

**International Advisory Group**  
*Chad-Cameroon Petroleum Development and Pipeline Project*

**REPORT OF THE VISIT TO EXXONMOBIL - HOUSTON OFFICE**

**REVIEW OF BASELINE STUDIES**

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**International Advisory Group**

Mamadou Lamine Loum, President  
Jane I. Guyer  
El Mazide Ndiaye  
Dick de Zeeuw  
Jacques Gérin, Executive Secretary

**IAG Secretariat**

5 Place Ville-Marie, bureau 200  
Montréal (Québec)  
CANADA H3B 2G2  
Tél.: +1 514 864 5515  
Fax.: +1 514 397 1651  
E-Mail: [secretariat@gic-iag.org](mailto:secretariat@gic-iag.org)  
[www.gic-iag.org](http://www.gic-iag.org)

## Acknowledgements

The IAG thanks the personnel of ExxonMobil for their willingness to comply with our request to see the baseline studies, and for their efficiency in facilitating our exploration and understanding of these materials. This text benefits from review and editing by ExxonMobil staff, with respect to technical accuracy and historical completeness *only*.

## List of acronyms and abbreviations

COFACE	Compagnie Française d'Assurance pour le Commerce Extérieur
D&M	Dames & Moore
EA	Environmental Assessment
ECMG	External Compliance Monitoring Group
EMP	Environmental Management Plan
FSO	Floating Storage Offshore
GEPFE	Groupe d'Étude des Populations Forestières Équatoriales
GIS	Geographic Information System
IAG	International Advisory Group
IFC	International Finance Corporation
IPP	Indigenous Peoples Plan
MINEF	Ministère de l'Environnement et des Forêts (Cameroon)
NGO	Non-governmental organization
OIMS	Operating Integrity Management System
STD	Sexually Transmitted Diseases
URS	URS Corporation
USEXIM	Export-Import Bank of the United States
WB	World Bank
WBG	World Bank Group
WWF	World Wide Fund for Nature

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## **1. Participants**

### **1.1 For IAG:**

Jane I. Guyer, Member IAG  
Céline Houdin, Documentalist, IAG.

### **1.2 For ExxonMobil:**

Clayton F. Kaul, Technical Manager, Chad Development Project (Friday debriefing only).

Kelly J. Moynihan, EMP Supervisor, Chad Development Project (in place of Kaul on 2/28).

Gary L. Hayward, NewFields. Formerly V-P Dames & Moore (now URS). Brought down from New Hampshire for our visit.

Lori K. Magyar, Senior Environmental Planner, URS, current keeper of the Chad-Cameroon project archive.

## **2. Purpose**

In light of its own and project stakeholder interest in the nature of "baseline studies" for the Chad-Cameroon Petroleum Development and Pipeline Project, the IAG undertook a visit to Houston to review them. The studies reviewed are those carried out by the Consortium up to the issuance of the 20-volume set of Environmental Management Plan (EMP) documents in 1999, and including studies mandated at that time by agreements amongst the major parties to the project.

This mission was informational: to help give us a complete overview of the archive on the status quo ante, and to understand how these documents are kept, used and made accessible as implementation progresses. It should be noted that the Consortium considers them accessible on request, so this report can serve as an initial guide.

## **3. Daily Activity Summary**

Feb 28<sup>th</sup>

9 – 10	Review of baseline documents (Moynihan, Hayward, Guyer, Houdin)
10 - 10.30	Visit with GIS/survey/map specialist Katie Springer
11.30 – 20.30	URS (formerly Dames & Moore). Review of documents, discussion. (Hayward, Magyar, Guyer, Houdin)

Mar 1<sup>st</sup>

8.30 – 14            Review of documents at URS (Guyer, Houdin)

15 – 17.30        Debriefing, ExxonMobil office (Kaul, Moynihan, Hayward, Guyer, Houdin)

#### **4.            Overview**

There is a set of documents specifically referred to as “baseline studies”<sup>1</sup>. The baseline studies consist of the set of reports written by consultant specialists and others (e.g. Exxon scientists) up to 1999, generally under contract to Dames & Moore, who managed the majority of the environmental studies carried out on behalf of the Consortium prior to June 2000. (Some studies, such as the marine studies, were contracted directly by Exxon, but were supervised by D&M, while others, such as the detailed Centerline Survey, were conducted by Exxon).

