valley and plateau; (b) the area between the Lom and Pangar rivers in the northern sector of the semi-deciduous forest zone; and (c) the area between Nanga Eboko and Belabo in the southern sector of this zone. The plan includes the restoration or creation of natural obstructions; construction of barriers such as locked gates; removal of temporary bridges; and educational programs for workers and people in the surrounding communities. The plan also addresses the control of bushmeat hunting by workers and transport by project vehicles. Contractors will be required to provide food, including meat, to project workers; no bushmeat hunting or trading will be allowed. In addition, cooking fuels will be provided to project facilities; no fuelwood or charcoal will be used.

60. Environmental Offsets. In Cameroon the project includes two offsite environmental enhancement programs (program) to mitigate for low level residual impacts to biodiversity and natural habitat value. One of the areas through which the project passes where biodiversity and natural habitat value is high is the forest/savanna mosaic of the Deng Deng in the vicinity of the Lom and Pangar Rivers. The other area is in the Atlantic Littoral Forest region along the Lolodorf to Kribi corridor in the south-western part of the country. The goal of the program is to establish a mechanism by which the biodiversity and natural habitat values of similar sensitive and vulnerable ecosystems can be enhanced and protected. To accomplish this goal two areas have been identified as worthy of having long term protection and enhancement: the "Mbam-Djerem" area of forest/savanna mosaic habitat to the west of the Deng Deng, and the Campo Reserve in south-western Cameroon which supports biodiversity of global significance, including forest mammal species (forest elephants, gorillas, mandrills, leopards, and the black colobus monkey), birds, amphibians, reptiles, and vegetation. To facilitate this enhancement and protection, in January 2000 the Government of Cameroon issued decrees providing for the creation of two national parks in these two areas (see attached map): the 353,200 hectare Mbam-Djerem National Park and the Campo Ma'an National Park (approximately 300,000 hectares). The entire Mbam-Djerem National Park is the site (offset) of one

program, while a relatively undisturbed area in the Campo Ma'an National Park north of the Campo Ma'an road will be the second offset.

61. Funding for the two offsets will be provided by COTCO through an Environmental Foundation, which will have an expendable endowment of US\$ 2.9 million (US\$ 1.5 million for Mbam-Djerem and US\$ 1.4 million for Campo Ma'an – to which will be added the US\$ 600,000 for IPP activities as described in Annex 16)). The endowment will be managed by an independent Fund Investment Manager and will be drawn down over a period of 28 years. This capital contribution to the Environmental Foundation by COTCO is expected to help attract other donors/participants to contribute to it, thereby increasing its capital base and making it a source of sustainable, long-term funding. For Mbam-Djerem this initial funding will first support developing the information base for the park's environmental management plan (expected to take between one and three years to complete), and then provide for implementation of an agreed management plan over a 25-year period. For Campo Ma'an, the Environmental Foundation's contribution will supplement existing GEF studies in the Campo reserve area, as well as provide for long term protection of the offset north of the road which traverses the Campo Ma'an National Park (the boundaries and management plan for this offset will be established in the first years following project inception). The two offsite environmental enhancement programs also will assist to inform and educate the local populations on the need to create protected areas and curtail illegal logging and hunting within the offsets in order to help protect biodiversity and natural habitat values.

Environmental Monitoring

62. Environmental monitoring plans have been developed for Chad and Cameroon. The oilfield operator (Esso Chad) and the two pipeline companies (TOTCO and COTCO) will each monitor the activities of their contractors and subcontractors. Field monitors will be continuously present at each construction site, responsible for monitoring biophysical impacts, socioeconomic impacts, and health effects. These monitors will report regularly in writing to the project sponsors, who will take any necessary action. The project sponsors will report to the respective Governments, which will also be able to conduct independent monitoring on the ground. As Chad and Cameroon currently lack technical capacity to carry out such monitoring, the requisite capacity will be created through short-term technical assistance and training under the IDA-funded capacity building projects (see Annex 18). These projects also include provisions to help the Governments to make monitoring data available to the public through information, education and communication programs.

63. Site-specific mitigation measures are identified on the Environmental Alignment Sheets (included as Volume 6 in the Environmental Management Plans; see also page 7-30 of the "Executive Summary and Update") and the protocols for implementing these measures are described in the Handbook for Site-Specific Environmental Mitigation Actions, included in Volume 1 of each Environmental Management Plan. The Handbook and the Alignment Sheets are basic tools for the work of the environmental monitors on the ground.

64. The project sponsors will report to the World Bank Group and the other lenders on implementation of the EMP. The Governments will report independently to the World Bank. In addition, the Bank Group, together with the other lenders, will also engage an external compliance monitor group to assist it in monitoring implementation of the environmental management plan. The external compliance monitoring group (also referred to as the EMP Compliance Monitoring Consultant) is expected to include a spectrum of skills, such as social development/consultation expertise, ecological/natural resource specialization, experience in the implementation of pipelines/other linear developments, and strong knowledge of the oil

industry. The external compliance monitor group would conduct periodic site visits (quarterly during the construction period and annually thereafter), and review the monitoring reports prepared by the private operators and the Governments, and would liaise with local groups in-country as appropriate. The Bank Group would also continue its periodic meetings with local NGOs to assess progress in implementation of the project, including the environmental management and resettlement/compensation plans.

Public Consultation and Disclosure

65. The consultation process for this project began in 1993 and has been gradually extended and intensified as the contours of the project have become clearer and capacity has grown for meaningful debate. The consultation process is an integral part of the project's adaptive design process. Thus, many changes have been made to project design in response to comments received through the consultation process. Initially, the consultation process focused on information gathering and information sharing, which did not allow participants to have any direct influence on project decisions. However, in recent years the consultation process has become more interactive and has involved a broader public, including international NGOs, resulting in significant improvements to the quality of the project.

66. Initial consultations with a limited number of agencies and NGOs on the ground concerned the evaluation of corridor alternatives and the selection of Corridor B, with its terminus at Kribi, as the most economically and environmentally sound alternative. In 1994 the work on environmental assessment started, and consultations were held with a somewhat wider group of agencies and NGOs on the scope of work for the studies. Research on the human environment of the project in Chad and Cameroon involved extensive contacts with potentially affected communities, although the outlines of the project were still so vague that meaningful consultation could not effectively take place.

67. In late 1997 and early 1998 the draft environmental documents, including the Environmental Assessments, the Environmental Management Plans, and the Compensation and Resettlement Plans, were released for public review and comment. Copies were placed in public reading rooms in key centers in Cameroon, and a public information campaign was launched to provide briefings at the village level on the project and its potential impacts in both countries. Provisions were made to record comments by visitors to the reading rooms; some 13,000 visitors came, and around 6,000 written comments were recorded. Copies of the documents were also distributed to interested international NGOs, and meetings were held with more than 175 organizations to explain the documents and receive comments. The draft documents were also made available to the public through the Bank's InfoShop.

68. During this period the project sponsors also conducted the centerline survey, which involved visiting all the affected communities and recording land uses and entitlements that would be affected by pipeline construction. Many minor adjustments were made to the pipeline alignment as a result of information received during these visits. A particular effort was made to contact and explain the project to the Bakola, and to minimize direct impacts on their villages. Local Community Contacts were hired to maintain continuous contact with affected communities and to provide local language interpretation during meetings. In Cameroon, meetings were organized by the provincial Verification and Valuation Commissions to follow up on compensation proposals. In Chad, extensive house-to-house consultation has been carried out with families likely to be affected by developments in the oilfield area, especially those who may be entitled to resettlement assistance.

69. As described above, the consultation process on the draft EA documents resulted in several important modifications to the project design, notably to avoid routing the pipeline through sensitive

ecological areas. Numerous alternatives were identified and evaluated, while efforts continued to collect the necessary baseline data for future impact monitoring and evaluation. The alternatives analysis and the proposed revisions in the project description, new sections in the environmental management plans, such as cultural heritage, oil spill response, decommissioning, indigenous peoples, and biodiversity offsets, and revised versions of the Compensation and Resettlement plans were prepared in response to comments received. These were circulated for additional public review, before the preparation of the final EA package that forms the basis for Bank Group approval of the project.

