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# 1. INTRODUCTION

## 1.1 The Chad Export Project

The government of Chad intends to exploit its natural oil resources in order to stimulate its national economy by investing the revenues in the sectors of education, health and infrastructure. Oil prospecting has been going on in Chad from 1969 onward. In the oil fields of Komé, Bolobo and Miandoum exploration started in 1974. In 1988 a convention between the Chad government and a consortium<sup>1]</sup> granted this consortium a permit to explore in Chad 4.8 million hectares for oil. The same convention granted the consortium a concession to develop and produce crude from individual fields for a period of 30 years. The consortium now considers development and transport to Kribi, Cameroon, of crude oil from the Komé, Bolobo and Miandoum oil fields. These fields are expected to produce 225.000 barrels per year during peak production (production years 2-6), gradually reducing to 25.000 barrels in production year 30. The fields are expected to produce a total of 924 million barrels over the 30 year exploitation period.

Two private companies, named Tchad Oil Transportation Company (TOTCO)<sup>2]</sup> and Cameroon Oil Transportation Company (COTCO), intend to transport the crude by means of a pipeline and an offshore loading facility. The total length of this pipeline is 1050 km, of which 170 km are located in Chad. The pipeline in Chad will be exploited by TOTCO, in which the consortium and the Chad government participate. The Pipeline and offshore loading facility in Cameroon will be exploited by COTCO, in which the consortium and the Cameroonian and Chad governments participate.

The government of Cameroon intends to take advantage of the opportunity of constructing and exploiting its part of the pipeline to create job opportunities and to resolve its economic problems.

The consortium will provide the main (about 97 percent) of the investment capital needed. An International Finance Corporation (IFC) loan is foreseen for both TOTCO and COTCO. The government of Chad will provide 45 million US\$ for investment in the Chad portion of the pipeline. The Chad government has asked for a World Bank loan (on International Development Association [IDA] funds). The Cameroonian government will provide 70 million US\$ for investment in the Cameroonian portion of the facilities. Also the Cameroonian government has asked for a World Bank IDA loan. It is assumed that involvement of the World Bank will facilitate commercial loan contracting by the consortium.

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1 This consortium is currently (since 1993) composed of Esso Exploration and Production Chad (40% and operator), Société Shell Tchadienne de Recherche et d'Exploitation (40%) and Elf Hydrocarbures Chad (20%).

2 TOTCO has not yet been established. Establishment is scheduled for July 1998.

According to World Bank's Operational Directive OD 4.01 the project, that includes the oil exploitation and construction and operation of the oil pipeline and offshore facilities, is a Category A project and requires full Environmental Impact Assessment, to be presented by the borrower. The borrowers are the governments of Chad and Cameroon, COTCO and TOTCO.

The government of Chad has formally endorsed the EA for the Chad portion of the project. It is not yet clear to the Commission whether the government of Cameroon has formally endorsed the contents of the EA for its portion of the project<sup>3</sup>].

## 1.2 Motives for and objectives of this review advice

The Netherlands, as contributor to the World Bank and by its position on the Board of directors of the World Bank, has to substantiate its position on the project. In order to assist in the identification of possible benchmarks for the discussion of the Board -in case such a discussion might be held-, the Netherlands Minister for Development Cooperation, by letter of 3 March 1998 (see appendix 1), requested the Netherlands independent Commission for Environmental Impact Assessment to advise on review of the Environmental Assessments for the project and other future relevant documents.

This advice has been formulated by a working group of the Commission. The composition of this working group is presented in appendix 2. The group represents the Commission and will therefore be referred to as the 'Commission'. In the Commission the following disciplines are represented: ecology, sociology, anthropology, technical aspects of oil exploration, production and transport, environmental aspects of oil exploration, production and transport, agriculture.