The list of baseline studies referenced and incorporated as part of the 1999 set of EMP documentation is attached.

The EMP documentation notes that these baseline studies are available on request, but Moynihan stated that we are the first people to ask to consult them in detail subsequent to the release of the EMP in 1999. In fact, there has been a small number of requests (i.e., from private firms, consulting companies, and individuals) for copies of specific documents since the publication in 1999. They have not received a request from the World Bank, nor from the several NGOs concerned by the project since that time.<sup>2</sup>

The reports are kept in a library at URS, also in Houston, and not at the ExxonMobil office for the Chad-Cameroon Project. Except for GIS information, they are now considered a “static resource”: that is, consulted from time to time but no longer being added to or updated since the EMP was issued in May 1999. Eventually they will be sent to the company archive, off-site, along with the paperwork on other aspects of the project, such as accounts.

These baseline study reports are to be distinguished from three other data sets:

- a. Proprietary data about the nature of the commercial resource: subsurface evaluation of the resource; plans for exploiting it; internal assessments (OIMS). This information is not accessible to non-Consortium members.
- b. On-going studies and/or monitoring which have been undertaken since 2000: surface-water, air quality, inflation, new primate studies, new Bagyeli/Bakola studies, socio-economic monitoring and others. Many of these studies are required by the EMP. Others are issue-driven. They are, for the most part, kept in-country, some on continual update. They may be made accessible upon specific request, but are not generally in the public domain.
- c. The databases from which the baseline studies were written. These belong to the company, but most are in the possession of the scientists who collected them for use in

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<sup>1</sup> The Baseline studies were used in conjunction with the development and preparation of the 1997 Environmental Assessment (EA) documents and the 1999 20-volume set of Environmental Management Plan (EMP) documents.

<sup>2</sup> The World Bank Group extensively reviewed all of the supporting documents that are currently in the collection housed at the URS offices in Houston during the synthesis of the 1997 EAs and the 1999 EMP.

their own publications, probably after the beginning of the operations phase. One example is the archaeological data that the Project has and continues to collect.

Access to the baseline studies can be gained through Clayton Kaul who is the External Interface Manager for the project. He can call on the expertise of several project people who have been on the job for many years. They are able not only to find specific reports but also give fuller explanations of their commission and use. Their commentaries were very important for our understanding of the role of the studies for the development of the project.

The baseline studies are now available in Houston and we were told that two sets of copies of selected reports will soon be sent to Chad and Cameroon to be put at the disposition of in-country scholars.

## **5. Brief History of the Studies**

### **5.1 The Dames & Moore Contract**

The studies were done for the specific purpose of identifying potential environmental impacts related to the project: for avoidance and mitigation, and to make decisions when needed. They were not intended as scientific surveys of all the environmental conditions in the oilfield and pipeline areas before work began.

Dames & Moore was contracted to manage the environmental studies and produced its first report in October 1993. This is a detailed review of published literature, with an annotated bibliography on biological, physical and human environments. The narrative identified apparent gaps in existing data coverage and the most significant issues to be anticipated. This review was done before acquiring site-specific on-the-ground information in areas that would potentially be impacted by the project.

Most of the subsequent studies were commissioned via subcontracts from D&M. D&M identified potential candidates for each contract and gradually narrowed down the list of candidates by proposal and presentation. Some of the contracts were explicitly intended to summarize the state of current and existing knowledge and not necessarily to carry out original field studies or to verify the results of past work. (We give examples below). Some of the subcontractors in turn could contract out parts of their mandate, with accountability to the main contractor on the terms of reference and cost of the contract. D&M (now merged with URS) is still under contract to the Project.

### **5.2 The Process**

Each stage of the studies had a specific purpose and audience, which is reflected in the focus and approach evidenced in the reports.

Before 1995, the project was still under negotiation with the governments, when the first aim of the Consortium was to assess the economic feasibility of the project. Consequently field studies were limited until the economic viability of the project was confirmed. Some topics studied at this stage were essential to the engineering as well as for environmental management purposes: e.g. soil studies (for composition and heat retention), hydrology (for river flow dynamics), marine studies (for decisions about the shore crossing and the offshore terminal).

