

Overview

The proposed Chad Export Project will develop oilfields in southern Chad. To export the crude oil to world markets from the landlocked oilfields, the oil will be transported approximately 1,070 kilometers (663 miles) by underground pipeline to a marine terminal on the coast of Cameroon. The two maps beginning on page 1-5 show the overall project area, including the pipeline and the oilfield area.

As much as one billion barrels of oil will be produced over the 25- to 30-year life of the project. Chad does not have the financial resources, expertise or oil industry to develop the project. The country has, therefore, invited outside private sector development. A consortium comprised of affiliates of Exxon, Shell and Elf has agreed to sponsor the project with an Exxon affiliate designated as the operator. Project construction costs are estimated at \$3.5 billion (2,100 billion FCFA).

Chad and Cameroon As the 21st century approaches, Chad remains a pre-industrialized society. It is ranked by the World Bank Group as the fifth poorest country in the world with a per capita gross national product (GNP) of \$160 (96,000 FCFA) and average life expectancy of less than 50. One out of five children born in Chad dies before reaching age five. Access to health care, public sanitation, safe drinking water and electricity are rare, even in the capital, N'Djaména.

Cameroon is also ranked as a low-income country, with a per capita GNP of \$610 (366,000 FCFA) and an average life expectancy of 58. In Cameroon, 59% of the population does not have access to safe drinking water.

Financing Under the proposed arrangements, the funding requirements for the oilfield development project and the two pipeline companies (TOTCO and COTCO) would be met as follows:

- Approximately 60% of the project cost will come directly from the Consortium partners and affiliates.

- Approximately 37% will be obtained through market rate loans arranged through the International Finance Corporation, export credit agencies, and commercial sources.
- The governments of Chad and Cameroon wish to make equity investments in the two pipeline operating companies. Cameroon will only invest in COTCO. The value of these investments will represent about 3% of the project cost. To fund their investments in the pipeline operating companies, the two host countries have applied for a total of approximately \$115 million (69 billion FCFA) in loans from the World Bank Group's International Bank of Reconstruction and Development (IBRD) as well as the European Investment Bank (EIB).

World Bank Group Role The linkage established by virtue of these financing facilities puts the World Bank Group in position to provide important support regarding development aspects of the project. For example, Bank staff have:

- Assisted the Republic of Chad in developing a Revenue Management Plan that has now been enacted into law by the Chadian National Assembly and President. The law sets out a process for long term management of the revenues from the oil development, ensuring that project benefits reach the citizens of Chad, including residents of the oilfield area.
- Reviewed the project's initial environmental documentation and thus assisted the host governments and the Consortium in achieving their goal of meeting development standards set out in World Bank and IFC Operational Directives. Among other issues, these standards deal with environmental quality, public consultation and protection of local people.

Public Consultation The public consultation program for this project began in 1993, with the issues identification (scoping) consultations with nongovernmental organizations (NGOs) in Chad and Cameroon. Public consultation has included nearly 900 village level public consultation meetings.

- Nearly 200 Human Environment Survey village meetings.
- Over 200 Public Information Campaign (PIC) meetings.
- Approximately 250 in-country and international NGOs consulted in a total of over 145 meetings.
- 165 consultation visits to Pygmy settlements in Cameroon.

- 331 Valuation and Verification Commission meetings.
- Establishment of 17 reading rooms in Cameroon.
- Kilometer-by-kilometer centerline survey consultation with affected land users along the entire pipeline route.
- One-on-one consultations with the households in Chad who will be required to resettle.

Hundreds of enhancements have been incorporated into the project design in response to this public consultation process as well as the review of draft documents by the public and the World Bank Group.

Environmental Planning To avoid or mitigate project impacts, the Consortium has worked with a team of scientists and environmental engineers with many years of experience in Africa. Chadian and Cameroonian scientists have been extensively involved on behalf of the project in research on biophysical, socioeconomic and health conditions.

This volume provides a summary of the current project design, including the design updates since the release for public review of the Environmental Assessments, Environmental Management Plans, Compensation Plan for Cameroon and the Compensation and Resettlement Plan for Chad.

Comprehensive information on the topics covered in the executive summary and update is available in the 18 additional volumes of this environmental documentation package, which includes the six-volume Environmental Management Plans for each host country. The key topics in each one of these volumes have been outlined in the Guide to Environmental Documentation chart in the Preface to this volume and in Chapter 8 on the Environmental Documentation Package, page 8-1.

The documentation addresses such issues as resettlement, compensation for lost crops, an Offsite Environmental Enhancement Program to protect biodiversity, oil spill prevention and response, pipeline routing, disease control, protection of indigenous peoples, and accident prevention.

