Quality Analysis of the EIA Draft Report for the Baku-Tbilisi-Ceyhan Oil Pipeline: Turkish Part

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# Quality Analysis of the EIA Draft Report for the Turkish Section of the BTC Oil Pipeline

## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>List of Abbreviations</td>
<td>2</td>
</tr>
<tr>
<td>1 INTRODUCTION</td>
<td>3</td>
</tr>
<tr>
<td>2 SUMMARY OF FINDINGS</td>
<td>4</td>
</tr>
<tr>
<td>3 DETAILED ANALYSIS</td>
<td>9</td>
</tr>
<tr>
<td>3.1 Communication of Results</td>
<td>9</td>
</tr>
<tr>
<td>3.1.1 Emphasis and Bias</td>
<td>9</td>
</tr>
<tr>
<td>3.1.2 The Non-Technical Summary</td>
<td>10</td>
</tr>
<tr>
<td>3.2 The EIA Procedure and Timing</td>
<td>11</td>
</tr>
<tr>
<td>3.3 Alternatives</td>
<td>12</td>
</tr>
<tr>
<td>3.4 Environmental and Social Baseline</td>
<td>13</td>
</tr>
<tr>
<td>3.4.1 Environmental Baseline</td>
<td>13</td>
</tr>
<tr>
<td>3.4.2 Social Baseline</td>
<td>15</td>
</tr>
<tr>
<td>3.5 Project Description</td>
<td>16</td>
</tr>
<tr>
<td>3.6 Waste Management</td>
<td>17</td>
</tr>
<tr>
<td>3.7 Methodology</td>
<td>18</td>
</tr>
<tr>
<td>3.8 Prediction and Evaluation of Risks and Impacts</td>
<td>19</td>
</tr>
<tr>
<td>3.8.1 Risk Assessment</td>
<td>19</td>
</tr>
<tr>
<td>3.8.2 Residual Impacts</td>
<td>21</td>
</tr>
<tr>
<td>3.8.3 Indirect and Cumulative Impacts</td>
<td>22</td>
</tr>
<tr>
<td>3.9 Management, Mitigation and Monitoring</td>
<td>22</td>
</tr>
<tr>
<td>3.9.1 Management Plans</td>
<td>22</td>
</tr>
<tr>
<td>3.9.2 Environmental Mitigation Measures</td>
<td>23</td>
</tr>
<tr>
<td>3.9.3 Social Mitigation Measures</td>
<td>24</td>
</tr>
<tr>
<td>3.9.4 Land Compensation</td>
<td>25</td>
</tr>
<tr>
<td>3.9.5 Monitoring</td>
<td>26</td>
</tr>
<tr>
<td>3.10 Consultation and Public Participation</td>
<td>27</td>
</tr>
<tr>
<td>4 CONCLUSIONS AND RECOMMENDATIONS</td>
<td>29</td>
</tr>
<tr>
<td>4.1 Methodology</td>
<td>29</td>
</tr>
<tr>
<td>4.2 Alternatives</td>
<td>30</td>
</tr>
<tr>
<td>4.3 Mitigation Measures, Management and Monitoring</td>
<td>30</td>
</tr>
<tr>
<td>4.4 Consultation and Public Participation</td>
<td>31</td>
</tr>
<tr>
<td>List of References</td>
<td>32</td>
</tr>
</tbody>
</table>

This analysis was prepared by Dusan Sevic (Central European University, Budapest) for CEE Bankwatch Network.
List of Abbreviations

AGI  Above Ground Installation
BOTAS  Boru Hatlari ile Petrol Tasima A.S.
BP  BP (formerly known as British Petroleum)
BTC  Baku-Tbilisi-Cheyan Oil Pipeline
BTC Co  BTC Pipeline Company (BTC Owners)
EA  Environmental Assessment
EBRD  European Bank for Reconstruction and Development
EIA  Environmental Impact Assessment (also, the EIA Document for the BTC)
EMMP  Environmental Management and Monitoring Plan
EIA  Environmental Impact Assessment Draft Report for the Baku-Tbilisi-Cheyan (BTC) Oil Pipeline: Turkey Part
GWP  Global Warming Potential
IFFM  International Fact Finding Mission
NGO  Non-Governmental Organisation
NTS  Non-Technical Summary
OP  (World Bank Group) Operational Policy
PCDP  Public Consultation and Disclosure Plan
PM  Particulate Matter
PS  Pumping Station
ROW  The strip of land in which the pipeline will be laid
QRA  Quantified Risk Assessment
SEA  Strategic Impact Assessment
SMMP  Social Management and Monitoring Plan
WB  World Bank (Group)
WMP  Waste Management Plan
1 INTRODUCTION

The present Analysis examines the quality of the Environmental and Social Assessment Draft Report for the Baku-Tbilisi-Cheyan (BTC) Crude Oil Pipeline: Turkey Part (in further text EIA). The EIA was prepared by BP (formerly known as British Petroleum) with contributions from ERM, ENVY, KORA, and Veri Arastirma. The EIA was prepared for the BTC Owners, known as BTC Co (formerly known as the BTC Pipeline Company).

The BTC Pipeline will run through Azerbaijan, Georgia, and Turkey. Another pipeline, the South Caucasus Gas Pipeline (SCP), will run in parallel through the same 44m wide corridor. The two pipelines will transport products from the Azeri-Chirag-Gunashli (ACG) Offshore Oil Field Development, and the Shah-Deniz Gas Development in the Caspian Sea, as well as other regional crude oil and condensate streams. The products will be transported from the Sangachal Terminal in Azerbaijan, to the Turkish port city of Ceyhan.

BP has been nominated by the BTC Owners to lead the engineering design work for the project on behalf of the BTC Owners. As stated in the Introduction Chapter of the EIA, BTC Co will be responsible for construction and operation of the proposed pipeline in both Georgia and Azerbaijan, while the construction in Turkey will be the responsibility of the State Company BOTAS.

The goal of this Analysis is to assess the quality of the EIA Draft Report and Draft Non-technical Summary (NTS) and the inherent Environmental Assessment (EA) Procedure, outline their main deficiencies, and give recommendations for improvements. This goal is achieved by quality analysis of the Report’s subcomponents describing the different stages of the EA procedure, applying the modified Lee and Colley (Lee et al. 1999) methodology for reviewing the quality of environmental statements and environmental appraisals.
2 SUMMARY OF FINDINGS

Communication of Results:
The structure and organisation of the document is logical, however it should have had chapter summaries and proper cross-referencing. Many of the maps are of scale and detail inappropriate for their function. There should have been a greater number of detailed maps, especially those concerning soils, sensitive natural areas, and wildlife habitats. Many important aspects of the project, especially those with negative environmental aspects are not covered in the Non-Technical Summary. There is not enough information about interactions with other projects in the sector/region.

Emphasis and Bias:
There is a great number of examples of inappropriate focus and emphasis, as well as bias. When the positive impacts are discussed, for example in the Non-Technical Summary, the affected population numbers and the significances are inflated, and when the negative impacts are discussed such as in Chapter 6, these numbers and statements are deflated.

Disproportionate emphasis is given to the employment opportunities for the local people, termed as "long-term economic value", which is not true, since the created jobs for the local population will be short term, and of a small per capita ratio. The questionnaire and information leaflets are basically project-promoting material.

Alternatives:
Methods used for comparing the alternatives are not explained. The EIA did not provide sufficiently detailed and precise information on and comparison of potential impacts from different alternatives. Even though it is stated that the final alternative selection was done in order to minimize potential negative impacts, the route crosses several Internationally Important Wetlands, two sites protected under Turkish legislation and 49 ecologically sensitive areas (NTS, p.15). It is evident that changes in the pipeline route were dominantly driven by technical and economic considerations, and to a much lesser extent by social and ecological limitations.

Baseline:
There are inconsistencies between the methodology described in Chapter 3 and the procedures described in the baseline and impact related chapters. The probable future state of the environment in the absence of the project, is not clearly defined.