Other phases related to environmental management were planned and budgeted in response to the subsequent development of the project. After the World Bank formally came into the process in 1995, there was a stage of field-based studies (1995-6), which were represented in the Environmental Assessments of 1997, delivered to the World Bank and made available for public review/comment. Also included in this phase were satellite imaging and aerial photography analyses, and other studies used to define the pipeline corridor, which was decided in 1995, from three alternatives. The Centerline Survey was then undertaken in 1997-8 to determine and optimize the final pipeline alignment within the selected (optimal) corridor.

There was a pause in project implementation, and then a spurt in research activities, between 1998 and 1999 when negotiations were under way with the different Lenders (i.e., World Bank, IFC, USEXIM, COFACE) about the final route for the export pipeline and terms of the EMP. Exxon commissioned several new “supplemental” studies from October 1998 to April 1999 in response to the Lenders’ review of the 1997 EAs. Volume 2 of the Supporting Documents of the EMP, named “Alternatives Analysis”, is considered to be a “bridge” between the 1997 EAs and the 1999 EMP with regard to defining the ultimate pipeline alignment. The text of the EMP was finalized in April 1999, with representatives of all the parties present, including delegations from the Governments of Chad and Cameroon that featured Ministry of Environment representatives.

Studies subsequent to 1999 are of two sorts: those specific to the precise pipeline alignment (technical, environmental, archaeological), and those used to meet the ongoing demands of monitoring required under the EMP.

### **5.3 The Nature of the Studies**

The initial baseline studies conducted by Dames & Moore were done in 1993 and the last was finalized in 1999. As mentioned above, certain baseline data continue to be collected and recorded by the Project’s EMP monitoring personnel and specific contractors in both Chad and Cameroon.

The initial baseline studies in 1993 and 1994 consisted of both : 1) a review of relevant published materials (e.g., collection of existing documents, land use, basic hydrology, offshore surveys, and technical engineering data); and, 2) focused siting studies and related in-country reconnaissance and ground-truthing activities. Also as part of this initial effort, a substantial amount of satellite imagery and other existing mapping data were acquired and analyzed in order to identify a number of potential 30-km wide pipeline corridor alternatives leading from southern Chad through Cameroon to the coast. Given the interrupted nature of scientific research, especially in Chad, the published materials referred to were of varied quality and recency.

Once the optimal 30-km pipeline corridor was identified, the Consortium acquired a series of aerial photographs along it. This was followed by a second stage of studies, a series of environmental and social studies undertaken during 1995 and 1996 focused on identifying the preferred 30-meter wide onshore pipeline alignment within the 30-km wide pipeline corridor, as well as marine studies to identify the subsea pipeline and marine terminal locations. There is a set of detailed trip reports for this period, with a peak of four documented trips in 1996. Several include minutes of meetings with local people and NGOs, as well as government representatives. These 1995-6 field studies focus on specific issues for project implementation, and include the two basic socio-economic studies of the populations in the oilfield area and along the pipeline route and basic environmental (i.e., wildlife, botanical) studies within the pipeline corridor.

A third stage of studies was conducted in 1998 and 1999 in response to the WBG's and others' review of the 1997 EA documents. They are termed "supplementary studies", devoted to: Vegetation and Ground-truthing Survey of the Pipeline Route (Cameroon Portion); Fishery Survey (Cameroon); Bird Survey (Cameroon); Amphibian and Reptile Survey (Cameroon); Mammal Survey (Cameroon), and indigenous peoples.

Some issues were not re-addressed in this period : e.g., hydrology and off-shore fisheries. The 1998-9 studies are more like general scientific studies in their breadth of coverage.<sup>3</sup> As articulated in the 1999 EMP, some issues are being addressed now in more detail than in the original baseline studies, in order to inform specific mitigating actions. An example is groundwater quality, which is monitored more closely now, during the construction phase, than in the earlier phase. In the case of the Oil Spill Response Plan, the (very large) document is the framework document (the General Oil Spill Response Plan). The elements currently under development are the "area specific" response plans, which have to be in place before the oil starts flowing in the pipeline. They will be made available six months before this date. These ongoing studies relate to predetermined survey requirements, monitoring responsibilities, or issues that arise, in accordance with an "adaptive design approach".