The review covers the following documents, made available to the Commission by the Directorate-General International Cooperation of the Ministry for development Cooperation:

- ! Environmental Assessment Chad portion.
- ! Environmental Assessment Cameroon portion.
- ! Plan de Compensation et de Réinstallation Tchad.
- ! Environmental Management Plan (EMP) Cameroon Portion.

In its review, the Commission has considered the EMP and the 'Plan de Compensation et de Réinstallation' as being integral parts of the EAs. Reference made to the EAs also includes reference to the other documents reviewed.

## 1.3 Approach and limitations

The review is done, using the World Bank's Environmental Source book, Operational Directives 4.01 (Environmental Assessment), 4.20 (Indigenous people), 4.30 (Involuntary Resettlement), Operational Policies on Forestry (OP 4.36) and Natural Habitats (OP 4,04), Environmental Sourcebooks Updates on Public involvement in EA, Technical papers No 55 (Techniques for assessing Industrial Hazards: a manual), 80 (Involuntary Resettlement in Development projects) and 126 (Environmental Considerations in Port and Harbor Developments).

Observations presented in this advice only address major issues. On request, the Commission is prepared to provide more detailed comments.

The Commission has not been able to undertake a site visit and discuss with local parties, involved in the project or influenced by the project. The Commission has included in the working group both experts with extensive experience in Cameroon and Chad and a resident of Cameroon. It has

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3 The press release announcing the EA does not identify the Cameroon government as project proponent, does not specify the decisions for which the EA has been prepared and does not declare that the Cameroon government endorses the contents of the EA. The Commission is not aware of any other document illustrating endorsement.

organised an information session with resource institutes in the Netherlands involved in projects in both Chad and Cameroon and has been in contact with and has made use of knowledge of resource persons in both Cameroon and Chad.

## 2. MAIN CONCLUSIONS

The Commission is of the opinion that the EAs, the EMP Cameroon Portion and the 'Plan de recompensation et de réinstallation' provide valuable information on social and environmental impacts of the project. Positive points of the reports are that:

- ! An attempt has been made to be comprehensive. Most aspects are covered.
- ! There is a high level of detail of the Chad portion 'Plan de recompensation et de réinstallation'. A good resettlement plan has been drafted.
- ! The documents provide a detailed description of the sites for installation and of the design of the technical installations for oil transport.
- ! A number of issues is addressed in good detail in the EMP Cameroon Portion.
- ! The EAs present useful and detailed maps.
- ! In its approach -as described in the documents- a comprehensive process of public involvement has been drafted.

Recognizing and valuing the virtues of the studies, the Commission has reservations on some major aspects of the EAs. The Terms of Reference (ToR) for the EAs may have asked to address these aspects, but verification thereof is not possible as the ToR are missing in the appendices of the studies.

### Problem analysis and objectives of the project

- ! The realisation and functioning of the project has not been placed in the context of an unstable socio-political environment.

Given the facts that both Cameroon and Chad: **1** are poor countries that implement structural adjustment programmes; **2** have weak government structures; **3** cannot be considered as politically and socially stable countries, the Commission would have expected that the EAs would have addressed all possible environmental risks resulting from especially these circumstances.

Even if technically perfect, the oil winning, transport and loading facilities will only function in an environmentally acceptable way if this functioning is not purposely disrupted. Socio-political instability could make oil exploitation facilities vulnerable to acts of sabotage, with subsequent serious environmental damage.

- Recent clashes and obstruction of political opposition illustrate that, at this moment, the political situation both in Chad and Cameroon is unstable.
- Both in Chad and Cameroon the populations have high expectations with regard to the Oil Export Project. For the following reasons disappointment and frustration will occur over project's effects on job availability and economic development/poverty alleviation.

- \* In Chad, due to successful exploration activities, expectations for jobs and poverty alleviation have developed.

*Project's contribution to job creation:*

An estimated 2400 (2000- 3000) jobs for Chadians are expected in the construction period. For the lifetime of the projects the EA indicates that jobs are available for some Chadians. Experience in the region shows that scores of job seekers will accumulate in the project area. The EA confirms that only a small part of them will be satisfied on a short time basis, fewer on a long-term basis.