There are no precise specifications of the timeline for the construction phase in relation to climatic and ecological seasonal variations. The flora and fauna studies did not cover periods long enough in order to cover those seasonal variations either. There are no proper references to exact sampling methods and locations. Furthermore, there was an insufficient number of these field studies, so the ecological evaluation relied more on pre-
existing studies, which were not always referred to. Some of the necessary field studies have not been performed at all, and it is not specified whether and when that will be the case, nor how would the results of these studies be incorporated in possible EIA updates or management and monitoring plans, nor whether and how would these new data influence the application of mitigation measures. There should have been deadlines, responsibility, liability and funding details provided.

**Project Description:**

The design lifetime of the pipeline is 40 years, and for the pump stations it is 30 years, and the scenarios for the last 10 years are not clearly defined. The quantities of steel needed during the construction are not indicated. Also, there is no clear information about the nature and quantities of all hazardous materials, neither for the construction, nor for the operation phase.

The estimated durations of elements of both the EIA process (disclosure, determination, and approval) and the construction phase are presented in Figure 4.3. However, this figure only provides general information regarding the timeframe of the project and leaves out important details, such as the exact times of starting and finishing construction at each of the locations. The timescale is limited to increments of years, without specific monthly plans that would indicate that special care is taken in avoiding construction during migration or nesting periods of important species, nor for periods of low flows of watercourses.

There is insufficient information about quantities of materials. The means of transporting raw materials and products are given but data on quantities are incomplete. For example, it is given for joints but not other materials. The SEA gives no precise information on how the developer plans to carry out project decommissioning to ensure that this phase will not have significant environmental and social impacts.

**Wastes:**

The quantities are not estimated for all waste types. It is stated that waste treatment will be carried out by “third party” local operators. However, there is no information about local capacity, i.e. whether there are any competent operators, or adequate facilities in the region. In case there are not adequate facilities for landfilling, recycling and incineration in the region, the project should invest in development of these facilities, with capacities greater than the project related waste-streams. In case such facilities/operators already exist, they should have been identified, checked for compliance and preliminary agreements should have been signed.
Methodology, Risks and Impacts:

The environmental and social baseline methodologies are deficient, with questionable results and skewed interpretations. Very often baseline analysis is based on secondary sources and unrepresentative data.

The risk assessment of oil spills impacts caused by accidents on the Pipeline and the Marine Terminal is incomplete. Not all key risks and impacts were proportionally assessed according to their potential magnitudes and significances. Necessary refined analysis for meaningful assessment of risk probabilities and impact magnitudes was announced but not executed. There are no confidence limits of all the calculated risks and magnitudes, and the overall significance of impacts was not properly determined.

There is no risk assessment for accidents related to Above Ground Installations (AGIs), nor for other types of accidents. There is no detailed risk assessment methodology and risk process presentation. This should have been presented in a separate document and included in the Technical Appendix.

There are serious deficiencies regarding the methods of impact magnitude prediction and impact significance assessment. There is no justification for the selection of methods. There are not enough maps of appropriate scale and level of detail. Some impacts have not been identified at all. Air Emissions data is incomplete, namely there is no air emissions data for all AGIs and tankers. There is often not enough relevant data on sources, pathways and receptors. Impact magnitudes are in some cases predicted arbitrarily, without use of sound scientific methods. Due to the methodology deficiencies, impact significance has been underestimated in many cases. Environmental impacts discussed in the EIA apply to the construction and operation phase but there is no consideration of the impacts related to decommissioning.

The EIA provides atmospheric emissions estimates only in relation to project operation. This document should have provided estimations for emissions arising from the use of oil exported through the BTC pipeline, expressed both in absolute values and as Global Warming Potential (GWP) Emissions. Since these emissions present indirect, induced, and transboundary impacts of the project, their estimations should have been outlined, and compared with the total global emissions forecasts, in order to present the contribution of the project related emissions to global emissions.

There is insufficient discussion about cumulative and synergistic impacts with third party developments, and there is no meaningful discussion on the overall cumulative, transboundary and indirect impacts of the BTC project on the regional and global scale.
Mitigation Measures:

The criteria for mitigation measures selection are not explained. There is no information on funding sources and mechanisms for implementation of selected mitigation measures. No information is provided on mitigation measures implementation monitoring arrangements (which should have included provisions for third-party independent monitoring as well). There are not enough environmental indicators listed that will be monitored throughout the operation phase.

Compensation:

It is stated that more information about land use impacts will be given in a Resettlement Action Plan (RAP) that is “currently under preparation”. The RAP should have been already developed and included in the EIA.

Even though it is stated that the compensations will be made for temporary and permanent land acquisition, there is no concrete data on the sums that would be reimbursed to the owners. There should have been a methodology developed for land classification in terms of its value. This methodology should have been published as an official document and subject to public consultations, and finally included in EIA documentation.

Instead, land expropriation and evaluation will be left to the local authorities, according to the Turkish Expropriation Law. In the light of existing corruption and human rights situation in the region, it is doubtful that the compensation process will be fair and transparent. Provisions should have been made for independent monitoring of the compensation process.

Management and Monitoring:

The Environmental Management and Monitoring Plan (EMMP) and Social Management and Monitoring Plan (SMMP) are not complete. These are only draft frameworks for the necessary management and monitoring sub-plans (e.g. Waste Management Plan, Pollution Prevention Management Plan, Community Liaison Management Plan etc.). Most of the sub-plans are either not developed at all, or presented only in draft form, and further elaboration of these sub-plans is left to the construction contractor, to be devised “prior to the beginning of the construction phase”.

The individual sub-plans do not include timing, costs of environmental monitoring and implementation of mitigation measures, financing responsibilities. There are no provisions for independent monitoring either. All this bears the potential for conflicts and delay the project, or inappropriate planning and carrying out of the mitigation measures. All this shows that there is no evidence of genuine commitment to mitigation measures.
The EMMP and SMMP should have included a detailed schedule and a step-by-step description required actions. There is no data about spacing and periodicity of monitoring activities. There should have been a monitoring program as an integral part of EIS, including lists of activities necessary for implementing monitoring activities and mitigation measures. The frequency and details of monitoring should have been determined based on different activities’ durations, potential impact magnitudes and significances, and the importance of each environmental factor concerned. Without this, potential delays or incompliance in implementation of mitigation measures and monitoring activities could cause a decrease in the efficiency of the mitigation measures or even be a cause of irreversible effects. It would also be necessary to determine an external, truly independent group of auditing bodies responsible for monitoring the implementation of environmental monitoring activities and mitigation measures.

**Consultation and Public Participation:**

The public participation process had a number of irregularities regarding information presentation and population sampling and it is not in line with the World Bank Group’s Environmental Assessment Policy, EBRD Public Information Policy, EBRD Environment Policy and Environmental Procedures, European Union Directive on Environmental Assessment, Aarhus Convention and the Espoo Convention.
3 DETAILED ANALYSIS

3.1 Communication of Results

The structure of the report is logical and it must be said that it presents an improvement comparing to the EIAs for the Azerbaijan and Georgian parts of the BTC. External sources are acknowledged in reference lists provided after each chapter. However, there are no chapter summaries that would give overviews of essential findings of each chapter. At some instances, inadequate terms are used.

The Introduction Chapter describes only the overall objective of the EIA process. However, specific objectives and aims are not mentioned in the introduction. Furthermore, there is no explanation of how the overall objective of the environmental impact assessment is to be achieved.

There are a number of color maps, some of which provide adequate and easily accessible information. However, in some sections there are maps not appropriate for their assigned function. In most cases the scale and/or level of detail are not appropriate. Graphs are sometimes missing vital information. Some of the tables have wrong units indicated and others do not refer to external data sources used.

Cross-references are often either missing, wrong, or open-ended, making many of the claims not verifiable. Many sections are providing either not enough essential information or too much irrelevant information, often unnecessarily repeated, making the use of the document inefficient. There are cases of non-congruent or even contradictory claims either in different parts of the EIA or even within the same subsection.