URS/Dames & Moore estimates spending over 200,000 man-hours on field studies, data analysis and reduction, and EA and EMP document development through June, 1999. ExxonMobil is not aware of any other baseline studies prepared by other participants, such as the World Bank Group or the governments with the sole focus being the Chad Development Project. An exception might be the Watson/Ngoidi report of 1998 on regional development, which was commissioned by the Government of Chad, and addressed issues of induced migration that had been raised in a previous Dames & Moore document. This Dames & Moore document was initially presented as Appendix E to the 1997 Chad Environmental Assessment.<sup>4</sup> World Bank officials who made site visits in 1998 and 1999 included members of the World Bank team (Cynthia Cook, Robert Robelus, Philippe Benoit, Cyprian Fisiy, Jean Roger Mercier, and Michel Layec to name but a few).<sup>5</sup>

## **6. Structure of the Records**

ExxonMobil had prepared a list of all the documents it considers to be "baseline studies" prepared and/or acquired for the Project up to the release of the 1999 EMP that included a large collection of at least 60 satellite images along the whole pipeline and in the oilfield development area, and a complete set of aerial photographs along the pipeline alignment taken for the project in 1995.

With the possible exception of the satellite images and the aerial photographs, the baseline studies prepared on behalf of the Project can be made available to requestors. They are in one place and numerically catalogued at the URS office. The documents are stored by catalog number. For our use, they had arranged the collection in piles by topic. Occasionally there are

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<sup>3</sup> Although, once again, the focus of these studies was primarily to identify potential impacts and develop appropriate avoidance and/or mitigation strategies.

<sup>4</sup> Appendix E was subsequently updated, and included as Appendix H to the Regional Development Plan prepared by the Government of Chad and presented as Volume 4 of the 1999 Chad EMP.

<sup>5</sup> This list does not include the various environmental and socioeconomic experts representing the IFC (i.e., that part of the World Bank Group focussed on the private sector) who also participated in numerous in-country missions during this period – such individuals include Ron Anderson, Eric Brusberg, and Glen Armstrong.

duplicates, or early drafts and final versions, but the gross numbers are as follows: soil (4), offshore (6), air (5), noise (2), zoology (4), biology (9), hydrology (13), hydrogeology (4), socio-economic (14), photograph albums (7) and “miscellaneous” (4). The “miscellaneous” category includes a Pipeline Corridor Route Selection Study, by Gulf Interstate Engineering, Aug. 1993; a GIS Documentation Report, by Dames & Moore, July 1995; and the Environmental and Socioeconomic Services Final Report, Data Assimilation and Review, October 1993.

In addition, they had displayed a series of 13 in-country trip reports (not considered baseline documents per se, but provides an indication of the number and nature of many of the earlier in-country trips carried out by Exxon and their consultants), and other key documents used by Dames & Moore and the Consortium on a frequent basis, that are in the public domain but were not prepared on behalf of the Project. These included “Long Term Recurrent Costs of Protected Area Management in Cameroon”, by James Culverwell (WWF and MINEF/Cameroon), March 1998; and Botanical and Ecological Survey of the Campo/Ma’an Area prepared by Duncan Thomas in 1992. Note that not all trip reports are contained in the URS collection – for example, field notes from the 1997/98 pipeline Centreline Survey are not included.

There was also a set of “deliverables”, that consisted of the 1997 Environmental Assessments for Chad and Cameroon, several additional Appendices and related documents to the 1997 EAs submitted to the Bank, and the 20-volume 1999 set of EMP documentation, including a full set of the environmental alignment sheets for the pipeline alignment and the oilfield development area.

## **7. Use of the Studies**

### **7.1**

As has been mentioned previously, studies were primarily used for technical design, issues/impacts identification and developing appropriate avoidance and/or mitigation strategies.

There are five levels of data compilation and analysis, from the baseline studies to the finalization of the final 20-volume set of EMP documents issued in 1999, only four of which are documented here: the initial “data assimilation and review” conducted in 1993; the baseline studies themselves; condensation and analysis of data into key points (the material in the 1997 EAs and the 1999 EMP Supporting Documents); and, the 1999 EMPs themselves. The fifth input into the compilation is a great deal of discussion and collaborative work in the field among staff for all the parties, and negotiation, which are not documented.