70. Project personnel have also met formally and informally with groups of NGOs in both Chad and Cameroon, together with Bank Group staff in some cases. A major NGO meeting sponsored by Oxfam was held in Donia, in southern Chad, in January 1998. In October 1998 a group of Cameroonian NGOs organized a similar meeting in Yaoundé. Both meetings provided useful feedback and suggestions for improving the project. Another such meeting was held in April 1999 in Bebedjia, Chad; the results were communicated in real time to the project team (Chad, Cameroon, and Consortium members) working to finalize the EA documentation package. International NGOs have posed questions about the EA process and proposals, with the aim of ensuring that the final project would be fully in compliance with the Bank Group's safeguard policies. These comments have been taken into account by the Bank Group in project planning (e.g., regarding compensation levels).

71. A content analysis of the comments received through this public consultation process indicates 15 categories of concern, of which the largest (22%) was an expression of positive views on the project. The next category was job opportunities/hiring procedures/training (19%), followed by compensation and resettlement (12%). Nine percent expressed concern about potential environmental impacts, mainly oil pollution, leaks and spills; another nine percent made comments about the consultation and participation process. Other categories of significant concern included project technical aspects and scheduling (8%), project revenues and their management (6%), infrastructure, socioeconomic impacts, and the quality of the EA documents (3% each). Other concerns included pipeline safety (2%), health, project funding and Bank role, human rights and civil unrest, and comments unrelated to the project (1% each). Details of how each of these concerns has been addressed through the adaptive project design process may be found in Annex 17 and in the Consultation Report (Volume 3 of the EA Supporting Documents).

Annex 15

SUMMARY OF COMPENSATION AND RESETTLEMENT PLANS

A. Summary of the Chad Compensation and Resettlement Plan

1. The Chad Compensation and Resettlement Plan was developed to meet World Bank Group policy on involuntary resettlement and compensation, as well as local laws. The objective of the Plan is to ensure that the standard of living of people affected by the project will not be lower after compensation is complete than it was before the project. In February 1998 a draft of the Chad Compensation and Resettlement Plan was distributed for comments both within Chad and outside. Extensive consultation has been carried out with the potentially affected rural communities in Chad about the plan. As a result of these consultations, all resettlement and relocation cases in the oilfield development area (OFDA) have been identified, and households which need to be resettled or relocated (between 60 and 150) during Phase I of the project have given their consent. No resettlement or relocation is expected along the pipeline easement in Chad.

2. An estimated 2,124 hectares (ha) of land will be needed, most only temporarily, during construction. About 203 ha (10 percent) of this land was acquired during exploratory and delineation drilling through 1994. The rest of the land (i.e., the 90 percent) needs will be acquired in two phases:

- Phase 1: A compensation process has been underway since September 1998 to acquire 890 ha (42 percent) for the permanent production facilities and related infrastructure (337 ha), and the pipeline easement (553 ha).
- Phase 2: The remaining 1031 ha (48 percent) of the land will be acquired over a period of three years for drilling wells, construction of flow lines, manifolds, trunk lines, power lines, and secondary roads to the well sites.

3. Most of the activity will occur in the OFDA for construction of production facilities and drilling about 300 wells. Facilities have been sited to avoid settlements and their placement is known, except for well drill pads and associated lines. Wells are to be sited over a period of several years as data are collected and analyzed from initial test and production wells. After the construction and development drilling, only about 457 ha (22 percent of the OFDA) will be permanently closed to public use during the project's operational phase. Another 300 ha will be occupied by public improvements (e.g., roads).

Elements of the Plan

4. The Chad Compensation and Resettlement Plan is included as Volume 3 of the Chad EMP. Key elements of the plan are to:

- Minimize project land use, reclaim land after construction, and make as much land as possible available to its original customary users after construction.
- Design the project to avoid village relocation.
- Recognize Chad's unique cultural and legal issues and model resettlement on existing cultural institutions common among ethnic groups in the area.

- Determine compensation values based on extensive data collection, market surveys, and socioeconomic analysis in the area.
- Provide for ESSO CHAD/TOTCO payment for compensation and resettlement at current market values to both private landowners and customary users.
- Incorporate preferences voiced during consultation with local peoples, NGOs, and other stakeholders.
- Meet the intent of World Bank Group guidelines on resettlement and all local laws.

Data Collection and Public Consultation

5. As part of the Environmental Assessment carried out for the project, initial consultations were conducted in 61 communities (villages and towns) in Chad. Residents proposed ideas and debated propositions about resettlement and compensation. Many of the plan's provisions were proposed by potentially impacted people. Further community consultation has provided updates on the project's progress to the local population and solicited inputs. Additional socioeconomic information was collected during the 1998 centerline survey. Village meetings and consultations have been held in almost 100 villages, and people in the project vicinity were informed of possible land needs and resettlement options during the 1998-1999 period. Village meetings will also be held as the project is re-mobilized and as construction begins. Consultation will continue throughout project construction and impact monitoring will indicate the degree to which the plan's goals have been achieved.

6. Information gathered from the OFDA and pipeline easement surveys, market surveys, and public consultations was used to design the Compensation and Resettlement Plan, determine compensation values, and prepare a timeline for compensation and resettlement activities. Public meetings were held at which the compensation method for valuing fields, crops, fruit trees, and non-domestic trees was explained and discussed. A field survey team and an individual data survey team measured individual fields and gathered data on crops being grown and the state of the fields, whether in preparation, cultivation, or cultivated during the previous year's growing season. Individual files were tabulated and a summary file prepared that allowed those affected to review the information gathered and express their agreement or disagreement. In cases of disagreement, team members met with the affected individuals, and the village and canton chiefs. Compensation valuations included the value of fields, crops, labor invested in the fields, house(s), installations (e.g., farm outbuildings and fences), and non-domestic productive trees.

7. This process has been closely followed by local NGOs, who have assisted the affected people to articulate their concerns about some compensation rates proposed by the project sponsor, in particular the rates for non-domestic economic trees. Rates for mango trees have already been revised in response to this concern, and the rates for other trees in this category are being evaluated for possible revision. Local NGOs may also be involved in implementation of the plan, by disseminating information, raising local concerns, and providing technical support to the compensation and resettlement process, e.g. through providing agricultural advice or credit facilities.

Compensation for Customary Rights

8. Individual and community compensation for customary rights is to be provided as follows:
 - Individuals will receive compensation for customarily held investments and assets that covers replacement cost of such investments which have been surrendered or abandoned because of direct project activity or resettlement; and
 - in-kind community compensation will be paid to villages that undergo significant impacts as a result of resettlement.

9. Many people depend on land to which they do not have legal title for their livelihood. In rural areas, customary users sometimes continue to use land, unaware that it has been acquired legally by someone else. In such cases, both the legal title holder and the customary user will be compensated for a permanent loss of land. Compensation for temporary loss of use rights (one growing season) will be paid to the user.

10. Bush resources, although not individually owned, are often extremely valuable to the community. Recognizing this fact, compensation for bush (fallow) land will be paid as part of community compensation. A village, which loses agricultural or bush land, will receive a one-time community compensation for permanent loss of customary rights to use land.

11. Community compensation is to be paid in-kind for a village as a whole. It will be made to villages permanently losing land in the OFDA for construction of fixed facilities and/or inconvenienced by temporary construction loss of more than one growing season. The compensation alternatives were derived from consultation meetings with villagers and local organizations. Examples of community compensation from which selection may be made include: a school building, well or pump, market place, road, or a storage warehouse. If a village makes another suggestion, it will be considered.

Resettlement and Relocation

12. Under the relevant World Bank Group policy, all households whose economic viability is impaired because of project-related land acquisition (defined for purposes of this project as the loss of 25% or more of land holdings) are entitled to resettlement assistance. Early project planning aimed at minimizing the potential for resettlement. The number of at-risk households (those who are at risk of no longer being economically viable due to project land needs) was evaluated on the basis of the average surface area used by a farmer and the fact that almost half of all households have two independent farmers each with their own fields. It is estimated that, at a maximum, 150 households will be eligible for resettlement or relocation assistance. Few households will lose their homes to the project, but for those that do, new homes will be constructed. A latrine will be included as part of any new home construction.