3.1.1 Emphasis and Bias

Many parts of the EIA suffer from inadequate emphasis and bias problems. There is a repeated emphasis of employment benefits that the project would allegedly provide. The EIA document lobbies for the project and the included questionnaire examples reveal that lobbying was systematically present in public consultations.

Chapters 5 and 10 provide lists of predicted positive and negative impacts, however the overall balance is skewed toward (mostly employment) benefits. It is estimated that 5,000 workers will be employed at the peak of construction, for short periods of time, dropping off to 350 workers employed during operation. These numbers show not only that the benefits will not be as significant as it is emphasized in the EIA, but also that the post-construction period will negatively effect all those that will be laid off.

Also, the question is what is the relation this number (5,000) to the total number of people unemployed in the region. Regional statistical figures should have been given in order to realistically assess the significance. Also, most of these workers need to be
semi-skilled or skilled workers (with experience in pipeline construction of 5-10 respectively 10-15 years). Therefore, it is highly questionable whether “priority in employment should be given to the villagers”, not to mention that most of the local people are “dependent on agriculture and fishery”, which means without experience in and skills for pipeline construction work.

Furthermore, the local labour force will be needed only for the construction period, which is 2 years. However, for individual workers it will mean much less. The mobility of local people in the rural area is probably quite low, and similar construction work in the same region is not likely in the near future. In appendix C8, it is stated that unskilled workers (most of the local people) will work only “in the district in which they live and potentially in neighboring districts up to a distance of 50 km from their place of residence”, which will most likely last for only a few months.

There is no clear information about the awareness of the population along the pipeline on the real possibilities for short term and long-term employment. Limited number of short-term jobs during construction, with very limited long-term opportunities during operation, is in contradiction with the “stated development component” offered by BTC Consortium to the affected population. There is no discussion about the potential conflict over the real employment opportunities and the expectations about the number of jobs. Similar conflict might occur due to allowing foreign workers or workers from other regions in the country to work on the construction due to low level of skills of the population along the pipeline.

In section 6.14.2 (pg. 6-59), which deals with negative impacts of local employment, it is stated that the impact is not considered to be significant “given the low percentage of temporary labour that will be employed on the Project”. It is obvious that when the positive impacts are discussed, the affected numbers and the significance are inflated, and vice versa.

The notion of the possibility for overall development of the affected settlements is not clearly defined. There is no elaboration on the claimed long-term benefits for the communities along the pipeline, except the above discussed “employment benefits”. The project does not envisage small-scale projects along the route. Despite the quite substantial energetic demand of the communities along the pipeline, the project will not provide any incentives to improve this (FoE 2002).

**3.1.2 The Non-Technical Summary**

The Non-Technical Summary (NTS) is clear and it contains the description of the project, environmental and social baseline description as well as the main impacts and mitigation measures. However, much of the essential information on basic categories (environmental and social baseline, alternatives, project characteristics, risks, impacts, mitigation measures) is missing, while on the other hand, many sections are overburdened with non-essential PR type information, some of which is unsubstantiated.
The Executive Summary should provide concise, essential information about the:

- Project (physical properties, energy requirements, wastes, emissions)
- Considered Alternatives
- Assessment Process (incl. consultation and public participation)
- Environmental and Socio-economic Baseline
- Predicted Impacts (character, magnitude, significance) and Risks
- Management of Impacts
- Monitoring

Most of these categories are not presented in a satisfactory way. Much of the essential information is missing, while on the other hand, many sections are overburdened with non-essential PR type information, some of which is unsubstantiated (see following sections).

The NTS does not discuss waste issues. There is no information about residual impacts. There is no discussion on minorities, they are even not recognised as such but merely as “language minorities”. Also, not all methods for data gathering are mentioned. Moreover, no reason for placing confidence in those methods has been mentioned. There is no information about the comparative experience from the Georgia and Azerbaijan BTC sections. It is stated that “49 ecologically sensitive areas have been identified along the route, mainly on the basis of the plant species they contain.” (NTS, p. 15). But there is no description of the methodology used, what are the marker species, correspondingly it is vague and unconvincing. Mitigation measures are not adequately described either. The pipeline crosses 2 protected areas, however, the discussion on mitigation measures is that “construction works will be allowed ... provided necessary precautions are taken” (NTS p. 16), without providing necessary details.

### 3.2 The EIA Procedure and Timing

Instead of performing Impact Assessment for the whole region and sector first, separate project level EIAs have been devised for the Azerbaijani, Georgian and Turkish parts of the BTC pipeline, as well as for the Caspian Sea ACG oil and Shah Deniz gas field developments.

Strategic Impact Assessment (SEA) can be devised in two forms: Regional Environmental Assessment and Sectoral Environmental Assessment, as defined by the World Bank (WB 1996). SEA (both Regional and Sectoral) should have been performed first, in order to improve the efficiency of the individual project EIAs. This conceptual error was the cause of many of the deficiencies described in this analysis.

As for the Turkish part of the BTC oil pipeline, the EIA procedure is lagging one step behind the project design process. For example, the Environmental and Social Management Plans should have been completed together with the draft EIA report, making them available for comments in order to revise them and include in the final EIA document.
3.3 Alternatives

At the different levels of the pipeline routing, viable alternatives had been either not assessed at all, or comparisons of alternatives had been biased. There are instances in which non-genuine reasons for the choice of alternative were put up, in an attempt to hide the actual reasons, which are of an economic nature.

The only alternative to this development is considered to be “The No Development Alternative” (section 2.2.2) which lobbies the concept of building the BTC by describing the negative impacts of potential substitute pipelines. Alternatives such as refining of extracted oil in the region, which would provide economic and development benefits by exporting different oil products instead of intensive extraction and transport of crude oil were not considered in the EIA.

For the transportation method (section 2.2.3) five options have been evaluated. Means of transportation included (1) road, (2) rail, (3) pipeline (4) shipping and (5) combination. A deeper study should have been undertaken and described in detail. The main environmental advantages and disadvantages of alternative routes were not discussed. Only brief description of alternatives is provided, which is not sufficient for justifying the final choice and rejection of alternatives. The description of alternatives was not adequate for two reasons: none of the alternatives are detailed in description, there is no comparison of potential environmental effects for different alternatives. The EIA did not justify reasons for selecting proposed action as safe and long-term export solution. Criteria for justifying pipelines as best alternative for transportation of oil were not given. Alternatives with regard to endangered species were not considered which implies that probably the economic aspects of the alternatives were the ones that determined the final choice. The EIA does not provide the results of cost analyses of different alternatives.

In the section on Pipeline Routing in Turkey (section 2.3), the principles of the routing process are explained, claiming that the best possible route was selected. However, the most part of the pipeline passes through areas with first and second degree of seismic risk (Figure 5-25), the route crosses several Internationally Important Wetlands, two sites protected under Turkish legislation (Porsof and Sarikamis Forest) and very close to 49 ecologically sensitive areas (e.g. Alacorak and Ulas lakes).

There are no environmental advantages and disadvantages of the proposed alternatives presented, and no clear explanations of the final choice. For example, there is no clear explanation for the choice of the Posof-Horasan route, even though it represents the biggest switch from the original ‘base route’ identified in the feasibility study. Viable alternative pipeline routes were either not assessed at all or the comparisons of alternatives were biased in favor the final preferred route. There are no indications and justifications given to any residual or unmitigated impacts, which is surprising after the
experience of the OCEANSA pipeline in Columbia which was operated by the same BP (Muttitt and Marriott 2002).

It is claimed that alternative designs were considered (loading concept, new built terminal versus extension of existing facilities, VOC emissions control). However, in Chapter 2, it is stated that “extending the existing terminal was not considered as a viable option” (p. 2-32). There is no detailed discussion about the reasons for such a claim. This means that this alternative was given pro form. Furthermore environmental implications of mentioned alternatives are not discussed and compared in terms of their potential impacts.

3.4 Environmental and Social Baseline

Environmental Baseline data relies in many cases on secondary regional data sources, and not enough on location specific field studies. The used datasets are therefore not representative. Instead of using non-representative datasets, mobile field monitoring stations should have been used along the suggested pipeline route, during 2001/2002 in order to provide enough relevant data.