Baseline studies commissioned by the Consortium are not necessarily used by other parties (e.g. the governments) for other purposes (e.g. if findings come up that fall outside the responsibility of the Consortium). There is no necessary follow-up on the reports by the Consortium if issues fall outside their own domain of responsibility. For a contrary example: the original Regional Development Plan study (on the prevention and/or mitigation of immigration) was commissioned by the Chad government after the Consortium had provided an assessment prepared by Dames & Moore (not catalogued, but as previously mentioned, it is included as Appendix H to the Regional Development Plan prepared by the Chad government and presented in Volume 4 of the 1999 Chad EMP). After that, however, they took no further part in the research on this topic.

Post-1999, the Consortium designs focussed studies and acts on specific issues that arise, for example as reported by the Local Community Contacts. On this principle, the Consortium has, for example, recently paid the transportation costs to return a number of unemployed workers home from a spontaneous settlement in Cameroon, and they decided to diagnose and treat curable STDs in a village close to Komé.

## **7.2 Synopses of Specific Studies**

The following synopses can serve to illustrate sequences of studies on certain important issues.

### **7.2.1 Hydrology, Hydrography, Hydrogeology and Water Quality Studies**

Taking into account the preoccupations expressed by the civil society and other actors concerning water, we paid special attention to the baseline studies conducted to give a portrait of the hydrology, hydrogeology and water quality of the project area before the construction phase.

- a) The Consortium adopted an impact-related approach to determine the depth and the level of detail needed to address the “land water” topic. Two different sub-topics were to be distinguished: the surface water and the groundwater. Based on an analysis of available data as well as some field data obtained in the oilfield area in 1995, they were judged to be little impacted by the environmental assessment team.
- b) The hydrology studies, addressing surface waters, were relatively basic. The hydrological studies specifically addressed small sections of the main rivers to be crossed by the Chad-Cameroon oil pipeline. Most of the hydrology studies were conducted by a French consultant company (Antea) which was contracted to review the relevant literature. No field surveys were made by the company that were specifically focussed on surface waters.

The bibliography associated with the Antea hydrological studies (1995-6) shows that most of the data referred to were historical in nature. Very little data were available from 1984/86 and later, and much of it was data prior to 1980. Those data were hydrometric, evaporation rates and concentration of several elements to address the water quality. Antea specified in its reports that hydrometric data were of poor quality and there were many gaps which made difficult a statistical analysis of the results. There are no recommendations.

- c) The Bureau de l'Eau of the Republic of Chad conducted several field studies in 1995 (under contract from Dames & Moore/Antea) to give a portrait of the quality and quantity characteristics of the groundwater resources in the oilfield area before oil exploitation. This environmental synthesis of the geology, hydrogeology, pedology, climatology and hydrography of the Doba area featured data from the 1980's supplemented by chemical and bacteriological analyses from 30 sampling locations distributed across the region.
- d) The groundwater was notably studied in order to evaluate its potential along the pipeline route as several pumps would be installed for the construction activities and for consumption. Consequently several hydrogeology studies were conducted by Antea, SNC-Lavalin Inc., and D&M. The Antea final report (Feb. 1996) is a hydrogeological study based on current data and documents in Antea's possession. Few

recommendations were made in this quite interesting report. Dames & Moore utilized the Antea report to identify and assess potential impacts and suggest appropriate mitigation strategies (if warranted).

The Dames & Moore Hydrogeological Study and Groundwater Quality Assessment of the Doba Project Area (1997) consists essentially of analytical results of the subcontracted laboratories which had worked with the Bureau de l'Eau. The results did not indicate a significant impact due to the oil exploration activities on the shallow groundwater sampled from the village wells.

The SNC-Lavalin hydrogeological report is very short and consists of a review of the existing documentation to make a choice in the location of the water supply borings. The bibliography of this report lists several documents which could be interesting to gain a better knowledge of the regional geology and hydrology. The last documents are not referred to as baseline studies.