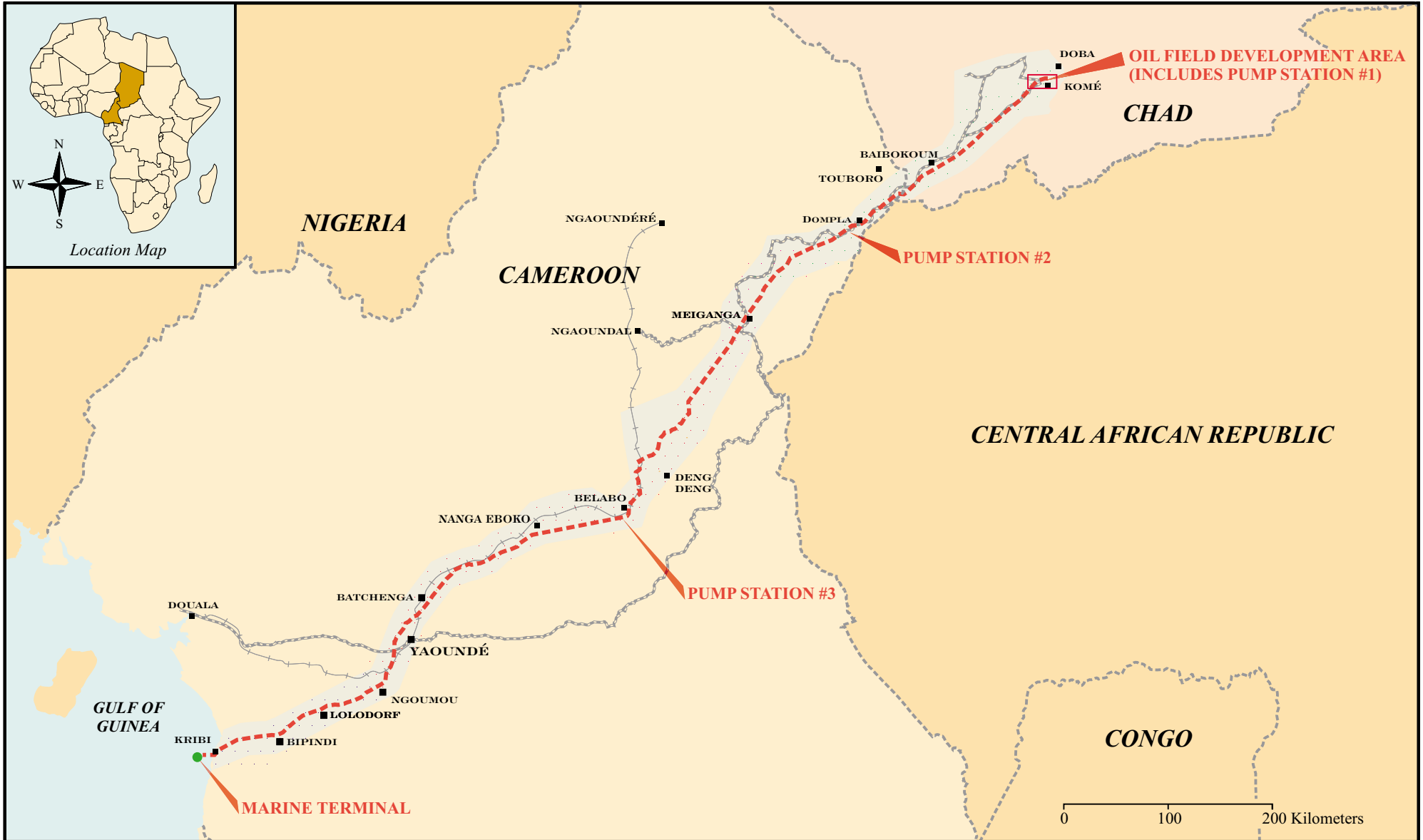
Benefit/Cost Analysis A Benefit and Cost Analysis has been conducted for each host country, quantifying the relative benefits and costs of the project in nine environmental and social categories, including agriculture, petroleum transportation, jobs, housing, transportation and health. Although World Bank Operational Directive 4.01 suggests that environmental issues be quantified, a full Benefit and Cost Analysis is not specifically required and

is not commonly performed on World Bank Group projects. However, the World Bank Group staff suggested that such an analysis be conducted for this project as a demonstration of how the concept could be applied to a large multi-faceted project. The objective of this effort has been to show how environmental and social factors can be quantified in a comprehensive manner, going beyond a purely economic analysis of benefits.

The Benefit and Cost Analysis shows that the project represents a positive net gain for both the Republics of Chad and Cameroon. The value of the benefits from the project far exceeds the project's costs.

For the Republic of Chad, the total estimated economic development value of the project, including compensation and costs to Chad and its people, has an approximate Net Present Value of \$1.3 billion (780 billion FCFA). Economists use Net Present Value to convey the value of a long-term project in terms of today's dollars. Taking into consideration expected changes in the value of the dollar over the life of the project, the Chad Export Project will generate an estimated total economic development value of \$8.5 billion (5,100 billion FCFA).