Social Baseline data is not credible enough, since a number of irregularities were identified in the Consultation and Public Participation process, most of which are described in the International Fact Finding Mission (IFFM) Report (IFFM 2002). The deficiencies are related to questionnaires’ contents, timing, sampling, and other elements of the social survey.

3.4.1 Environmental Baseline

The BTC Pipeline baseline conditions are described in Chapter 5, and the Marine Terminal baseline conditions are described in Chapters 10 (Onshore Baseline Conditions), and 11 (Marine Baseline Conditions). Methods and investigations undertaken in order to collect data are disclosed. Different information sources were used. The studies included literature research, desktop studies, and different surveys undertaken either for proposed BTC Marine Terminal or for other EIA studies of recent coastal development and consultation with local population.

The main objections related to these chapters are as follows. The methods and investigations undertaken for the identification and description of the affected environment are not always addressed or properly explained. The timeline for the construction phase should have been specified in more detail in relation to seasons. The flora and fauna studies were performed in too short a period in order to be able to observe seasonal variations. Local knowledge was not used in evaluating the regional seismic activity restrictions. There are no clear literature references on soil. The ecological evaluation relied heavily on literature reviews and the sources are not always referred to, while there should have been more project related studies in periods that would cover full
seasonal variabilities. Water quality conditions are discussed but no adequate information is provided on the character and extent of the dependency of local communities on water resources.

Furthermore, the “probable future state of the environment” is not properly addressed. The EIA states that the baseline study is done “to provide data to enable the prediction and evaluation of the significance of potential impact” and “to benchmark future environmental and socio-economic change/impact”. While the baseline chapters (Chapters 5, 10 and 11) indeed give plenty of data to meet these two tasks, they do not provide predictions on the future state of the environment without the project.

The temperature and wind data were obtained from two remote meteorological stations (Iskenderun – approximately 60 km and Yumurtalik 30 km away from the actual site). The rationale for choosing the particular marine sampling stations is not provided. Therefore it is not clear whether they are representative. The duration of some of the ecological surveys is not indicated. There is insufficient data on marine turtles.

The same has been done for wind data. Since the wind speeds and directions probabilities are extremely important in determination of the wave patterns, those measurements should have been included in field surveys in order to obtain relevant data.

The rationale for choosing locations for particular marine sampling stations is not given These stations should have been selected in such a way so as to include different habitats and various sediments. Without these parameters, the sampling stations cannot be considered as representative.

The durations of particular ecological surveys is not indicated (e.g. habitat and faunal surveys including reptiles and amphibians). It is not known whether the lengths of these studies were sufficient.

Even though the nesting season of Green turtle is not well defined, variable from one locality to another, and the peak nesting months in Turkish waters are not known, the actual survey was undertaken only during July 2001. Further monitoring is proposed to be included in Environmental Management and Monitoring Plan, which has not been done. In any case, the initial survey should have been undertaken through the whole year in order to capture seasonal patterns. Later in the text, seasonal sensitivities for marine turtle are indicated using year round data. It is not clear where do these data originate from, but it is obvious that they do not result from an EIA specific study.

Fish species and their abundance were monitored in two instances, during winter in February, and during spring in May. The data for summer were taken from the Sugozu Power Plant Study. Since seasonality is acknowledged and fishing is an important activity in the area, the EIA survey should have been conducted through one whole year, instead of two separate instances.
Data on reptiles and amphibians are obtained through communication with a person whose identity, role and expertise is not indicated in the text, nor in the reference list, which makes the credibility of information questionable.

The probable future state of the environment in the absence of the project, is not clearly defined. At the level of the entire project, the no-development option is presented, only in general terms. As for the Marine Terminal, indications of the future development of the Iskenderun Gulf coast are given (on-going industrialization, possible three more jetties and a power plant as well as further depletion of available sources to the local people is envisaged), however not in sufficient detail.

### 3.4.2 Social Baseline

The social baseline methodology is deficient, with questionable results and skewed interpretations. The methodology used in order to gain social baseline data is questionable. For example, it is explained that data was gained from Muhtars because it is politically sensitive to directly ask people. The questionnaire and information leaflets were designed with bias, with project-promoting questions. The mechanisms of land compensation are not clear and transparent.

The Non-Technical summary does not mention national minorities. In the main text of the EIA these are referred to merely as language minorities. The Kurdish and Cerkez ethnic populations are not mentioned as proper interest parties in the EIA document. Since broadcasting or publishing in Kurdish was banned up to August 2002, no written documents on the proposals of the project were available in Kurdish (KHRP 2002). Due to this, Kurdish communities, who represent about forty percent of the population of north-eastern Turkey where the pipeline is supposed to pass (Muttitt and Marriott 2002), were not provided with sufficient information, and were not enabled to express all of their opinions and concerns about the project. The Non-Governmental Organizations’ letter to International Financial Institutions (2002) emphasizes that “the EIA does not undertake a full assessment of the BTC project’s impacts on ethnic minorities along the pipeline route”.

The Fact Finding Mission conducted by the Campaign of the Kurdish Human Rights Project in August 2002 found massive discrepancies between BP’s claims about the consultation plans and the reality (KHRP 2002). The claims to have consulted approximately 270 communities within or near the pipeline corridor, but only a half of the concerned parties had been officially informed about the project. Furthermore, the Kurdish Human Rights Project released in press further objections that the questionnaires distributed to the communities “failed to provide adequate information and discourage objections to the project” (KHRP 2002). This is very important, especially in the context of minority repression and lack of freedom of speech.

According to IFFM (2002), the design of the consultation process is flawed and inadequate, with “questionnaires, skewed and limiting with respect to the responses they
invite, in both structure and vocabulary” and “discourages frank expression of concerns about the pipeline’s impact”. Furthermore, the IFFM report points to inadequacies of implementation, with the most interesting example being a village in Erzincan province “marked as having been consulted by telephone, [although] it has been deserted for many years, its houses fallen into ruins”.

In Chapter 5 it is stated that “since 1965, no official data have been collected on ethnicity in Turkey.” (p. 5-160). The majority of social baseline data was obtained through interviews with the local settlement leaders, the so-called Muhtars. As explained in IFFM (2002) the Muhtars do not represent a reliable source of information. From these interviews it was concluded that there is less than 4 per cent of Kurdish population. However, according to the data of Bankwatch (2002), there are at least 40 per cent of Kurds inhabiting the region. There is a history of tensions between the Turkish authorities and the Kurdish population in the area. The potential social impacts of military patrols that will guard the construction of the pipeline in this already volatile region, was not even mentioned in the statement.

The IFFM report noted that locally-consulted people were afraid to speak freely during the consultations. Nothing has been mentioned in the EIA about the freedom of expression in Turkey and people’s fears about saying things against the government and it’s activities. Turkey is a country known for violations of human rights and repression of minorities and freedom of speech. These result from the intolerance to “separatist” movements opposing the “indivisible integrity” principle, on which the modern Turkish state is build. Therefore, it seems that the consultation process for the implementation of a state-backed project was seriously undermined by the lack of consideration of the political climate in the affected local area (IFFM, 2002).

3.5 Project Description

Project description is provided in Chapters 4 (Pipeline) and 9 (Marine Terminal). Total surface areas are given for the Above Ground Installations (AGIs), but not for the pipeline corridor and access roads. Also, the data on the surface areas are scattered instead of being given together with the total area in one dataset. Most of the maps are of inadequate scale and level of detail. There are no separate maps/plans for AGIs. Schemes and descriptions of AGIs should have been provided, especially relating to pollution emission sources and treatment facilities, such as stacks, oil-water separators, spill tanks, retention ponds, and sewage treatment plants.