13. Households that were eligible for resettlement assistance were offered three options for income restoration: (i) participate in training and receive credits for improved agriculture; (ii) participate in training and receive credits for off-farm income opportunities; (iii) physical resettlement in another village. Compensation was offered either in cash, in-kind, or as training and credit assistance. Farmers whose adjunct structures (for storage of seeds, harvested crops, temporary shelters or housing in distant fields, in which they live for part or all of the rainy season) are built on land needed by the project would have such structures relocated in different, but nearby locations. Compensation was paid out between December 1998 and January 1999 to those who need to be resettled (18 cases) or relocated (17 cases) during Phase 1

in the OFDA. Six of the 18 households to be resettled chose off-farm training as their alternative option. The others have identified and gained access to replacement fields. Those who choose resettlement in another village have decided on and gained access to a destination village. No resettlement or relocation will be required along the pipeline easement

Budget and Implementation

14. Esso Chad/TOTCO will be responsible for financing and implementation of the Compensation and Resettlement Plan. Approximately US\$ 350,000 has already been spent on preparing the plan and on initial compensation payments and expenditures. It is estimated that the additional cost of implementing the Plan over the project period will be between US\$ 2.0 and US\$ 2.5 million. Esso Chad/TOTCO will continue to contract with other organizations with the requisite expertise to implement parts of the plan. An Esso Chad/TOTCO designated representative (EDR) will coordinate compensation and resettlement and be responsible for overall management of activities which include, working with village officials, gathering data, identifying individuals and households eligible for resettlement, preparing compensation contracts, scheduling and paying cash compensation, implementing community compensation, conducting grievance procedures, and cooperating with Government and external monitors in evaluating compensation and resettlement. The EDR will also arrange for village labor-intensive employment opportunities emphasizing assistance in construction, field preparation, and moving for those who are to be resettled.

Change Management Procedures and Monitoring

15. The EDR will collect information needed to monitor compensation and resettlement and will submit bi-annual reports on verifiable indicators and disbursements to Esso Chad/TOTCO. Esso Chad/TOTCO will also provide for an expert group to monitor the plan's progress at two important milestones: (i) completion of the pipeline transportation system, and (ii) end of the agricultural year following completion of the fixed facilities construction. Monitoring will, in addition, be performed by the Government of Chad through the CTNSC (the government inter-ministerial/agency established for, *inter alia*, this purpose). The World Bank Group will also monitor implementation of this plan as part of project supervision.

16. The Plan establishes a Change Management Process to be implemented by Esso Chad and TOTCO. Changes may be introduced either as a result of monitoring performance indicators for the Plan, or as a result of feedback from the affected population. Any individual may register a complaint about compensation or damages with the EDR and with the local village chief, who will attempt to settle the matter together to the satisfaction of all concerned. The EDR will record each complaint and its resolution and will periodically evaluate the pattern of complaints to see if changes need to be made to the plan. Such changes will only be made with the agreement of the local authorities and will be promptly communicated to the people of the area.

B. Summary of the Cameroon Compensation Plan

17. The Cameroon Compensation Plan has been developed to comply with Cameroon legislation and to meet the relevant World Bank Group policy. No resettlement is expected in Cameroon. A draft of this plan (June 1998) was distributed within Cameroon and outside for comments. Extensive consultations were held about the plan in rural communities in Cameroon during 1998. Comments were received and assessed and appropriate changes were made to the plan. The revised version was distributed in March

1999 and after further consultation, the final version was adopted by the Government of Cameroon in May 1999. The Plan is available in Volume 3 of the Cameroon EMP.

18. The plan describes the compensation to be paid under Cameroonian law and the supplemental compensation to be paid by COTCO to make up the difference between the amount due under Cameroon legislation and the amount due in order to meet the relevant World Bank Group policy. The plan calls for fair and adequate compensation for individuals, households, and communities adversely affected by the pipeline project. Early project design and siting of facilities avoided populated settlements, so that disruption of local peoples will be limited. Some temporary or ancillary structures may be impacted by the project and will need to be relocated within the same village. It is estimated that no families will be required to move out of their homes because of the project's land needs.

Land Acquisition

19. The project will require about 3,500 hectares (ha) of land in Cameroon for pipeline and facilities construction, most only temporarily during construction. About 3,200 ha (91 percent) of this land will be needed only for three to six months and another 150 ha for a maximum of two to three years during construction. The remaining 50 ha, or about 1 percent, required for two pump stations, a pressure reduction station, storage yards and staging areas, and other infrastructure, will be permanently closed to public use during the project's 30-year operations phase. The project's land easement crosses 12 departments, 32 subdivisions, and 240 villages. Based on field observations, the project's land easement requirements in most cases will affect only a minor portion of an individual's fields, and only a very few structures (no houses) will need to be removed and relocated.

20. The land that is required only during construction will be reclaimed and returned to its prior use. Most of the land will be needed for construction in the pipeline's "land easement," about 3,200 ha in a 30-meter (m) wide strip of land (up to 50- to 60-m wide in areas of difficult land contours and at river crossings) extending from Cameroon's border with Chad to the Atlantic coast at Kribi. Following construction of the pipeline, a "system easement," a strip of land 15 m wide will be maintained on the land below which the pipeline will be buried. The majority of the land needed for construction and operation of the pipeline is currently classified as National Domain land by the Government. As part of Cameroon's expropriation process, it will be converted to Private Property of the State. However, the Government has undertaken a commitment to make this land available to pre-construction users (e.g., after the pipeline has been installed and buried).

21. The project's centerline survey, which identified land needs in Cameroon, has been completed and the Government's Verification and Valuation Commission (VVC) has completed its review of the project's compensation proposals. The centerline survey and the work of the VVC provides the basis for drafting a Declaration of Public Purpose which will transfer use rights on the Land Easement to COTCO for the duration of the construction period.

Compensation

22. Compensation will be based on land status, usage and improvements, official rates, and rates from market surveys. It is intended to meet the requirements of the relevant World Bank Group policy. Compensation will be paid for crops, trees, and structures that need to be removed, for which compensation will provide for replacement in nearby locations, and labor costs. If the compensation rates are not equal to current market values, COTCO will fill the gap. Consistent with its laws and policies, the Government will

provide only cash compensation. Supplemental compensation from COTCO may be taken as cash and/or in-kind. COTCO will also provide compensation for bush and forest products not covered under Cameroon compensation legislation.

23. COTCO will provide in-kind compensation for community resources in the form of a investments selected by the affected communities from a wide range of options, such as distribution of improved agricultural plantings, health care and/or vaccination programs, construction of schools, drilling of wells, and improvement of roads. However, as COTCO will not be responsible for long-term maintenance of these facilities, communities will be encouraged to select locally sustainable use of compensation.

Consultation

24. Meetings have been held in each of 240 villages where individuals were identified as eligible for compensation. Inventories were made of crops, cultivated trees, and other resources for which compensation will be paid to about 3,000 individual land users. A market survey was done in July-August 1997 to determine appropriate compensation rates for damage to crops incurred during land clearing for the centerline survey. The experience of the centerline survey provided a basis for determining fair and appropriate supplemental compensation for affected parties during pipeline construction. More work is planned to review and adjust supplemental compensation payments for several crops, including cocoa, coffee, raffia palms, and manioc. Additional meetings are planned with non-governmental organizations (NGOs), community-based organizations, and individual land users and communities directly affected by the project.

25. Before project start up and payment of compensation, directly affected communities along the pipeline right-of-way will be visited again to solicit their thoughts and concerns about the Compensation Plan. It is expected that this consultation process will:

- provide an opportunity for affected individuals and communities to raise issues, ask questions, and provide comments on the Compensation Plan, including the adequacy of compensation rates;
- provide an opportunity to update communities on the latest revisions to the Plan, including compensation for wild resources, the grievance procedures, and any changes in supplemental compensation gap payments for crops and trees;
- solicit inputs on potential community compensation at fixed facility sites, and regional compensations along the pipeline right-of-way;
- assess the understanding of the compensation process by affected individuals and communities; and
- reach agreement on how to proceed where differences arise.

26. COTCO has employed nine Local Community Contacts (LCCs) to facilitate the dialogue with affected communities. The LCCs have already provided assistance during public meetings, particularly by translating between the languages used by the project sponsors and the languages used by the local communities. The teams planned to carry out future consultation regarding the compensation plan will include the LCC and two or three others who could be members of NGOs, social science specialists, specialists in local agriculture, or other respected members of the community who would be able to facilitate dialogue and solicit a wide range of opinions. As part of the compensation process, the LCCs employed by the project will continue to update communities on issues relating to compensation schedules, opportunities for in-kind compensation, changes in valuations, and feedback on issues raised during previous regularly scheduled meetings.

Grievances and Conflict Resolution

27. The LCC will be the primary channel for recording grievances and resolving conflicts. All grievances noted by the LCCs will be included in weekly reports submitted to COTCO. Within the limits of their responsibility, the LCCs will seek a provisional solution to any issue that may arise. If no satisfactory arrangement can be reached, a technical representative of COTCO will visit the village to validate the claim, document the discussion, and negotiate a provisional resolution. If this solution is not approved by COTCO management, a COTCO management representative will visit the village to negotiate a final resolution.