*Project's contribution to poverty alleviation:*

Poverty alleviation can be realised if revenues are certain and proper and transparent management of revenues is secured. The EA gives indications on the contents of the convention between the Consortium and the Chad government but gives no details. At actual world market prices for crude, revenues will be limited. The EA does not describe how and where revenues will be used for poverty alleviation and how proper royalty management is guaranteed.

- \* In Cameroon the project has been presented as a chance to solve unemployment- and economic problems.

*Project's contribution to solving unemployment:*

During construction an estimated 1000-1500 Cameroon nationals will be employed. During operation 200 jobs will be available for Cameroon nationals. These numbers may not live up to the expectations. Moreover, given experience with recruitment of workers to date, the majority of the workforce may not be recruited in the project areas, potentially giving rise to tensions between native workers and workers recruited elsewhere.

*Project's contribution to solving economic problems:*

Cameroon government fee and tax income of the pipeline exploitation is estimated to amount (present value) to 47 million US\$ in the first four years of exploitation, dropping gradually to an estimated 10 million US\$ in year 30 (if no oil of other fields than those foreseen in the project is transported through the pipeline). These amounts are far from balancing the annual budget deficits of Cameroon, actually estimated at 220 million US\$ in 1997.

If external debt service (estimated at 640 million US\$ per year) and internal debt are included the amounts are even less significant<sup>4</sup>. It is clear that, in the most favourable circumstances, the project will only be able to contribute slightly to the solution of Cameroon's economic problems.

Given the risk of political instability and the possibility of future frustration over project's interaction with the local and national institutional, social and economic environments, ingredients are present for attacks and acts of sabotage on the project's infrastructure. Such acts will notably cause considerable environmental and social damage.

The socio-political situation has hardly been addressed in the EAs. Socio-political risk assessment has not been presented. No socio-political preconditions for project approval have been formulated. Environmental and social impacts of acts of sabotage have not been assessed in the EAs.

- ! The EAs state that project's objective is to produce, transport and sell oil from the Komé, Miandoum and Bolobo oilfields and that this exploitation is expected to cover a period of approximately 30 years. However,
  - the design capacity of the system is 250.000 barrels per day. This capacity is slightly in excess of the estimated peak production of the Doba basin oil fields, a production that will only be maintained in the second, third, fourth and fifth year of production. In year eight, average daily production is expected to be at 125.000 barrels, falling gradually to 25.000 barrels in year thirty. This means that available excess transport capacity grows from approximately 90.000 barrels per day in year six to 225.000 barrels per day in year thirty.
  - the EAs explicitly acknowledge the possibility that additional crude from the Komé, Miandoum and Bolobo oilfields or from other oilfields may be transported through the system;
  - the Convention of establishment of COTCO covers a 25 years period, renewable with 25 years;

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<sup>4</sup> Given the levels of revenue for Cameroon there seems reason to check the overall benefits and cost calculation of the Cameroon portion of the project. On the basis of the information contained in the EA, this is, however, not possible.

- this Convention explicitly foresees the possibility that oil of other oilfields (including fields in Cameroon) is transported through the system;
- Cameroon has recently started exploration activities in the Cameroon part of the Logone Birni basin.

These facts make it plausible that the project may have more extended objectives than the production, transport and selling of the Komé, Miandoum and Bolobo oilfields as stated in the EAs. If this is indeed the case, then the EAs lack essential information on project's objectives.

### Project description

- ! Project planners have adopted an approach of: 'general attention for environmental issues in basic project design, foreseeing provision of more environmental information as engineering proceeds'. As a consequence of this approach, the EAs lack essential information on crucial components of the project: environmental management for the Chad portion of the project, compensation for the Cameroon portion, oil spill response and easement access management for both portions. For this information the EAs refer to studies yet to be made public. Without these studies, which should be integral components of the EAs, the effectiveness of mitigation and the significance of residual impacts cannot be judged.