The design lifetime of the pipeline is 40 years, and for the pump stations it is 30 years, and it is not clear what will happen after 30 years. Air Emissions data is incomplete, namely there is no air emissions data for the Pigging Stations. The quantities of steel needed during the construction are not indicated. Also, there is no information about the nature and quantities of hazardous materials.
The estimated durations of elements of both the EIA process (disclosure, determination, and approval) and the construction phase are presented in Figure 4.3. However, this figure only provides general information regarding the timeframe of the project and leaves out important details, such as the exact times of starting and finishing construction at each of the locations. The timescale is limited to increments of years, without specific monthly plans that would indicate that special care is taken in avoiding construction during migration or nesting periods of important animal species, nor for periods of low flows of watercourses.

There is insufficient information about quantities of materials. The means of transporting raw materials and products are given but data on quantities are incomplete (e.g. it is given for joints but not other materials. In addition, the EIS gives a little information on how the developer plans to carry out project decommissioning to ensure that this phase will not have significant environmental and social impacts.

### 3.6 Waste Management

The quantities are not estimated for all waste types. It is stated that waste treatment will be carried out by “third party” local operators. However, there is no information about local capacity, i.e. whether there are any competent operators nor adequate facilities in the region.

Waste types are presented in the following tables: Table 4.6 Provisional Waste Inventory for Pipeline RoW; Table 9.4 Provisional Waste Inventory for BTC Marine Terminal Phase; and Table 9.5 Operational Emissions/Discharges for BTC Marine Terminal. These tables and additional information on waste can be found in the chapters related to the pipeline construction inland (4.14) and the marine terminal (9.8.3).

The **Waste Management Plan** in Appendix C3, includes Tables 3.1 Provisional Waste inventory for pipeline RoW; 4.2 Indicative Quantities of Waste for Incineration; 4.3 Indicative Quantities of Waste for Landfill; 5.1 Provisional Waste Inventory for BTC Marine Terminal. As to the quantities of these wastes, for most categories of wastes, the quantities are referred to as “TBD” or “To Be Determined”. It is not specified by when are these quantities going to be determined. Moreover, in Table 5.1 from Appendix C3, the quantities are not determined for any of the waste categories.

The ways in which it is proposed to handle and/or treat waste are summarized in the above mentioned tables under the column “Management Options”. These options include disposal to landfill, recycling, incineration, special treatment and disposal at “an appropriately licensed waste facility” return to supplier, re-use, and use as fuel.

The Management Options are unobtainable in the local and regional context. In spite of the fact that possible ways of waste treatment are indicated, there are no clear provisions for their implementation. The location and nature of landfills or the procedure of
recycling and incineration are not discussed. For most of the treatment options, it is stated that these will be carried out by “third party” local operators. The infrastructure in the area is undeveloped, and many settlements do not even have proper landfills or waste management system. It is highly questionable whether there are any operators in the country capable of performing adequate treatment. There should have been a baseline study performed, in order to identify any operators in the region, capable of performing adequate landfilling, recycling, or incineration for the needs of the project. In the very likely case of negative findings of such a study, provisions should have been made for developing such facilities/operators.

In other words, the project should have provided facilities for full treatment and disposal for its inherent hazardous wastes. Waste and waste water treatment plants, domestic and hazardous waste disposal sites, and incinerators should have been an integral part of the project, included in the project and EIA documentation, comprising baseline studies, locations, and detailed design. The Waste Management Plan should also specify the monitoring responsibilities and remediation measures and procedures in case of leaks/accidents related to landfills and incinerators.

### 3.7 Methodology

Baseline information mainly relies on secondary sources review and not enough on location specific field studies. The risk assessment of oil spills impacts caused by accidents on the Pipeline and the Marine Terminal is incomplete. Not all key risks and impacts were proportionally assessed according to their potential magnitudes and significances. Necessary refined analysis for meaningful assessment of risk probabilities and impact magnitudes was announced but not executed. There are no confidence limits of all the calculated risks and magnitudes, and the overall significance of impacts was not properly determined.

There is no risk assessment for accidents related to Above Ground Installations (AGIs), nor for other types of accidents. There is no detailed risk assessment methodology and risk process presentation. This should have been presented in a separate document and included in the Technical Appendix.

There are serious deficiencies regarding the methods of impact magnitude prediction and impact significance assessment. There is no justification for the selection of methods. There are not enough maps of appropriate scale and level of detail. Some impacts have not been identified at all. Air Emissions data is incomplete, namely there is no air emissions data for all AGIs and tankers. There is often not enough relevant data on sources, pathways and receptors. Impact magnitudes are in some cases predicted arbitrarily, without use of sound scientific methods. Due to the methodology deficiencies, impact significance has been underestimated in many cases. Environmental impacts discussed in the EIA apply to the construction and operation phase but there is no consideration of the impacts related to decommissioning.
3.8 Prediction and Evaluation of Risks and Impacts

The assessment of potential environmental and social impacts during the operational phase posed by the Pipeline is described in chapters 6, 7, 8, and by the BTC Marine Terminal in chapters 12, 13 and 14. These chapters lack maps of appropriate scale and level of detail. Some impacts have not been identified at all. There is often not enough relevant data on sources, pathways and receptors. Impact magnitudes often predicted arbitrarily, without use of sound scientific methods. Due to the deficiencies described regarding methodology, impact significance has been underestimated in most of the cases. Not all impacts were discussed in full detail, especially secondary and indirect impacts. Impacts of habitat disruption and noise on coastal species have been underestimated and cumulative effects of these factors has been omitted altogether.

The EIA provides atmospheric emissions estimates only in relation to project operation. This document should have provided data for emissions arising from the oil exported through the BTC pipeline, expressed both in absolute values and as Global Warming Potential (GWP) Emissions. Since these emissions are indirect impacts of the project they should have been compared with the total global emissions forecasts, in order to present the contribution of the project related emissions to global emissions, which will be significant, considering the fact that the ACG oil reserves are estimated to be 2 – 3 % of the known global reserves. Data for GWP Emissions is given for the Construction Phase but missing for the Operation Phase.

There is no risk assessment provided for accidents related to Above Ground Installations (AGIs), nor for other types of accidents. There is no detailed risk assessment methodology and process presentation. This should have been presented in a separate document and included in the Technical Appendix.

3.8.1 Risk Assessment

The oils spill risk assessment has been derived from oil spill frequency data for Western Europe (CONCAWE 1998). In section 8.4.1, the need to refine the above mentioned data in order to conform with site specific conditions was outlined, but not performed. Direct use of Western European data is incorrect due to differences in seismic risk, political stability, weather and geographical conditions. Potential increase of risk from political unrest was mentioned, but not dealt with. The same applies for incorporating weather conditions and increased earthquake risks. There is a mention of possible future evaluation by specialist consultants of fault crossings, ongoing investigations on river erosion and landslide hazards. However, without these data, the determination of risk frequencies and magnitude is meaningless. In section 8.4.3, refinements of these data are referred to as if they had been completed and enabled the calculations of site-specific spill occurrence frequencies. Regarding the calculated response times for determination
of spill volumes (Table 8.3), three characteristic spill size volumes are provided. However, no estimation of oil spill volume is given. Regarding checking the leak detection system (4.6.2) it only states that “leaks in excess of 1.0% of BTC full pipeline flow rate” can be detected, smaller leaks over a longer time may also be detected. There is one reference (8.7.2), that the average risk value compared to base case design was reduced by 90% in a computer model when appropriate block valve spacing were set. However, there are no detail about the spacing procedure and whether it was carried out because of environmental or economic considerations. There is no separate data on risk levels in environmentally sensitive areas.

The risk of ‘Third Party Intentional Interventions’ should have been derived from existing developing countries frequency datasets, and not from Western European datasets, because of evidently higher risks of terrorist and dissatisfied local population groups attacks. In this case the final risk estimates would have been higher. For example, the sabotages of the 772 km long Occidental Petroleum pipeline in Colombia have over the years produced almost 3 million barrels of spilled oil. The pipeline will not be guarded against terrorist attacks, which are highly probable due to the tense political situation related to Iraq. There is another already built pipeline in Turkey (East Anatolian Natural Gas Pipeline) very close to the proposed one. This is increasing the risks of terrorist attacks, and could provoke additional social discomtment and disturbance. Also, according to the Reinstatement Plan the land above the pipeline can be used for farming (Appendix C2, Reinstatement Plan, C2 – 42). The EIA should pay attention to these possible threats and develop a security program to prevent or respond to hostile actions against the strategic object if they occur.