28. Grievances about compensation payments paid by the Government will be subject to legal procedures and remedies under Cameroon law. Grievances concerning supplemental compensation, which are not resolved through informal negotiation at the local level, will be referred to the COTCO designated representative (CDR) for resolution and to determine whether supplemental compensation will be paid. The CDR will report the resolution of grievances to the Government's Pipeline Steering and Monitoring Committee (PSMC) and Secretary of the Payment of Compensation Commission.

29. Some supplemental compensation procedures and rates may need to be revised during implementation of the Compensation Plan. COTCO has devised a change management process for this purpose that involves feedback from:

- a series of consultations held during the Public Information Campaign, the centerline survey, and public inquiries held as part of the compensation process;
- the Government of Cameroon through the PSMC;
- formal and informal discussions with individuals during village meetings
- testing of valuation of resources during the compensation process;
- monitoring of inflation in the cost of goods and services; and
- suggestions from interested organizations.

30. COTCO will evaluate this information and assess if follow-up inquiries or changes are appropriate and necessary. If it is determined that additional follow-up is needed, COTCO will notify the PSMC for input and comment.

Budget

31. The budget planned for the Compensation Plan is US\$ 4.5 million to US\$ 5.5 million equivalent for direct compensation payments by COTCO and the Government of Cameroon (of which the Government would provide about US\$ 1.5 million for land acquisition), and US\$ 1.5 million for the cost of development and implementation of the plan. Payments by the Government and COTCO are intended to take place at the same time to ensure maximum transparency and efficiency in the process.

Implementation and Monitoring

32. The implementation of the Cameroon Compensation Plan will be monitored in the first instance by COTCO's environmental monitoring staff, based on data provided by LCCs and/or by specialized consultants. A Compensation Data Base and a Community Information Data Base have been established.

Other data bases will be developed as needed. Specific monitoring plans will be developed after project approval and before the start of pipeline construction. In addition, COTCO will audit the implementation of its supplemental compensation and implement the change management process, as needed.

33. The Government of Cameroon will also monitor implementation of the Compensation Plan. Government representatives will attend public sessions, such as valuation and verification meetings, community consultation, review COTCO reports on land use and compensation paid, and hold review meetings with COTCO and individuals who received compensation. The Government will also carry out, through consultants, an independent assessment of the short-term impact of the compensation program on the welfare of affected people, shortly after pipeline construction is completed. Support for this activity is provided under the Cameroon Petroleum Environment Capacity Enhancement project.

34. As part of its supervisory responsibility, the World Bank Group will review the Government of Cameroon's dossiers on expropriation, eviction, and compensation and COTCO's reports on supplemental compensation, and monitor the implementation of the Plan.

Annex 16

SUMMARY OF INDIGENOUS PEOPLES PLAN

1. The Indigenous Peoples Plan (IPP) covers the Bakola pygmies and Bantu villagers in the Atlantic Coastal part of the project area, stretching over some 120 kilometers along the pipeline route between Kribi and Lolodorf in Cameroon. Its primary purpose is to address health, education, and agricultural needs and issues specific to an estimated 1,000 Bakola pygmies living in this area; it will also help to address these issues affecting the Bantu villagers (estimated at 10,000) in the vicinity with whom the Bakola have economic relations. The Bakola lifestyle, although semi-sedentary, depends on access to forest resources for their livelihoods. They perceive land as territory that serves to meet their hunting and gathering lifestyles. Given their semi-sedentary lifestyle, they experience higher rates of disease than neighboring Bantu villagers and have poor access to health facilities. Their access to schooling is also very limited and they have little motivation to seek it. Their ability to participate in mainstream Cameroonian life is circumscribed by social prejudice, based on their way of life and historically subordinate relationships with their Bantu neighbors. Their agricultural production is low because of limited training in methods to raise yields and long absences from their settlements for hunting.

2. The IPP is an integral part of the project's environmental management plan. Its purpose is to mitigate potential adverse effects of the project's pipeline routing and provide assistance to the affected communities to implement programs that will help meet their ongoing health, education, and agricultural needs. It aims to (i) assist the local communities in health matters to counter potential health problems related to the project, and generally promote their health conditions; (ii) promote and support education and training initiatives in order to contribute to increasing the ability of the Bakola to make informed decisions about issues of interest to them; and (iii) support local initiatives to improve agricultural production. Funds to support the IPP will be generated from interest earned on a one-time endowment fund to be established by COTCO as part of the project (the Environmental Foundation).

Consultation and Evaluation of Impacts

3. As part of project preparation, a study was conducted in 1997 by the Consortium, through a team of social scientists with long experience in the project area (Groupe d'Etudes des Populations Forestières Equatoriales – GEPFE), that identified a number of potential short- and long-term impacts. Short-term impacts were: potential for disturbing wildlife for a 30-60 day period resulting in a temporary reduction of hunting catches; presence of numerous construction workers might increase hunting pressures and raise the price of starchy foods for the Bakola if construction workers were to buy cassava; and exposure to diseases from outside workers. Mitigation measures proposed included: monitoring of game consumption during the preliminary consultation and assessing the need for additional monitoring; providing food for non-local workers; prohibiting hunting and fishing by non-local workers during construction; and monitoring health effects. The potential long-term impacts included: danger of introducing new and/or more resistant disease strain in the locality; potential for the Bakola settlements to move because of the project; the influx of workers, if permanent employment occurred, could threaten the survival of wild animal species; and modifications in the trade and exchange system between the Bakola pygmies and Bantu villagers.

4. From November 1997 to February 1998, in association with the centerline survey for the pipeline easement, GEPFE conducted an extensive consultation program with the Bakola people. In addition to the local village/settlement leaders, others were consulted about the routing change options, including

representatives of CoDeBaBik (the Bakola Development Committee) and the Petites Soeurs de Jesus who have been involved with Bakola community development for the past 50 years.

5. Some 40 settlements in the general vicinity of the proposed pipeline route were visited at least once during the consultation effort. The project was considered to have negligible effects on settlements more than 2 km from the pipeline route. Most of the consultation effort focused on 24 settlements that were located less than 2 km from the pipeline route. These villages were visited multiple times, before, during, and after the passage of the centerline survey. Settlements within 500 meters of the corridor were visited at least five times and as many as eight times. Changes in routing were made at 8 of the 13 settlements located less than 1 km from the pipeline route.

6. The consultation team met with the chief of the Bantu village responsible for the Bakola pygmy settlement as a courtesy and in recognition of the special relationship between the pygmies and the Bantu villagers. During each visit to a Bakola settlement, local guides accompanied the team to ensure that information was communicated effectively with the local peoples. The topics discussed included a general explanation of the project and routing and compensation issues. The main concerns of the Bakola and Bantu were that villages, houses, graves, and sacred sites should be avoided and that sufficient compensation should be paid to replace useful plants and crops and start new fields. There is a possibility that the construction corridor will facilitate crop cultivation for the Bakola. The Bakola pygmies were very interested in work opportunities. They also indicated that any damage to wildlife would be temporary and that game would return after the construction phase, based on their long experience with logging companies in the area.

7. The Bakola were assured that the pipeline would be sited to avoid their settlements by at least 500 meters wherever possible, and that efforts would be made to avoid other resources important to them. No Bakola village would have to move as a result to the project, and because there would be practically no long-term employment associated with the project, there would be no significant long-term effects on wildlife resources. The team sought information about hunting areas, graves, sacred trees, and other sacred sites, so that the location of these could be considered in determining the final alignment.

8. The Community Development Facilitator will carry out further consultations with the Bakola, Bantu communities, NGOs and other organizations working with the Bakola pygmies and the Bantu villagers in order to develop a detailed work program for the IPP in a fully participatory manner.

Compensation

9. The Bakola and Bantu villagers will receive compensation for lost land and crops at the same standard rates as all other Cameroonian citizens. The team explained that compensation would be paid for any damage done to improvements and other replaceable items, including crops/fields and important medicinal and fruit trees, and that compensation could be made either in cash and/or in-kind. The Bakola generally preferred in-kind compensation, such as building materials--corrugated iron sheets for roofs, machetes, and lamps.