### Alternatives

- ! Alternatives are not fully worked out and compared. The adequacy of the selection process of alternatives cannot be verified. Examples are the presentation of the offshore Floating Storage and Offloading (FSO) vessel as being the environmentally preferred alternative for loading facilities and the transect of the pipeline.

### Impacts

- ! Potential major induced impacts have not been addressed in the EA. Some examples are given here:
  - The presence of the project provides for excess transport capacity in the region. Moreover, as the objective of the project is defined as production, transport and selling of oil of the Komé, Miandoum and Bolobo oilfields, amortization of project investment will be done on production realized in these oilfields over the first years of the expected production period. As a result, the price of the excess transport capacity during and after this production period will be low. Availability of transport capacity (at low prices) may facilitate:
    - \* exploitation (at a convenient point in time) of other oil reserves in southern and eastern Chad and the northern part of the Central African Republic;
    - \* exploitation of reserves of which exploitation would, otherwise, not have been feasible.
 These potential induced developments have not been identified. Their impacts have not been addressed.
  - the fact that Kribi develops as an oil loading station may trigger development of long desired road and deep sea port development (Grand Batanga) in the southern part of Cameroon. If it does, it will have a potentially great effect on forests<sup>5]</sup> and biodiversity and important social impacts. Assessment of the probability of these impacts might significantly have influenced the selection of the location for loading facilities and the location of the pipeline corridor.

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5 Forests including forest reserves and other classified areas

Moreover, the potential cumulative impacts of Kribi-, Limbe- and Malabo oil activities on the gulf of Guinea and its ecosystems have not been addressed in the EA.

Another example of a non-assessed potential impact is the impact of increased access to vulnerable areas without taking proper management measures. Eg. there is a possibility that herdsmen, walking cattle from the Ngaoundere and Ngaoundal region to Yaoundé, would be eager to use the significantly shorter pipeline corridor for their migration movements.

- ! Judgements on the significance of effects are insufficiently substantiated with quantitative and verifiable data. The feasibility and effectiveness of proposed mitigating measures have not been assessed <sup>6</sup>. Residual impacts have not be qualified nor quantified. As a result, the EAs read to some extent as a scoping exercise rather than as an Environmental Assessment.
- ! No qualitative or quantitative risks assessments for flow line-, pipeline- and coastal facilities (FSO) spills have been presented in the EAs. Quantitative assessment of impacts of spills are missing as well.
- ! In several paragraphs the EAs are a sweetheart statement, giving announcements without providing proper evidence that substantiates them. Some examples of these statements are:
  - the project has a beneficial impact on the economical development of the local people (Chad portion page 1-11)  
No specification is given on the (numbers of) local people that will benefit, the extent to which they may benefit and the mechanisms in place that will make them benefit. Substantiation of this statement is of particular importance as there still is a controversy between northern and southern Chad. Oil exploitation will take place in southern Chad while the decision power on revenue spending is mainly in the hands of representatives of the north.
  - the no-project alternative would be detrimental to Chad (Chad portion page 4.12)  
In the reasoning substantiating this statement, only the assumed positive effects of the project are mentioned.

### Monitoring and evaluation of project implementation

- ! The EAs refer to national legislation and national institutions for enforcement of relevant legislation. Moreover the EAs refer to national institutions for implementation of a part and monitoring of all the mitigating measures.  
The EAs neither comment on the adequacy and comprehensiveness of legislation and the state of law enforcement in both countries nor present assessments of the functioning of the institutions identified to implement and monitor mitigating measures.