Furthermore, the risk is presented only in incidents per kilometer per year (1/km/yr). The risk should have been calculated also for the whole Turkish section and for the whole length of the BTC pipeline. Also, the risk should have been calculated for the whole lifetime period (minimum 20 years, but more likely 40 years), as well for the entire range of events, not only for separate event types. The resulting whole project/length/lifetime Figures would have been several orders of magnitude higher, and would provide realistic risk assessment for the whole project and a meaningful estimation of its regional environmental significance. These Figures should have been also presented in the Executive Summary.

No details are provided about the location-specific spill risks modeling procedure. Only the final results are presented on a graph, unfortunately without providing relevant information on exact values of risk probabilities (labeled as ‘frequencies’) for specific locations nor for the overall ‘baseline’ risk. The names of the specific locations are not indicated, nor are their exact kilometer point (KP) positions. Names of those locations and their exact KP should have been presented, and each of the locations should have been discussed and explained the reasons for increased risk. Such discussion does not exist neither in this section, nor in any other part of the EIA.

The potential impacts of accidental events and incidents at the Marine Terminal, except for third party activity, are relatively well described in Chapter 14. However, the
methodology for consequence assessment is not explained, and the results are not justified (e.g. Table 14.21 Release Duration in case of fire/explosion). In several Tables different data was given for the same event (e.g. Table 14.7 and 14.20 Frequency per Year). Allegedly, the details on the Emergency Shutdown (ESD) and Emergency Release (ERS) systems are to be described in the Control and Operating Philosophy Document. However this document is not attached to the EIA. The acceptable risk limit (Fig. 14.11) is not justified. Identification of the consequences of transboundary spills was incomplete. In section 14.5.5 Transboundary Response (14.5.5), Israel is stated to be potentially at risk from an oil spill, however it is not mentioned in Table 14.4.

Several statements imply that an iterative risk assessment process was used in order to optimize mitigation measures, and customize them for different risk profiles. However, neither mitigation measures were optimized/customized, nor there was an iterative risk evaluation process relative to environmental sensitivity. Had it been the case, the number of Control Valves would have been increased in the higher risk and environmental sensitivity areas.

The risk assessment of oil spills impacts caused by accidents on the Pipeline and the Marine Terminal is incomplete. Key risks and impacts were selected but not all were appropriately investigated, according to their potential magnitudes and significances. Necessary refined data for meaningful assessment of probabilities and magnitudes was announced but not provided. There are no confidence limits of all the calculated risks and magnitudes, and the overall significance of impacts was not properly determined.

### 3.8.2 Residual Impacts

In many instances the residual impacts are underestimated, and there is insufficient consideration of appropriate mitigation methods for those impacts. This is especially true in the case of effluents and solid wastes. Section 13.5: impacts to water quality, is full of contradictions and omissions. For example, in section 13.5.2.1 it is stated that “sewage and grey water will be tanked to municipal sewage works ... or treated on site,” where the latter case would require the disposal of sewage sludge. However, there is no discussion of treatment and impacts of disposed sewage sludge. It is stated that the preferred disposal route for drainage from potentially contaminated areas is not yet finalized, but “if treated water is discharged to sea ... impacts are ... predicted to be minor under worst case scenario” without any specifications on different scenarios. Later in the same section it is stated that “As no wastewater will be discharged to sea, there will be no impacts to marine quality” which is clearly in contradiction with the previous statement. There should have been monitoring procedures provided for ensuring compliance with water quality standards.

There are no provisions for monitoring and inspecting waste-water disposal for the construction and operation phases. Section 13.5.2.1 discusses effluents from construction vessels and section 13.5.5.1 concerns effluents from tankers during operation. Both
sections state that standard wastes and discharges from vessels “will be managed according to Turkish and international regulations (specifically MARPOL 73/78)”.

Turkey has signed the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78) on 10 October 1990, entering into force on 10 January 1991. However, Turkey did not accede all articles of the Convention, including Article IV, which deals with sewage disposal (AMSA [online]). Several criteria for sewage disposal are listed, however in section 13.5.2.1 it is stated that “If the relevant regulations are followed and the standards met, impacts to the marine environment will be localised and minor in nature”. This vague statement, combined with the fact that Turkey did not sign Article IV, does not provide for minimization and localization of waste-water marine environmental impacts.

Solid wastes are discussed in section 13.5.2.2 where it is stated that “no impacts to the marine environment from disposal of solid wastes are ... anticipated”. This is explained by the assumption that “no trash will be disposed of overboard” and “no special wastes will be discharged to the marine environment”. There are no monitoring provisions given in order to ensure compliance with these statements.

On the IMO website it is stated that “Any violation of MARPOL within jurisdiction of any Party to the Convention is punishable either under the law of that Party or under law of the flag State”. The question remains whether all the tankers coming to the jetty will be under flags from countries that have ratified MARPOL. There are no measures proposed for tankers that are not under MARPOL obligations. There are no provisions for liability in such cases. There are no provisions that e.g. enable the Turkish Coast Guard to inspect those and other tankers. There are no action plans to address worst cast scenarios and specify responsible bodies.

### 3.8.3 Indirect and Cumulative Impacts

Another problem is the growth of traffic in the Gulf of Iskendrun. It is not mentioned among key residual impacts at all, and the project’s contribution to the cumulative effect of the traffic growth is understated. In chapter16, (p. 16-17) it is stated that “The BTC Marine Terminal will be one of several that will add to the degree of marine transport movements into and out of the Gulf of Iskendrun”. A development transferring 50 Mt/a of crude oil, will not be „one of the several”, but the major marine transport contributor, and as such, it will have immense contribution to the cumulative impacts.

### 3.9 Management, Mitigation and Monitoring

#### 3.9.1 Management Plans
The mitigation measures and monitoring are presented in chapters 6, 7, 8, 12, 13, 14, and in appendices C1 to C9. The Environmental Management and Monitoring Plan (EMMP) is in appendix C1, and some but not all of the announced sub-plans are in appendices C2 to C9. The commitment to, and effectiveness of the proposed mitigation measures is not clear. Not all of the mitigation measures that are indicated in the main document, are included in the environmental management plan, and there are no budgetary provisions. There is no precise timing and spacing information for the mitigation measures and monitoring activities. The compensation procedure is not well described. There is no information on how many workers will be employed to perform the highlighted mitigation actions.

There should have been a detailed monitoring program, to be an integral part of EIS and to include a list of activities necessary for monitoring the implementation of the mitigation measures. The frequency and details of monitoring should be determined based on each activity’s duration, potential impact, and the value of the environmental factor. In addition, an external environmental auditing body responsible for controlling implementation of mitigation measures, should be assigned. A schedule of deadlines for mitigation measures (i.e. dates for beginning mitigation activities plus a timeline for their duration), taking into consideration the specification of the relevant project activity and environmental factor should be defined.

No real commitment to mitigation measures can be observed. BOTAS is responsible for implementing the provisions of the EMMP and the SMMP and supporting plans and Contractors are responsible for the implementation of and adherence to all mitigation measures outlined in the EIS, EMMP, SMMP. However, budgeting and staffing is not discussed. Even though it is noted that management plans will provide the mechanism for implementation of each and every mitigation measure and commitment identified by EIA process, it is not clearly mentioned in EMP.

Regarding the choice of mitigation measures, the criteria for mitigation measures selections are not explained. There is no information on funding sources and mechanisms for the implementation of selected mitigation measures. No information is provided on mitigation measures implementation monitoring arrangements (which should include provisions for third-party independent monitoring as well). There are no timelines, nor evidence for the effectiveness of proposed mitigation measures. Mitigation measures are not proved to be sufficient to protect endangered species, habitats, wetlands and cultural resources. Although mitigation measures were planned to be detailed in Environmental Management Plan, this has not been done.