For the Republic of Cameroon, the total estimated economic development value of the project, including compensation and costs to Cameroon and its people, has an approximate Net Present Value of \$500 million (300 billion FCFA). Taking into consideration expected changes in the value of the dollar over the life of the project, the Chad Export Project will generate an estimated total economic development value of \$900 million (540 billion FCFA).

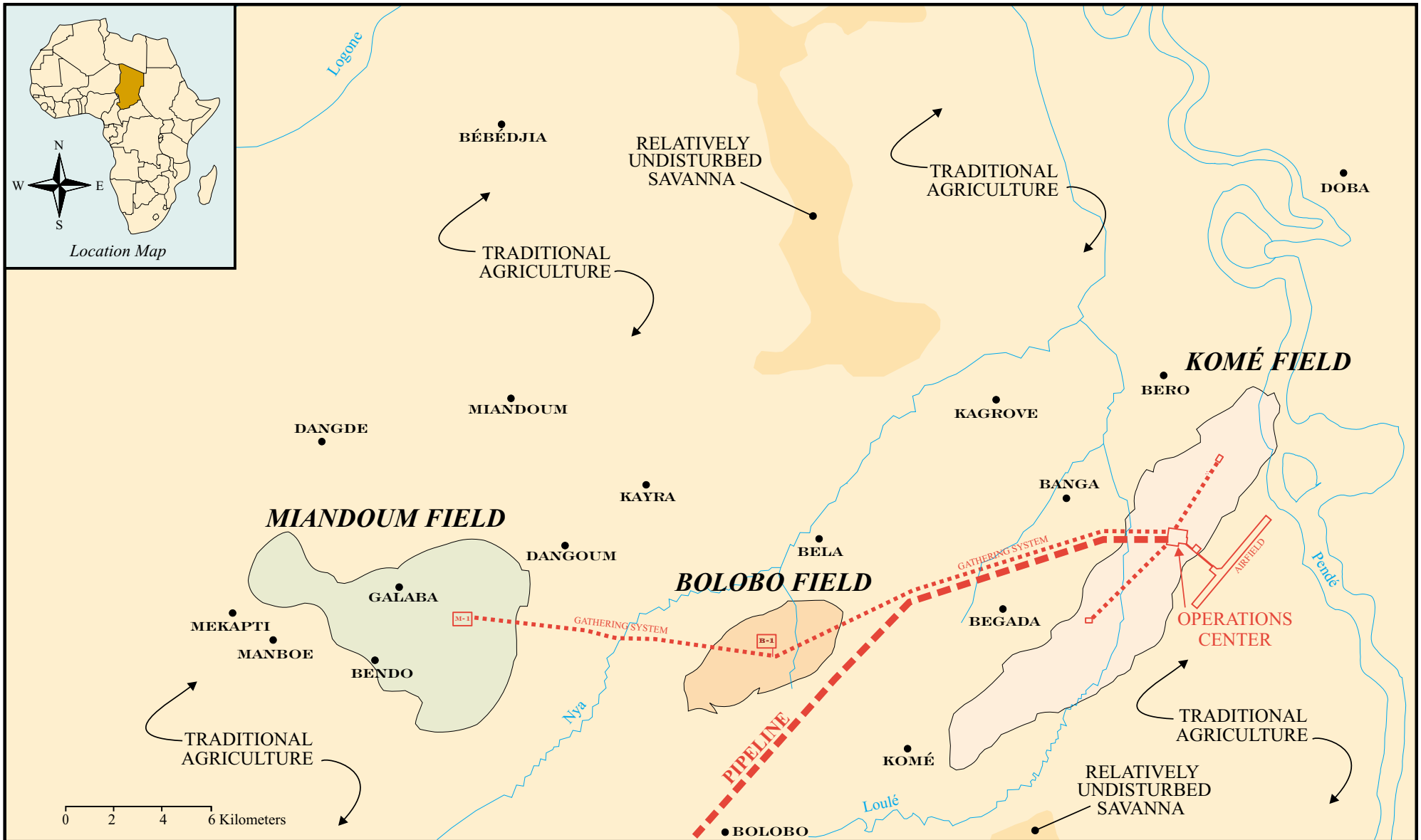


LEGEND	
	Oil Field Development Area
	Pipeline
	International Boundaries
	Major Roads (In Study Area)
	Railroad
	Marine Terminal (FSO)

Chad Export Project

PROJECT AREA





LEGEND

- Komé Field
- Miandoum Field
- Bolobo Field
- Villages / Towns
- Gathering Stations
- Rivers

Chad Export Project

OIL FIELD PROJECT AREA