Establishment of an Endowment Fund (Environmental Foundation) for the IPP

10. A sinking fund with an initial capital of US\$ 600,000 will be established by COTCO for the life of the project (28 years – see discussion of Environmental Foundation for environmental offsets in Annex 14). Interest on the endowment would be used each year to fund the IPP. A **Board of Trustees** would oversee

the fund, solicit and fund proposals, monitor, and verify implementation, and audit completion results. The Board would be supported by an Administrative Officer responsible for day-to-day administrative activities. The fund would be managed by a financial institution that would report to the Board of Trustees.

11. The Board would establish funding priorities for projects; solicit, review, and select projects for funding; verify proper execution of projects, identify existing initiatives and suitable community groups or organizations to receive funding for specific projects, and ensure that fund resources are allocated in accordance with stated objectives. Overall responsibility for implementation of the IPP would be under the Board of Trustees. The Board would explore ways to ensure that advice and input are provided from the community, possibly through an advisory group. Through feedback from the stakeholders, the Board would have authority to modify finding priorities and program focus to ensure that the IPP responds to local needs.

12. The Board membership would include representatives from the Government of Cameroon, COTCO, international experts, and private citizens. Board members would have some experience in working with community and environmental issues.

13. A **Community Development Facilitator (CDF)** would be hired by the Foundation for the first two to three years to facilitate participation by the Bakola in planning and execution of the IPP. The CDF would, at a minimum, meet annually with each Bakola settlement and Bantu village in the project area and assist the people with:

- identifying and prioritizing their concerns,
- identifying suitable NGOs to represent the communities in specific projects,
- promoting common interests among settlements, and
- promoting projects that benefit people across settlements.

14. The CDF's main responsibilities would be to explain the IPP and its goals to the communities; distribute and explain proposal guidelines, assist communities to translate their needs or ideas into a proposals, identify suitable NGOs or organizations to prepare proposals and carry out projects on behalf of the communities, if needed, and create a process/system to sustain the role played by the CDF by the end of the two/three-year period by an institution such as a Bakola Steering Committee. After two to three years, it is expected that the Bakola and Bantu groups would become familiar with the IPP goals and procedures and would be able to prepare and present their own proposals for funding.

IPP Programs and Projects

15. The IPP envisages three program areas: health, education, and agriculture. Potential program areas and projects were identified by the GEPFE during their extensive consultations with the Bakola and others working with them, based on their knowledge of existing programs in the area, as well as existing health risks. The scope of potential programs and projects would be further defined in consultation meetings to be implemented as part of the IPP. Every year, through a process of local participation, projects would be solicited, prioritized, and selected for funding up to each year's funding cap. New projects would be added over time, as local communities and organizations propose specific initiatives.

16. Guidelines for proposals would be developed and distributed to the Bakola and Bantu communities and interested NGOs. Proposals would be solicited annually and submitted to the Board of Trustees; they would follow a simple format and allow maximum participation by the affected communities. They would state clear objectives and measurable goals, how the resources would be allocated, describe how the project would benefit the community, and how many people would benefit. Project proposals receiving the highest priority would be funded up to one year's funding limit. Additional funds may be sought from other sources by the community to supplement resources granted by the fund. Simple reporting at completion would be required for each project, summarizing the project's goals and activities, how the funds were spent, and an assessment of whether the project achieved its goals. The reporting requirements would be simple in order not to present a burden for the communities; a project completion form may be provided to facilitate the reporting.

17. Some examples of the type of projects that could be funded are: (i) public health programs with emphasis on child vaccinations and control of endemic and epidemic diseases: measles, tuberculosis, sleeping sickness, surveillance of major epidemics (like cholera), and yaws; (ii) literacy classes for the adult population using itinerant teachers and counseling on hygiene in and around the house; (iii) drilling of new wells or improving the existing water supply by protecting it from direct pollution; and (iii) implementation of agro-forestry systems to improve the use of traditional plants.

IPP Project Review, Evaluation, and Verification

18. Project completion reports would be reviewed annually by the Board of Trustees to determine if the IPP goals are being achieved. The Board may choose to obtain advice from another group or set up a group to provide advice. The Board would prepare a brief evaluation of each year's activities with all the project completion reports attached. This documentation would be made public.

IPP Project Monitoring

19. It will be the responsibility of the Board of Trustees to assure that the goals and objectives of the IPP are met. It is expected to do so by gathering information on:

- numbers of Bakola and other communities participating/benefiting from IPP programs,
- programs that have resulted in improvements in health, education, and agriculture,
- peoples' use of information learned during community education programs and use of community improvements, and
- changes in key indicators, such as diet, use of bush meat, and contribution of agricultural products to the diet.

20. The Board would make adjustments as needed to ensure appropriate representation and participation in the IPP. During the first three years, this monitoring would be done by the CDF who will prepare a report and make recommendations to the Board at least once a year and possibly more, as needed.

21. The Board would report periodically to COTCO and the Government of Cameroon on progress in the implementation of the IPP. These reports would also be made available to the Bank supervision missions.

Annex 17

SUMMARY OF CONSULTATION

1. The lead project Sponsor (Exxon) instituted, together with the Governments of Chad and Cameroon, an extensive consultation and public review program to (i) inform the public about the project; (ii) seek inputs and perspectives from the affected public; and (iii) clarify and reconcile misconceptions about the project and its impacts and mitigations. World Bank Group staff have also been engaged in extensive consultation, especially with non-governmental organizations (NGOs) in Chad and Cameroon.¹

2. Consultation was initiated in 1993 with scoping of the corridor selection process and continued over the last six years, reaching all areas affected by the project, which includes four different bio-climatic zones along the pipeline corridor and an ethnically diverse population. Consultation and coordination with communities, individuals, Government agencies, and NGOs helped the Sponsor to identify potential impacts and provided inputs for project design changes. Extensive consultation was carried out with residents in the oilfield development area and along the pipeline route, as well as with indigenous people living near the pipeline corridor, to locate sacred sites, crop and hunting areas, and other culturally important sites. Measures were taken to avoid, reduce, or compensate for project impacts, including specific design modifications made in response to concerns expressed during the consultation process.

3. The consultation process has involved hundreds of meetings in Chad and Cameroon. The major elements of the consultation process are summarized in the following list:

- Human Environment Survey village meetings in Chad and Cameroon.
- Public Information Campaign meetings in Chad and Cameroon.
- Local and international NGOs consulted in meetings in Chad, Cameroon and abroad (including in Europe and the U.S.).
- Consultation visits to pygmy settlements in Cameroon.
- Valuation and Verification Commission meetings in Cameroon.
- Use of Local Community Contacts and establishment of reading rooms in Cameroon.
- Distribution of EA documentation to local authorities and presentations to affected villages in Chad.
- Centerline/Biology/Market surveys along the length of the pipeline route.
- One-on-one consultations with the households in Chad who would be required to resettle.

4. Input and comments were collected and evaluated over three time periods: pre-development of the environmental assessment (EA), during EA development, and after publication of the EAs. Project information was shared with those being consulted and copies of EAs were delivered to NGOs, reading rooms, Government agencies, including local authorities, and other organizations that had participated in consultations. Comments on the EAs were invited and used to update the EAs and revise the EMPs and supporting documents.

Consultation before and during EA development/publication

5. During the second half of 1993, a series of issues-identification (scoping) meetings were held with 16 prominent local NGOs and research institutions in Chad and Cameroon to provide input into the corridor selection process. The next round of consultations with local NGOs was conducted in 1995, based on the

Terms of Reference for the EA that had been developed after the initial consultations, reviewed by the World Bank, and accepted by the Governments of Chad and Cameroon. Between 1995 through late 1997, consultation meetings were broadened to include villages, community groups, and local Government representatives. Public meetings were held in about 200 villages in Chad and Cameroon as part of the Human Environment Surveys, led by experienced social scientists. They conducted village public meetings, one-on-one interviews of village residents and local leaders, and statistically valid public attitude surveys. Inputs from the discussions were incorporated into the project design and draft EAs.