### 3.9.2 Environmental Mitigation Measures

The implementation of some of the mitigation measures seems to be very difficult to control, especially during the construction phase. There is control envisaged by BOTAS over the contractors. In section 17.3.3 it is stated that the contractors will have to comply with the provisions from the EIA. However, there is no clear procedure for independent
third party control on the implementation of mitigation measures. Moreover, there are no indications on the budget for these measures.

The pipeline crosses internationally and nationally important sites where over 500 endemic plant species have been observed, along the 500-m corridor. Mitigation measures are not proved to be sufficient to protect endangered species, habitats, wetlands and cultural resources. Although mitigation measures are claimed to be detailed in Environmental Management Plan, this is not the case. There have been no mitigation measures designed for prevention of disruption of the habitat and impact of noise for Loggerhead turtle and green turtle – species classified in the 2000 IUCN Red List as Endangered and Critically Endangered correspondingly.

The Block Valves are presented as mitigation measures for oil spills. In reality, Block Valves were introduced and their spacing optimized, only in the context of cost cutting. The costs taken into account were only those associated with Block Valves construction and maintenance, and costs associated to crude oil loss in case of spills. The cleanup and environmental damage costs were not taken into account. As a result, the Block Valves are evenly spaced, instead of their density being increased in highly environmentally sensitive areas.

The above findings lead to a conclusion the iterative risk assessment procedure and cost/benefit analysis, related only the cost of Control Valves and the value of oil that would be lost in case of oil spill. In this process, the costs related to oil spill cleanup and residual environmental damage were not internalized.

3.9.3 Social Mitigation measures

The Cultural Heritage Management Plan is provided in Appendix C7. The BOTAS company is committed to avoid any sites where cultural heritage remains might be discovered. The company plans to invite qualified archeological supervisors to secure that all valuable cultural remains are properly treated if discovered during the construction period. There is no information on financing to implement the measures, nor on independent monitoring.

The Social Management and Monitoring Plans (SMMP) are disclosed in Appendix C8. These are the Community Liaison Management Plan (C8 - 1.1); Construction Impacts Management Plan (1.2); Community Safety Management Plan (1.3); Employment and Training Management Plan (1.4); and the Procurement and Supply Management Plan (1.5). The overall Monitoring Plan for the construction and operation of the pipeline, AGIs, construction camps and Marine Terminal, is given in section 1.5.7 (should have been 1.6).

Most of the targets for the SMMP objectives’ performance indicators (sections 1.1.4, 1.2.2, 1.3.2, 1.4.2, and 1.5.2 in App. C8) are not provided, but left “to be determined prior to the end of disclosure as a condition of contract”. Tables that give exact
provisions of each SMMP (sections 1.1.6, 1.2.6, 1.3.6, 1.4.6, 1.5.6 in App.C8) do not have a column which would provide exact timing for each proposed action.

The potential adverse social impacts of the project are not addressed in a satisfactory way. The local population’s biggest concerns, such as land compensation, energy supply, infrastructure development and employment, were not adequately addressed. Adequate security measures against possible terrorist attacks have not been developed. There is no evidence that the compensation for displacement reflects the market value. Also, there is no information on existence of public funds to those who wish to challenge their valuations.

3.9.4 Land Compensation

Regarding land compensation, it is stated that “the largest proportion of land within the pipeline corridor (62% of surveyed settlement land) is owner cultivated” (p. 5-168) and that “there is little information on land prices” (p. 5-171). Even though it is stated that the compensation will be provided for temporary and permanent land acquisition, there is no concrete data on the sums that would be reimbursed to the owners. For example, what is considered a “fair market value” of the livelihood of people whose orchards will be affected? There should have been a methodology developed for land classification in terms of the value of different types of land. This methodology should have been published as an official document and subject to public consultations, and finally included in EIA documentation. From this documentation, it is not clear what is the size of compensation funds and whether they will be able to fairly cover the damage that might be caused by the construction and operation of the pipeline. The same applies in the case of the Marine Terminal. Even though it is acknowledged that the establishment of the Security Exclusion Zone and the Maneuvering Area for the construction and proper operation of the marine terminal will greatly affect the fishermen living in the area, there are no concrete provisions for compensation.

There is very little discussion of controversial issues, such as outdated land ownership registrars and the legal framework for the compensation, which, together with the absence of specific provisions in the EIA, casts a doubt on the fairness of the process of land acquisition and compensation.

From the questionnaires in appendix A4, it can be seen that 9 types of questionnaires were used (pipeline household, pipeline settlements, marine terminal household etc.). Most of the questionnaires begin with an introduction that promotes the project: “The Government of Turkey and MEP (a consortium) has been discussing the possibility of constructing a oil pipeline near your settlement. This oil pipeline is of high economic and strategic importance to Turkey...” (p. A4-4). First of all it is saying only that the pipeline is of strategic and economic importance for the country. Secondly, it is stressing the involvement of the Government. Such statements at the very beginning of the questionnaires can directly influence of the respondents, most of which are from economically and socially underdeveloped regions with low levels of education.
The **Overview of the Land Acquisition Process (OLAP)** is provided in **Appendix C9**. In the introduction, it is stated that "the project has avoided impacts on housing and the need to physically relocate households". Later it is stated that more information about land use impacts will be given in a Resettlement Action Plan (RAP) that is “currently under preparation”. First of all, if indeed no resettlement is envisaged, the question is why should the document be called RAP, instead of e.g. Land Compensation Plan. In any case, the plan should have been already developed and included in the EIA. This plan should have included a study on land and land use categories, with proposed compensation figures, and be subject to public consultation. Potentially affected landowners and users should have been identified and registered. All this data should have been included prior to inclusion in the EIA document. Instead, Valuation and Compensation has been discussed in only one paragraph (section 1.7.3, App. C-9) where it is said that land expropriation and evaluation will be left to the local authorities, according to the Turkish Expropriation Law. In the light of existing corruption and human rights violation levels in the region, it is doubtful that the compensation process will be fair and transparent. Provisions should have been made for independent monitoring of the compensation process.

### 3.9.5 Monitoring

There are no enough environmental indicators listed that will be monitored throughout the operation phase. The Environmental Management and Monitoring Plan (EMMP) is only a draft framework for the necessary management and monitoring plans (Waste Management Plan, Pollution Prevention Management Plan, Transport Management Plan, etc.). Some, but not all, of these plans are devised and attached in appendices. However, these are again, only in draft form, and further elaboration of these sub-plans is left to the construction contractors, to be devised “prior to the beginning of the construction phase”, which bears the potential for conflicts and delay the project, or inappropriate planning and carrying out of the mitigation measures. There are no provisions for the assessment of the quality of these detailed sub-plans or contractor EMMPs (CEMMPs), submitted by the construction contractors.

BOTAS is responsible for appointment of the contractors. It is necessary to guarantee a selection of contractors capable to deal with environmental issues. An open and transparent bidding process should be presented. Since the Contractors will be required to submit the CEMMPs within 30 days of being appointed, it is difficult to imagine that any of the contractors will be able to complete these documents.

There are no provisions for an adequate environmental monitoring system, which would provide accurate and current data on pollutant levels, wind, wave and sea current patterns and speeds, to allow operations personnel to react and respond accordingly when an incident or emergency occurs. There is no plan proposed specifically for biodiversity monitoring.
There should have been a monitoring system established, that would be an integral part of the EIA and include a list of activities necessary for monitoring implementation the project’s mitigation measures. The frequency and details of monitoring should be determined based on each activity’s duration, potential impact magnitude and significance, and the importance of each environmental factor concerned. In addition, it is necessary to determine an external, independent environmental auditing body responsible for monitoring the implementation of mitigation measures. Furthermore, the EIA has to specify a schedule for mitigation measures (i.e. dates for beginning mitigation activities plus a timeline for their duration), taking into the consideration the specification of the relevant project activity and environmental factor. Without this, potential delays or incompliance in implementation of mitigation measures could cause a decrease in the efficiency of the mitigation measures or even be a cause of irreversible damages.

