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The influence of the EIA for the BTC-oil pipeline across the Caucasus

The pipeline featured in the 1999 James Bond film 'The world is not enough'.

Introduction

In June 2006, 12 years after the start of the BTC project, the first tanker was loaded with oil at the Ceyhan terminal on the south coast of Turkey. The oil had been extracted in Azerbaijan and conveyed to Turkey via Georgia through a 1760 km long underground pipeline. This pipeline has strategic importance and is the only pipeline to have starred in a James Bond film – which implies that the project was far from boring. An Environmental Impact Assessment (EIA) was carried out for the project and the Minister of the Environment in Georgia invited the Netherlands Commission for Environmental Assessment (NCEA) to advise on the EIA study and the EIA process. This article outlines the influence of EIA and independent quality review on the process of designing the pipeline, making decisions about it, and installing it. The results are based on a documents that are publicly available and interviews of representatives of the Ministry of Environment and NGOs in Georgia. The article is restricted to Georgia, as though the project covered the entire region, this was the only country in which the NCEA was active.

The context of the project

In 1990 the Soviet Union disintegrated; shortly afterwards Georgia and Azerbaijan became independent states. Georgia and Azerbaijan opted to orient themselves towards the West, whereas Armenia remained strongly oriented to Russia. The Clinton administration made the first plans to develop an energy corridor jointly with the presidents of Azerbaijan, Turkey

and Georgia. The corridor would give the West the opportunity to convey strategically important oil from the oilfields in the Caspian Sea area to the West, through friendly countries. In the early 1990s the magnitude of the oil reserves of the Caspian Sea area was considered to be second only to those of the Persian Gulf. The Western countries wished to reduce their dependency on the Gulf States and Russia and so supported the development of the corridor, which at the time consisted of two oil pipelines and one gas pipeline. There were plans for laying a third oil pipeline.

Prior to creating the present-day corridor, three alternative corridors were considered. One running via Iran to the Persian Gulf was not acceptable to the USA. A corridor via Armenia to Turkey was unacceptable to Turkey and Azerbaijan: for Turkey because of the strained relations brought about by the genocide in 1915 and for Azerbaijan because of the conflict over Nagorno-Karabakh. In 1996 the presidents of these three countries, supported by the USA, decided to develop the corridor we know today. No EIA was carried out for this.

In 2000, the governments of Georgia, Azerbaijan and Turkey signed an Inter-Governmental Agreement (IGA) for the development of the oil and gas pipelines (the BTC project) within the chosen 10 km wide corridor. The same year, Georgia, Azerbaijan and Turkey initiated the Georgian Host Government Agreement (HGA) that defined the environmental standards of this project. The HGA stated that the environmental standards of the Netherlands and Austria and

also the EC Directive 85/337/EEC would be applied. Dutch standards were adopted because of their excellent international reputation; Austrian standards were adopted because of Austria's experience in constructing pipelines through mountainous areas.

Two different consortiums, both led by British Petroleum (BP), were the proponents for the oil and gas pipelines. In this article we focus on the oil pipeline. The length of the pipeline running through Georgia is about 250 km. In addition to constructing this 250 km pipeline, the project included a number of permanent facilities in Georgia such as pumping stations, an optical fibre communication system and a computer-based integrated control and safety system. Construction was scheduled to start in spring 2003; total investments in the BTC project were estimated at around 3.6 billion US \$. In addition to the BP-led consortium, the International Finance Corporation (IFC), European Bank for Reconstruction and Development (EBRD) and a number of commercial banks were involved in the funding.