The Commission has doubts about the adequacy of the proposed arrangements for law enforcement and for implementation and monitoring<sup>7</sup> of mitigating measures. Important opportunities are missed or insufficiently worked out. Eg. the opportunity:

- to establish participatory resource management and conservation in the Mbere Rift valley;

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6 There is doubt about the effectiveness of some of the mitigating measures proposed, eg.:

- providing information on safe sex as effective response to Sexually Transmitted Diseases;
- Providing information on safe driving as effective means to improve traffic safety;
- Prohibition of consumption of game during working hours and on the projects premises.

7 A first experience: compensation for loss of crops due to clearing of a 3 m wide alley for the proposed pipeline intersect has been paid to Cameroon villagers. No information has been provided prior to the payment as to the basis of this compensation. It is not known on which criteria the amounts paid as compensation are based, neither is the process that fixed them. For some important crops the compensation paid is not in line with World Bank criteria.



- to establish an advisory/management committee in which all stakeholders are represented for the transect line as a whole;
- to build up and strengthen local environmental institutions;
- to strengthen environmental legislation and its enforcement.

Given the lack of institutional strength with respect to supervision and enforcement on environmental measures in Chad and Cameroon and the poor environmental legislation, the consortium's own environmental care system is essential in order to maintain the environmental measures over time. Given the weakness of environmental institutions in both countries, the Commission considers external monitoring of the adequacy of this system (by for instance ISO 14001<sup>8]</sup> certification) desirable<sup>9]</sup>.

## Public involvement

! In the EAs extensive attention has been given to public participation. In the field, however, the public participation process during ToR definition and EA-writing has not been up to World Bank standards:

Cameroon:

- Public discussion on the necessity of the project has not taken place. The project has been presented as a chance to solve Camerouns unemployment and economic problems. This way of presenting the project has not created an 'enabling environment' for public participation. One result has been that opposition against the project was silenced as opposition against the project would have been explained as opposition against the national interest. Another result has been that false hopes have been raised.
- According to the EA, ToR writing has taken place involving appropriate government ministries and a number of NGOs. It has taken place without further public participation. Draft ToR have not been discussed with relevant stakeholder groups, especially those affected. This is not in line with World Bank OD 4.01 and the World Bank Sourcebook Update on public involvement. These directives require involvement of (potentially) affected groups in Draft ToR preparation and draft ToR review.
- Pygmies, as affected indigenous people, are reported not to have been consulted for project design. According to Operational Directive 4.20 this should have been done.
- The socio-economic survey carried out in a selected number of villages and locations in Cameroon is presented as public information and consultation activity. The Commission has the opinion that this survey cannot be qualified as such.
- The full volumes of the EA and the EMP have been presented for consultation in 16 towns in Cameroon. The Commission doubts whether with this approach the consultation process has reached the directly affected groups in the villages.

Chad

- In public participation after publishing of the EA was reported to take place under military escort while, in the region military actions against rebels were taking place. There is doubt that such circumstances can be qualified as an 'enabling environment' for public participation.
- According to the EA, a most important stakeholder group has not been reached by the public participation process. Pastoralists have not been informed or consulted. Still, the project will interfere with traditional migratory routes and dry season grazing lands. No alternative routes have been developed and agreed upon with pastoralists and sedentary populations. Given the already tense relationships and frequent conflicts

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8 ISO 14001 is a globally accepted standard for environmental management systems. The standard has been published by the International Organization for Standardization (ISO) in September 1996.

9 Lloyds Register Quality Assurance has issued a statement that the environmental management components of the Operations Integrity Management System (OIMS) are consistent with the intent and meet the requirements of the ISO 14001 Environmental Management Systems Standard. This statement, however, is no ISO 14001 Certificate. It does not involve regular field checks on implementation of the OIMS.

between pastoralists and sedentary population the Commission considers this as a serious shortfall of the public participation process.

**From these observations the Commission concludes that essential information is lacking in the EAs. On the basis of these EAs the project nor its environmental consequences can fully be overseen. The Commission advises to supplement these EAs on all points raised as the pertinent information is essential for well informed decision-making. The Commission offers to review published additional environmental information.**