- e) The superficial and groundwater studies are not comprehensive geological, climatological or geographical studies. The data presented in these specific studies were utilized in the analysis presented in the 1997 EAs to give an overview of the situation in the project area. Taking into account the impacts of the project expected on water, the Consortium presented relevant mitigation measures. These same baseline studies were also used to prepare the 1999 Chad EMP.

### **7.2.2 Fisheries Studies**

- a) The initial Data Assimilation and Review document of 1993 was compiled from published sources. There is a substantial annotated bibliography on commercial and artisanal fishing, and it mentions the Fisheries Research Station in Limbe (Cameroon). It appears that most attention at this stage was focused on marine fisheries, rather than rivers. Under the category of "biological data gaps" the document noted that most marine resource studies already available relate to commercial fishing and plankton; apparently artisanal fishing had not been well-studied. The report suggested developing a marine biological sampling program, which was developed and conducted as part of a marine survey program in the offshore region near Kribi in 1995 (see Gardline Surveys).
- b) In the Cost-Benefit study (1996) for the Project as a whole, the estimation of oil spill costs made no reference to the sources in the Review (1993), noting "Due to a lack of fisheries data it was difficult to assess the damages" (p.13). Possible damage was estimated by a formula: an estimate of Cameroon fish production was divided by the proportion of the coast expected to be affected (6.2%) and by the length of time it would be polluted (1 month).
- c) There was a supplemental study commissioned in 1998, focused on fishing in rivers (18 pages, plus figures, tables and a long bibliography). It seems comprehensive in ambition and notes that fish resources are "incompletely documented", although "extremely rich". There are no specific recommendations.
- d) At the debriefing we asked about the limited nature of the fisheries studies. The answer : It was concluded that potential impacts to river fisheries as a result of pipeline construction and operation activities would fall into the "less than significant" category due to the fact that if such impacts did occur, they would take place immediately adjacent to the narrow pipeline easement and would be very short in duration (<< 1

month). In addition, large scale commercial marine fisheries production in the vicinity of subsea pipeline and marine terminal does not occur, in part because the nearshore area in the vicinity of Kribi is affected by a large influx of fresh water and sediment loads from several large rivers that discharge into the sea along the Cameroon coast. A noticeable lack of commercial fish species was also documented in the 1997 Cameroon EA based on a series of trawls conducted in the offshore area as part of the offshore surveys conducted in 1995. However, it was acknowledged that there are small fishing groups in the Kribi area that do drift net fishing from dugouts and supply fish to local hotels and fish markets in the area, and there is also some subsistence fishing in the area as well. The ability to conduct drift net fishing and subsistence fishing in the area is not expected to be impacted, other than in the immediate Project area during offshore construction activities (about 2 months), or from a small exclusion area around the Floating Storage Offshore (FSO) only during operations.<sup>6</sup>

Therefore, based on the above it was determined that potential impacts to marine fisheries in the area as a result of construction and operation of the subsea pipeline and FSO would also fall into the “less than significant” category. It was also pointed out that some of the most productive fisheries in the world are located in oil production areas : e.g., the North Sea and the Gulf of Mexico.

The Area-Specific Oil Spill Response Plans will be released for public review six months before the oil starts flowing. This is unusual; as in most projects these plans are typically released only to a defined regulatory (i.e., governmental) agency at the time of the first oil flow.

### **7.2.3 Socio-Economic Studies**

- a) The Review of 1993 covers a large range of topics, and notes many issues.
- b) There is a stage of studies completed in 1996 :
  - i. Economic cost-benefit studies for the countries. These were done using models, and came up with massive benefits by comparison with costs. Methods look very formulaic, and the bibliography is very short. Probably the “global cost” question for the project never came up again in that form.
  - ii. On Southern Chad (137 pages plus maps, bibliography etc.). It focuses on economic life, and offers advice about compensation alternatives. It is based on fieldwork: study of a sample of 5% of villages, 5% of households in each.
  - iii. On Cameroon (90 pages plus maps, bibliography etc.). A team studied areas all along the pipeline route, from Kribi to Mbéré, focusing on production, land ownership, and local political issues. Offers recommendations on mitigation. The main