The EIA: design, decision-making and implementation

EIA for oil pipeline projects

In general, selecting the route of a pipeline is one of the most important issues studied in EIA because this offers an opportunity to avoid environmentally sensitive areas as well as to consider other aspects such as safety and economic costs. Three levels of decision-making on routing can be identified for the BTC pipeline:

- A. Deciding which countries the pipeline would run through. As described above, Azerbaijan in close collaboration with the USA selected the approximate route deemed acceptable to safely convey oil to a Western ally. This route – across Georgia - was selected largely for geo-political and safety reasons and without the benefit of an EIA.
- B. Deciding on the 10 km wide corridor through Georgia. It is common practice to identify a 10 km wide corridor within which the pipeline will run. In Georgia, three 10 km wide corridors were identified: northern, central and southern. The selection of the southern corridor was not based on EIA. However, in the EIA report its selection was justified by reference to environmental, technical and safety criteria. The northern corridor to the Black Sea coast of Georgia was unacceptable to Turkey because of the potentially major impact of oil pollution in the Bosphorus near Istanbul. The central corridor was not acceptable because it had to cross the highly valued Borjomi - Kharagauli national park. So, the southern corridor was selected.
- C. Deciding on the actual route within the southern 10 km wide corridor. It is common practice to use technical, safety, environmental, social and economic criteria to locate the most suitable route within the boundaries of the 10 km wide corridor. Typically, EIA is used to identify one or more routes in this corridor by a comparative assessment of these criteria. The procedure followed for the BTC-pipeline is described below.

The EIA procedure for the BTC project

In Georgia, the Minister of the Environment decides on the environmental permit for the construction and operation of a pipeline. There is a statutory obligation to carry out an EIA. In this case, the IFC made the preparation of a social impact assessment a condition for providing a loan, so BP decided to combine this into an environmental and social impact assessment study (ESIA). The IFC has the obligation to follow its own ESIA procedure as a condition for providing a loan; this gave the Georgian government a good reason to follow the same procedure. Furthermore, IFC's procedure is more advanced than the statutory Georgian procedure.

As the Georgian ESIA legislation allows for international experts to be asked to review the ESIA, the Georgian Minister of the Environment invited the Netherlands Ministry of Housing, Spatial planning and the Environment to advise her on ESIA for the BTC project. The NCEA was asked to provide advice on scoping, reviewing and monitoring. Over time this resulted in five reports that were all made publicly available. On top of this, the NCEA advised on procedure. All the advice was issued by an expert group consisting of a chairman, a secretary and seven experts on pipeline engineering, geo-hydrology, ecology and sociology. In parallel, use was made of a reference group consisting of Georgian experts. The cost of the entire ESIA for the three countries was about US \$ 12 million. The cost of the NCEA involvement was US \$ 250,000.

Phase 1: Terms of Reference (ToR) for ESIA (submitted June 2001, approved May 2002)

The main issues to be studied in the ESIA were identified during the scoping phase. The 10 km wide southern corridor crossed the sensitive and highly valued Borjomi-Bakuriani area in the Southern Caucasus mountain range. This area became the focus of study and public debate in subsequent years, mainly for the following three reasons. Firstly, the area lies in the buffer zone of the Borjomi - Kharagauli national park, the first national park in Georgia. Secondly, it is said to be the source area of Borjomi mineral water, a mineral water that is not only iconic in Georgia and part of Georgian identity, but is also a valuable source of income when exported. Thirdly, the area is a recreation area renowned for its natural beauty in summer and skiing in winter. The question asked by many Georgians was 'why put an oil pipeline through our national jewel?' In its advisory report on the ToR for the ESIA, the NCEA recommended justifying the selection of the southern corridor and emphasised the importance of mentioning social aspects, including compensation. The Minister adopted the advisory report and in May 2002 formally approved the ToR becoming a framework for review.

Phase 2: Draft ESIA report (submitted April 2002, review July 2002)

After the draft ESIA report was presented in April 2002, there was public debate about the route of the pipeline through the Borjomi-Bakuriani area that lies wholly within the boundaries of the 10 km wide southern corridor. In its advisory

review the NCEA noted that not all the alternative routes in the southern corridor had been described and recommended that this should be done. BP argued that the earlier agreements made with the government were of a sensitive nature and could not be made public. Later it emerged that a route to the south of the area in question had been rejected for strategic and safety reasons. A Russian military base was sited in the area and, moreover, many of the local residents were Armenians who would oppose a pipeline conveying 'Turkish' oil; there was a higher probability of sabotage. The Minister adopted the NCEA's recommendations, stipulating in addition that supplementary mitigating measures should be worked out for the route through the Borjomi-Bakuriani area in order to reduce the risk of oil leaks to 'as close to zero as possible'.