3.10 Consultation and Public Participation

A number of irregularities were identified in the Consultation and Public Participation processes, most of which are described in the IFFM Report (IFFM 2002). The deficiencies are related to insufficient/inaccurate/incorrect information about the project, provided to the local populations, questionnaires’ contents, timing, sampling, and other survey procedures.

It is doubtful whether the questionnaires used for surveying the development concerns, contained enough information to secure informed response. Furthermore, the EIA claims to have consulted either directly or by telephone approximately 270 communities within or near the pipeline corridor. Yet of the rural settlements directly affected by the pipeline (and on the BTC BOTAS list of “consulted” settlements) visited by the International Fact-Finding Mission, only half have in fact received any form of consultation at all (Kurdish Human Right Project, 2002).

The IFFM (2002) report states that locally-consulted people were afraid to speak openly during consultations. These observations draw into question the validity of the participation process.

In the EIA it is stated that “Environmental and Socio-economic Management and Monitoring Plans have been developed”. One of the major deficiencies of the EIA is that most of the Management and Monitoring Plans are not fully developed and postponed towards the construction and operation phases, without any dates specified. The World Bank Group’s Environmental Assessment policy (OP 4.01) requires public consultation, which has a purpose of taking into account local views in designing the environmental and social management plans as well as the project design.

In Appendix A1 Public Consultation and Disclosure Plan (PCDP), the dispute resolution mechanism is missing. Also, the issue of minorities is not considered anywhere, although
there is a list of cultural minorities living along the pipeline route. There is no evidence of serious consideration of current and future concerns raised by the public. It is mentioned that an office will be formed for receive comments and sending out acknowledgments of receipt, without specifications on the mechanisms of consideration of the comments and subsequent creation and/or modification of mitigation measures.
4 CONCLUSIONS AND RECOMMENDATIONS

The EIA Draft Report for the Turkish Part of the BTC Pipeline shows a significant improvement in comparison with the EIA documents for the Georgian and Azerbaijani sections of the pipeline. The improvements concern both the quality of the document and of the EA procedure elements. There is evidence of more substantial and detailed studies concerning the environmental and social baseline. Also, there is more substance regarding the environmental management plans.

However, inadequacies were detected in all areas, especially concerning alternatives selection, risk assessment, impact magnitude and significance determination, mitigation measures and monitoring and management plans design, and public participation.

4.1 Methodology

There should have been a Strategic Impact Assessment (both Sectoral and Regional) for the whole group of associated projects (BTC, SCP, ACG, and Shah-Deniz), in order to envisage regional and even global impacts of the whole system on the region, which would enable a more meaningful EIA process for each of the individual projects.

The collected Environmental Baseline data too often relies on secondary regional data sources. The used datasets are not representative enough. There should have been more project- and site-specific studies carried out by EA contributors in order to capture local micro-climatic characteristics and seasonal variations.

There is a number of irregularities were identified in the Consultation and Public Participation process, most of which are described in the IFFM Report (IFFM 2002). The deficiencies are related to questionnaires’ contents, timing, population sampling, and other elements of the social survey.

The risk of oil spills should have been calculated for the whole Turkish section, and for the whole BTC pipeline at its entire length. Also, the risk should have been calculated for the whole lifetime period, which is up to 40 years. Also, it should have been calculated for the total sum of different events/hazards. The resulting risk figures for the whole project and its lifetime would have been several orders of magnitude higher, and would provide a realistic assessment of the oil spill risk, and it’s environmental implications.

Impact magnitude and significance assessment methodology is deficient. Not all key risks and impacts were proportionally assessed according to their potential magnitudes and significances. Necessary refined analysis for meaningful assessment of risk probabilities and impact magnitudes was announced but not executed. There are no confidence limits of all the calculated risks and magnitudes, and the overall significance of impacts was not properly determined.
There is insufficient analysis of cumulative and synergistic effects BTC Co and third party developments in the region/sector, and there is no meaningful discussion on the overall cumulative, transboundary and indirect impacts of the BTC project on the regional and global scale. Similarly to the other two sections of the pipeline, this EIA provides atmospheric emissions estimates only for project operation activities. There should have been data for the emissions arising from oil exported through the BTC pipeline, expressed both in absolute values and as Global Warming Potential (GWP) Emissions. Since these emissions will cause major induced, indirect and transboundary impacts on the global scale, they should have been compared with global emissions forecasts, in order to assess the contribution of these emissions to global emissions.

4.2 Alternatives

Not all viable alternatives have been considered. The EIA claims that the project will be beneficial for the socio-economic development of Turkey. However, an alternative in which oil refinement industry development in the country was not discussed.

Methods used for comparing different alternatives are not explained. Even though it is stated that the final alternative selection was done in order to minimize potential negative impacts, the route crosses several Internationally Important Wetlands, two sites protected under Turkish legislation and 49 ecologically sensitive areas. It is evident that changes in the pipeline route were dominantly driven by technical and economic considerations, and to a much lesser extent by social and ecological limitations.

4.3 Mitigation Measures, Management and Monitoring

Most of the Environmental and Social Management and Monitoring Plans (EMMPs and SMMPs) are not ready yet. They are left to be developed by the construction contractors prior to the commencement of the construction phase, while there is evidently not enough time for that. These plans should have been ready together with the draft EIA and available for comments, in order to improve them and include in the final EIA document. The World Bank Group’s Environmental Assessment policy (OP 4.01) requires public consultation, which has a purpose of taking into account local views in designing the environmental and social management plans as well as the project design. There should have been provisions for independent control of environmental monitoring activities and mitigation measures. Without these plans, there are no guarantees that any monitoring, mitigation, pollution prevention and remediation actions will be carried out properly.

The Control Valves, which can shut down sections of the pipeline, were presented in the EIA as environmental mitigation measures. In essence, these are technical measures, which have the goal of minimizing financial losses due to loss of the crude in case of oil
spills. They can be regarded as environmental mitigation measures only in cases where their locations and distances are adjusted to environmentally sensitive locations or areas of special environmental or cultural heritage importance. However, there is no evidence of such adjustments in this project, which proves that there was no consideration of the values of polluted environmental media, nor of cleanup costs, in case of an oil spill. In the absence of liability of the BTC owners for any environmental pollution or contamination, it is not surprising that not even the cleanup costs were taken into consideration.

4.4 Consultation and Public Participation

The deficiencies in consultation and public participation are related to insufficient, inaccurate and incorrect information about the project, provided to the local populations, the contents of questionnaires and types of questions, timing, and population sampling.

There is no evidence of serious consideration of current and future concerns raised by the public. The IFFM Report (2002) shows that information in the EIA about the survey procedure and about the population attitudes is incorrect. Local population was generally afraid to speak openly and express their doubts during the consultation process.

There is no dispute resolution mechanism. Despite the presence of national and cultural minorities along the pipeline route, there is no discussion on minority issues. Even though there is a complaint collection procedure, there are no specifications on the mechanisms of consideration of the public comments and subsequent development and/or modification of mitigation measures.
List of References


World Bank (WB) 1999. Environmental Assessment Policy OP 4.0
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CEE Bankwatch Network is an association of non-governmental and non-profit civic organisations from Central and Eastern European countries.

The CEE Bankwatch Network's mission is to prevent environmentally and socially harmful impacts of international development finance, and to promote alternative solutions and public participation.

The goals of the CEE Bankwatch Network are:

?? To create public awareness about International Financial Institutions activities in Central and Eastern European countries and their social and environmental impacts.

?? To promote public participation in the decision making process about policies and projects of International Financial Institutions, on the local, national and regional levels.

?? To help non-governmental environmental organisations and citizen groups to monitor what the International Financial Institutions are doing in the Central and Eastern Europe.

?? To change or stop environmentally and socially destructive policies and projects of International Financial Institutions in Central and Eastern Europe, and promote alternatives.

?? To cooperate with environmental citizen organisations in stopping destructive activities of Transnational Corporations and to limit their overall impacts on the environment in Central and Eastern Europe.

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