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<sup>6</sup> Footnote provided by Exxon : A series of detailed oil spill trajectory analyses prepared from a set of hypothetical oil releases from the FSO indicated that the nearshore currents and winds could bring spilled oil to the beach. The type of shoreline most likely to be affected in the event of an oil spill (based on the detailed set of oil spill trajectory simulations and an analysis of coastal characteristics and shoreline types, as well as the coastal land use, vegetation and wildlife that was presented as Appendix C to the 1997 Cameroon EA and again as Volume 4 of the Supporting Documents to the Cameroon EMP in 1999) is one of the least productive from a biological standpoint and one of the easiest to clean up (e.g. sandy beaches and a few rocky headlands).

researcher was the first to point out that there was an “indigenous peoples” issue. Exxon was not aware of this issue before 1996, as government officials and NGO’s had not indicated the presence of indigenous people in the project area prior to that time.

- c) Two studies of the Bagyeli/Bakola were launched in 1996, in response to the Consortium’s new perception of the issue, and completed in 1997. They were carried out by the Groupe d’Étude des Populations Forestières Équatoriales, and they located all villages and established total populations. They are both very detailed.
- d) This same group carried out market surveys for the purpose of establishing compensation rates for crops to be affected all along the pipeline from Kribi to Meiganga (1997) and in Southern Chad in 1998.
- e) The GEPFE also reported on a meeting with 43 Bagyeli/Bakola in Kribi in 1999, to discuss the IPP.
- f) Two studies on the northern stretch of the pipeline in Cameroon were reported in 1998: on the roadway development from Meiganga to the Chad border and at Dompta. The focus was on land, job access, sacred sites, local political leadership.
- g) A review of the compensation process in Chad was made in the field in 1999, consisting of detailed interviews with four recipients.

Studies after this point are not in the “baseline” archive. They include all monitoring obligations and needs for case-by-case interventions as identified by the Local Community Contacts.

## **8. Some Observations**

### **8.1 Documents in the Archive**

The URS/D&M and ExxonMobil personnel are very knowledgeable and willing to help us to understand the research process.

Because the data are kept by the consultants, the accessible archive is smaller than we expected. The reports also seem to us of quite variable length, thoroughness and general quality. Hayward himself said that he thought the biology reports were particularly good, involving original science (discovery of new species) as well as useful information for the project. ExxonMobil personnel mentioned their increased respect for the socio-economic work.

They made it clear, however, that they do not aim for comprehensive study, except where necessary. The baseline studies are not actively used documents because they do not establish the standards for monitoring. These are in the EMP. Ongoing monitoring refers to the EMP and not directly to the original studies. Given our sense of the variable depth and quality of the studies, it would be important to examine the standards that did end up in the EMP. In general, it seems worth while for Céline to study key sections of the EA and the EMP to have a complete understanding of the issues raised by the project and how the studies, conducted before and after 1997, informed the standards.

## **8.2 Post 1999-monitoring**

Monitoring is building up important information that is only selectively available. It is important for us to know how this monitoring information is shared with the external monitoring groups: the national monitors and the ECMG, in particular.

The interaction of the parties about the findings of on-going studies is not clear. How do findings become interventions, and for whom? Is the increased direct intervention by the consortium in economic life in the south, that we see since our last trip, due to lapses in the response of others to their findings?

It seems clear that, on some topics, a broader information base would be very useful for the countries to compile, building on the material in the Consortium archive. Insofar as water and fisheries are concerns of the population, they probably need more detailed attention.

**ANNEX**  
**EXXONMOBIL BIBLIOGRAPHY**

## EXXONMOBIL BIBLIOGRAPHY

### ALPHABETICALLY IN TOPICS

**Legend:**

- Not available during our visit (Copies sent to IAG)
- Available but not included in the URS list of documents

TOPIC	SECTION	AUTHOR, TITLE	Nb. Of pages	CODE
	Reports (White)	Dames & Moore, 1996. Environmental Standards and Numeric Guidelines, Exxon Chad Doba Development Project, June 7, 1996.		D&M.553.14
Socio-Economic	Socio-Economic Issues (BLUE)	GEPFE (Groupe d'Etude des Populations Forestières Equatoriales), 1997. <i>Survey of Pygmy Population, Lolodorf to Kribi Area, Republic of Cameroon</i> , June 1997.		GEP.327.5
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TOPIC	SECTION	AUTHOR, TITLE	Nb. Of pages	CODE
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