Consultation post-EA Release

6. With the release of the draft EAs for Chad and Cameroon in late 1997 and early 1998, respectively, the Sponsor launched a Public Information Campaign, during the course of which over 200 presentations were made in villages in Chad and Cameroon. Audio-visual aids and presentations were used and the meetings were facilitated by local leaders and trained Local Community Contacts (LCCs) who translated information into local languages understood by the villagers. Local and international NGOs were also consulted and their comments on the EAs were invited. Copies of the documents were made widely available to the public, local communities and administrative centers, as well as to the local and international NGOs, before consultations took place. In Cameroon, copies were deposited in 17 reading rooms in public locations throughout the country and written comments were invited and collected by the Sponsor. Project representatives attended several conferences organized by local and international NGOs or groups of NGOs within Chad and Cameroon, as well as in some European cities. They also met with staff of international NGOs at their headquarters in Europe and the U.S. Comments, letters, and information posted on NGO websites were analyzed to obtain additional input for the project. Based on this extensive input, the final EAs were prepared, approved by the respective governments and submitted to the Bank Group in May 1999. These reflected comments received on additional draft EA documentation made available for public review and comment in March 1999. The final EAs have been disclosed to the public through the Bank's Public Information Centre (InfoShop) and through a wide distribution in Chad, Cameroon, and elsewhere beginning in June 1999.

Consultations with Affected Groups

7. In compliance with World Bank directives for consultation with population groups, including indigenous peoples, affected by the project, the Sponsor conducted a focused consultation program in the oil field area in Chad, villages near the pipeline corridor, and with pastoralists in northern Cameroon and the pygmy population in coastal Cameroon. As a result of these consultations and subsequent project design modifications, potential resettlement impacts were significantly reduced and will only affect a small number of families in the oil field area in Chad. No resettlement is anticipated along the pipeline route through Chad and Cameroon.

8. Local consultations were carried out extensively during the centerline survey that comprised several studies to obtain data for the selection of the optimum pipeline route, based on technical, construction, environmental, and socioeconomic criteria. As a result of the consultations, numerous route changes were made to avoid burial sites, houses, and sacred trees. Village meetings and LCCs were helpful in resolving pipeline route issues.

9. Intensive consultation was conducted with the Bakola pygmies in village meetings, including their direct participation in numerous decisions on the pipeline route. Two detailed surveys of Bakola settlements were done; these served as the basis for consultation and discussions of the project's potential

adverse impacts. The teams that conducted the consultation meetings in 40 Bakola settlements, within a 2 km corridor on either side of the pipeline route, consisted of social scientists and others with considerable knowledge of the Bakola, including Bakola research assistants.

Consultation Principles and Methodology

10. The consultation efforts undertaken by the Sponsor had to meet three challenges—time, distance, and diversity. The consultation process has been ongoing for over six years; it has extended throughout a project area that is 1,070 km long, and covers a variety of terrain, customs, and languages. To meet the challenges of time, distance, and diversity, a consultation methodology was used that had three key features:

- Fact-finding meetings were the basis for consultations with and data gathering from affected groups, local and international NGOs in Chad and Cameroon, and Government agencies.
- Consultation meetings were held in places accessible to people, in hundreds of villages rather than at a few central locations. They were conducted in French, English, and local languages and dialects, as appropriate.
- Feedback and input from consultations was integrated into the project planning and design, and close collaboration was maintained throughout between the EA team and the project design team.

Integrated Consultation/Design Approach

11. Project design was continuously refined as more and more detailed and specific information became available from the consultation and scientific investigation processes. This approach helped to make the design process participatory, flexible, and evolutionary.

- Major issues were identified early on and could be addressed at an early stage of the project's design. Some examples of major issues raised by NGOs were the potential for oil spills, socioeconomic impacts, pipeline routing, and compensation for lost crops planted on traditional lands, not individually owned by farmers.
- As the project design was refined, consultation was broadened to identify local issues. During EA development, for example, specific sacred sites to be avoided by pipeline rerouting were identified, as was the need to reduce project land use in the oilfield area.

Consultation Results and Changes

12. Comments on the project received since the EA documents were released to the public in late 1997 were compiled in a database and categorized to determine areas of concern most frequently mentioned by the people and NGOs. Those receiving the greatest number of comments were: hiring/employment/job opportunities, consultation/participation, environmental impacts, and compensation/resettlement. Responses or changes to the project in light of these concern were also compiled by the Sponsor.

13. The largest category of comments (22%) expressed positive views on the project, the documents, and the consultation process. The two most important categories of concerns were employment/training (19%)

and compensation/resettlement (12%). Concerns about environmental, social, and technical aspects of the project were about equal at less than 10% of the total each. Other categories of concern included, in order of importance, project revenues, cultural aspects, infrastructure, the EA documents, pipeline safety and security, health, and human rights.

14. Concerns regarding employment and training were addressed through an expanded public information program, developing a process to promote local employment, establishing a transparent recruiting process, and developing, together with the governments concerned, programs to address the expected impacts of construction workers and related migrants on local communities, requirements to contractors to provide training, structuring of contracts to allow for the employment of unskilled workers, and exploring ways to maximize opportunities for local procurement of goods and services.

15. Concerns regarding compensation and resettlement were different in Chad and in Cameroon. In Chad, these concerns were mainly raised in village meetings to discuss the Compensation and Resettlement Plan. The main concern was the proposed compensation rates for economic trees. One rate has already been modified, and others may be modified based on the results of market studies. Apart from this issue, concerns mainly indicated the need for further explanation of the provisions of the Plan, and the desire of local people directly or indirectly affected by the project to benefit from community compensation. Community compensation was introduced into the Plan as a direct result of these consultations. These concerns are also being addressed through ongoing public information programs, and through the Chad regional development plan process.

16. In Cameroon, many comments were received prior to the June 1998 version of the Compensation Plan, and were taken into account in that version. Most of these early comments indicated a need for additional information on the process for calculating and paying out compensation, which was provided in the final Plan. Payment procedures, in particular, have been carefully designed to ensure that compensation reaches and remains with the individual who is entitled to it. At their own request, in-kind compensation will be offered to Bakola households in Cameroon. There was much concern about possible resettlement in Cameroon. The pipeline and associated infrastructure have been laid out in such a way as to avoid all physical resettlement and impacts on significant community features.

17. On environmental impacts, the major concern was about possible oil leaks or spills. The project has been designed in accordance with international standards to minimize the risk of oil spills and to provide leak detection and emergency response systems, and a General Oil Spill Response Plan has been prepared. Other concerns included the originally proposed routing of the pipeline through ecologically sensitive areas including the Mbere Rift Valley, the Deng Deng forest, and the Atlantic coastal forest. These concerns have been addressed by changing the routing, by preparing an Access Management Plan to minimize project impacts on sensitive areas, and by establishing an offsite environmental enhancement program in two areas of Cameroon.

18. On consultation and participation, comments often concerned ways in which the process could be improved. Project responses included the use of nonverbal communications media, the hiring of Local Community Contacts who could interpret information in local languages, and use of radio and newsletters to disseminate information, in addition to public meetings and reading rooms. A second theme was the desire of NGOs to participate more actively in the project. A number of opportunities for NGO involvement have been identified, including communication with local people on a variety of topics, and involvement in the implementation of mitigating measures (including under the pilot development fund to be established under the Chad petroleum/environmental capacity building project described in

Annex 18, Part A). A concern about the lack of involvement of local people in planning the activities of the Environmental Foundation (biodiversity offsets and Indigenous Peoples Plan) is being addressed by introducing a by-law requiring the Foundation, through its Implementing Organizations, to plan and carry out local public consultation programs.

19. On technical aspects of the project, questions were very varied. Many questions concerned the project implementation schedule, specifically, when construction would start. In response to this question, the project team provided whatever information was available at the time. In response to suggestions received, the project sponsor donated storage containers, which would otherwise have been discarded, to a Chadian NGO for recycling into locally used tools; it was agreed that non-commercial timber cut during project clearing would be cut and stacked so that local people could make use of it (commercial timber goes to the Governments); detailed information will be provided on the design of river and stream crossings to show how water pollution will be avoided; and provisions for roadside brush clearing will be revisited now that the project realizes that farmers need this vegetation to protect damage to crops from road dust.

20. Much more detailed information concerning the consultation process which has been carried out so far, including specific issues which have been addressed under other topics, lists of communities and groups consulted, and samples of various forms of communication and exchange, is contained in the EA Supporting Documents, Volume 3, "Consultation and Public Review Program." A copy of this document can be obtained from the Bank's Infoshop. Furthermore, the Consortium and the two Governments have committed to a continuing and expanding program of consultation and participation during project implementation, based on lessons learned during the six-year project preparation period.

¹ World Bank Group staff in the Field Offices in Chad and Cameroon, as well as headquarters staff, have held extensive consultations with local and international NGOs in both countries over the last two years. They have hosted meetings and taken part in seminars organized by the NGOs. The major concerns expressed by NGOs about the EAs, mitigation measures, use of project revenues, project benefits/employment, induced impacts in the project area, resettlement and compensation, need for partnerships with NGOs in the delivery of services, resettlement, monitoring implementation of the Environmental Management Plans (EMPs), and the need for greater consultation, transparency, and accountability were communicated to the Sponsor as well as to Government authorities. Bank staff have also participated in NGO seminars in Europe and the US. The Bank has also responded in writing to the numerous letters and emails received. The Bank has also posted project information on a website and prepared a set of Questions and Answers about the project. Project documents— project descriptions, EAs, and EMPs were made available through the Public Information Centers in Washington, London, Paris, and Tokyo, as well as at the Resident Missions in N'Djamena and Yaoundé.

Annex 18

Parallel Support Projects: Summary Descriptions

A. Chad – Petroleum Sector Management Capacity Building Project (IDA Credit)

1. Doba Project Management. This first and main component will aim at strengthening government capacity and mitigating the impact of the project on the producing region. This component will also support information and communication campaigns to increase the amount and quality of information about the project available to the government, local populations and other stakeholders.

- a. Strengthening Government Capacity by:
 - i. Building environmental, social and technical capacity in line ministries.
 - ii. Building government's capacity to deal with legal, financial and other technical aspects of the Doba project.
 - iii. Providing operational support for project coordination activities.
- b. Mitigating Project Impacts on the Producing Region by :
 - i. Implementing a communications campaign to limit migration to the producing region and mitigate its impact on local populations.
 - ii. Mitigating induced impacts on the producing region through the financing of rapid intervention measures such as increased health facilities and water-wells.
 - iii. Supporting development activities in the producing region, including the establishment of a pilot development fund to test financial and implementing mechanisms for complementary rapid intervention measures and mid-term development activities that will be proposed by the community and local NGOs.
- c. Additional Information and Communication activities :
 - i. Supporting the development of a monitoring information system (MIS).
 - ii. Implementing communication and consultation activities to generate accurate information regarding the project and support information dissemination and dialogue with all stakeholders.

2. The Petroleum Sector Management component will build on the invaluable information generated by the Doba and other projects. It contains two sub-components:

- a. strengthening the environmental and social regulatory framework applicable to petroleum development activities in Chad, building on the lessons of the Doba project.
- b. strengthening Chad's capacity to manage the technical aspects regarding the promotion of its petroleum sector by creating an effective petroleum sector information management system. Specific actions include: training, database management, and technical assistance to assist in enhancing Chad's capacity to attract and negotiate with potential investors, and logistical support.

B. Chad – Management of the Petroleum Economy Project (IDA Credit)

1. The objective of the Management of the Petroleum Economy (GEEP) is to enable Chad to mobilize expected oil and other revenues efficiently and transparently for poverty reduction activities. The GEEP

project would help implement the Government's strategy for the management of the petroleum economy and the provisions of the Law on oil revenue management adopted at end-1998 by funding activities to help manage macroeconomic distortions induced by oil exports, provide poverty data to underpin allocation of public resources, integrate sector expenditure programs in the priority poverty-reduction sectors in a viable budgetary framework, implement ex-post control of budget execution, associate the civil society to the oversight of oil revenues and development policy formulation, and inform it on the outcomes of public resources use.

2. The GEEP project will fund the following activities:

i. Public financial management:

- consolidation of the budget on the basis of a new nomenclature, improved macroeconomic and expenditure frameworks, and introduction of sector expenditure programs;
- simplification of expenditure circuits;
- modernization of debt and treasury management, and of customs and tax administrations; and
- strengthening of financial control and auditing, and integration of financial reporting.

ii. Poverty database and strategy:

- household and community surveys to produce and maintain a comprehensive database on poverty and development indicators; and
- poverty profiles summarizing indicators at household and community level, to provide the analytical framework for the participatory articulation of a strategy for poverty reduction.

iii. Human resources development:

- articulation of the policy framework for civil service reform;
- consolidation of payroll and civil service census; and
- reform of key economic administrations (Finance, Planning, and expenditure management departments in Health, Education, Rural Development and Public Works).

iv. Oversight and control of petroleum revenue:

- implementation of oversight and control capacities in the judiciary (the Auditor General's Office in the Supreme Court);
- implementation of the Committee for the Oversight and Control of Petroleum Revenue to be created according to the provisions of the Law on oil revenue management; and
- information of the civil society on the implementation of the strategy for oil revenue management.

v. Overall coordination of the program of financial consolidation and economic reform, and of capacity building:

- coordination of the preparation of adjustment programs, monitoring and reporting;
- public information on the design and implementation of adjustment programs;
- seminars on good governance; and
- coordination and oversight of national capacity building initiatives.

C. Cameroon Petroleum Environment Capacity Enhancement (CAPECE) Project (IDA Credit)

1. The preparation of the Chad-Cameroon Petroleum Export Project (CCPEP) has involved the design of an Environmental Management Plan (EMP), in compliance with the World Bank Group (WBG)'s policies. The EMP will be implemented in Cameroon in large part under the responsibility of the Cameroon Oil Transportation Company (COTCO), but also requires active involvement by the

Government of Cameroon. In addition to sharing the responsibility for EMP implementation, the Government of Cameroon, together with COTCO, has the responsibility for monitoring the environmental and social impacts of the project.

2. The objective of the Cameroon Petroleum Environment Capacity Enhancement Project (CAPECE) is to develop and establish a national capacity in Cameroon for the environmental management and monitoring of the Chad-Cameroon Petroleum Export Project, and, beyond the Chad-Cameroon Pipeline, to enhance Cameroon's capacity to manage the environmental and social impacts in the petroleum sector.

3. The implementation of CAPECE will be managed under the trusteeship of the National Oil Company (SNH) by the interdepartmental Pipeline Steering and Monitoring Committee (PSMC), established by decree in 1997. CAPECE will be implemented over a five-year period. Total cost is US\$ 13.3 million, funded partly by an IDA credit of US\$ 5.8 million for the investment part (training, equipment, technical assistance) and by the Government of Cameroon for the operation part.

4. The activities funded under the CAPECE project are:

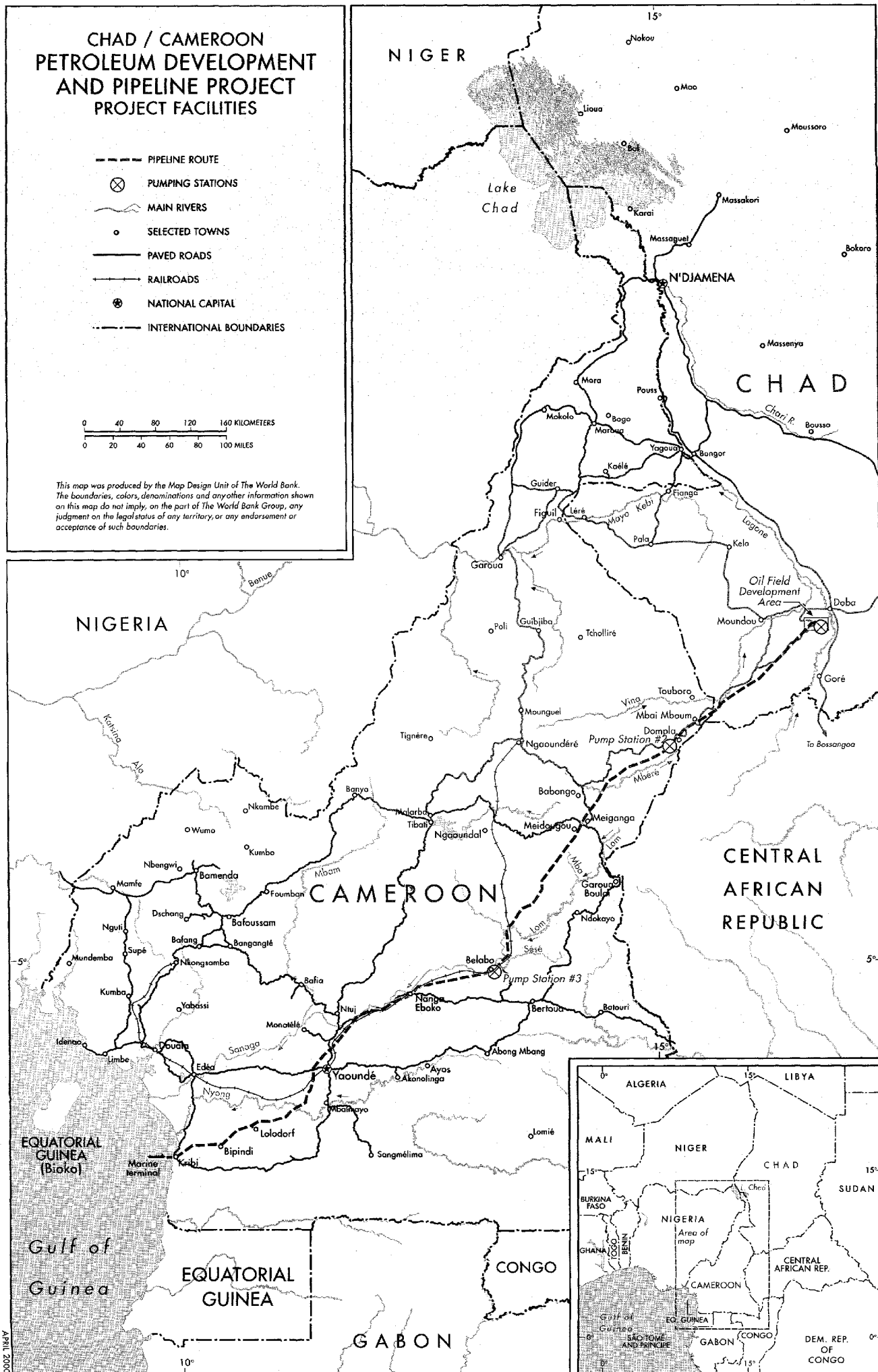
- Development of an enabling institutional and regulatory framework.
- Drafting of, publication of, training on and dissemination of 12 decrees regulations to implement the framework law on environmental management of 1996 and other relevant environmental and safety-related regulations.
- Long term vision study to establish a long term institutional capacity to manage the environmental and social impacts in the petroleum sector.
- Coordination Capacity Enhancement (PSMC).
- Central level unit, which will coordinate, manage, contract for studies (development impact around fixed facilities, support to IPP implementation, support for the archaeological component of the EMP, socio-economic impact study to be conducted with beneficiary participation) and special services.
- Three Field Units (bio-physical, socio-economic, health coordination), including two terrestrial and one marine, to monitor the environment and trigger the intervention of the specialized ministry.
- Information, Education & Communication (IEC) to the local communities and the international stakeholders, in coordination with COTCO's communication strategy.
- Intervention Capacity Enhancement.
- Health Management activities (Ministry of Health, NGOs).
- Government Oil Spill Response Plan and implementation.
- Local administrative capacity enhancement (Transport for infrastructure improvements and oil spill prevention and management; MINEF for the biodiversity offsets and poaching control, Mines to develop a durable legal framework and permitting and inspection system, Research to work on IPP and CH issues).
- Project Management, Monitoring & Evaluation.
- Provision of the Services of an International Advisory Panel.
- Monitoring of the implementation of the EMP and Management Information System.

CHAD / CAMEROON PETROLEUM DEVELOPMENT AND PIPELINE PROJECT PROJECT FACILITIES

- PIPELINE ROUTE
- ⊗ PUMPING STATIONS
- ~ MAIN RIVERS
- SELECTED TOWNS
- PAVED ROADS
- RAILROADS
- ⊙ NATIONAL CAPITAL
- - - INTERNATIONAL BOUNDARIES

0 40 80 120 160 KILOMETERS
0 20 40 60 80 100 MILES

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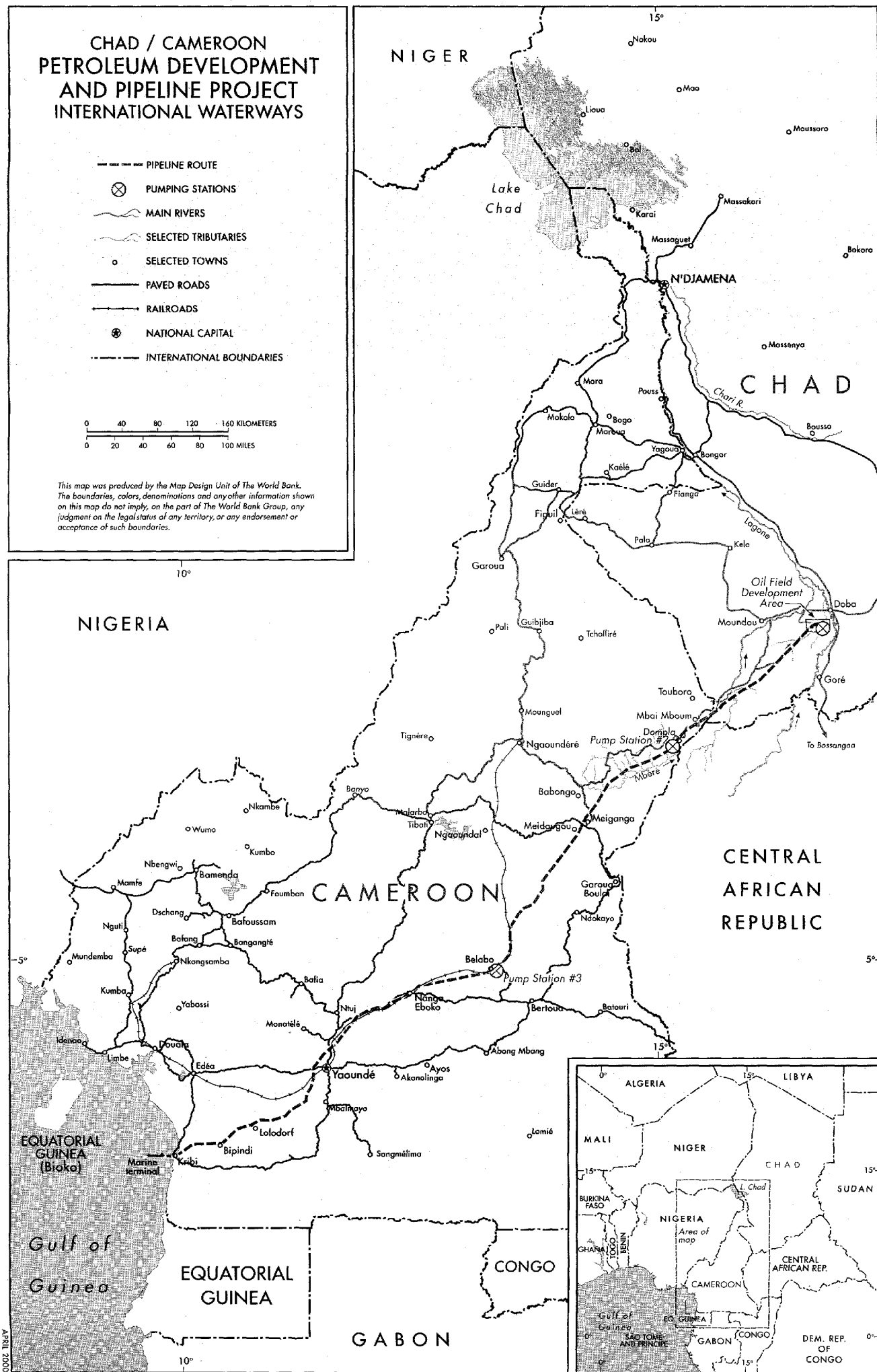


CHAD / CAMEROON PETROLEUM DEVELOPMENT AND PIPELINE PROJECT INTERNATIONAL WATERWAYS

- PIPELINE ROUTE
- ⊗ PUMPING STATIONS
- ~ MAIN RIVERS
- ~ SELECTED TRIBUTARIES
- SELECTED TOWNS
- PAVED ROADS
- RAILROADS
- ⊙ NATIONAL CAPITAL
- - - INTERNATIONAL BOUNDARIES











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CHAD / CAMEROON PETROLEUM DEVELOPMENT AND PIPELINE PROJECT

CAMEROON NATIONAL PARKS, ENVIRONMENTAL OFFSETS, AND INDICATIVE INDIGENOUS PEOPLE PLAN AREA

-  NATIONAL PARKS
- OFFSET:
- * boundaries of OFFSET correspond to boundaries of National Park.
 - ** boundaries of OFFSET are within boundaries of National Park, but not yet fully determined.
-  INDICATIVE INDIGENOUS PEOPLE PLAN AREA
-  PIPELINE ROUTE
-  PUMPING STATIONS
-  MAIN RIVERS
-  SELECTED TOWNS
-  PAVED ROADS
-  RAILROADS
-  NATIONAL CAPITAL
-  INTERNATIONAL BOUNDARIES

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