The discussion that arose in this phase of the project between BP, the Ministry of Environment, NGOs and international funding agencies was based on a mixture of facts and preconceptions. The NCEA played a role in separating the facts from the preconceptions. One preconception was that the number of temporary jobs created by the project would be 40,000: a more accurate estimate would be 2,500. The NCEA also dismissed the preconception that oil might contaminate Borjomi's mineral water. The NCEA's geohydrologists were able to demonstrate to all the parties that there was no risk of contamination of the Borjomi mineral water abstracted from deep aquifers. Borjomi drinking water abstracted from shallower reserves (the so-called Borjomi spring) was at risk, however: here, contamination from a leak could not be excluded. Supplementary measures were proposed in order to reduce this risk; they are being implemented.

The NCEA's advice also had an 'institutional' effect. BP reported that the advisory reports strengthened the position of its environmental and social departments relative to the technical department that was leading the project.

Phase 3: Final ESIA report and decision-making (submitted October 2002, 1st review November 2002, 2nd review October 2003.

The Minister of Environment signed the environmental permit on December 2nd, 2002 and approved the BP-preferred route across the Borjomi-Bakuriani area. There was public debate on whether the Minister had been pressurised to approve the permit, but the Minister always denied that she was subjected to pressure. The permit included a number of stipulations that BP provide additional information, e.g. to justify why one of the routes the NCEA recommended studying was still not addressed sufficiently in the final ESIA. The NCEA was asked to review the quality of the information requested in the permit. In its advisory review submitted October 15th, 2003 the NCEA stated that the information was complete and correct.

Phase 4: Monitoring (NCEA review December, 2004)

During the two-year construction of the pipeline the Ministry of the Environment was formally responsible for monitoring the project and checking whether the environmental permit conditions had been met. However, the ministry was barely able to provide the necessary high-level expertise required for this assessment. Environmental NGOs continued to exert pressure on BP and International Finance Institutes (IFIs) as well as on the Ministry of the Environment regarding certain specific issues composition programme for affected people, risks of oils spills and compensation of biodiversity loss. BP set up an international independent advisory group, but some NGOs objected that it was biased, having been set up and funded by BP. The NCEA was therefore asked to review the quality of the monitoring programme and of the implementation of the measures agreed in the permit. In its final report submitted in December 2004 the NCEA was asked to assess the risk of geohazards in the Borjomi-Bakuriani area, especially risks of landslides that could break the pipeline. Recommendations have been provided to achieve a risk 'as close as possible to zero'. This means the application of best available techniques in which costs should not play any role. The proposed measures have been applied.

Results of the ESIA process, study and report

- BP was convinced by the Minister of Environment and IFC to study alternative routes outside the agreed 10 km wide corridor, to avoid the sensitive Borjomi-Bakuriani area. However, this did not result in major changes to the route proposed by BP at the start of the process. The pipeline was constructed within the 10 km wide corridor that had been defined at the start of the ESIA process and therefore it traverses the Borjomi-Bakuriani area.
- The ESIA was intended to determine the exact route within the 10 km corridor. At the start of the ESIA, the indicated route originally ran down the exact centre of the 10 km corridor. The ESIA resulted in many deviations from the indicative route, for the following reasons:
 - to avoid geologically unstable areas;
 - to meet villagers' requests;
 - to reduce the impacts on areas of valuable biodiversity.
- Mitigation measures to minimise potential negative environmental impacts were identified in the ESIA report, and then approved and implemented. For the Borjomi-Bakuriani area, for example, best international practice was applied. The right of way was reduced to an absolute minimum of 14 metres. To avert antagonism between workers and villagers during the construction period, a number of measures and programmes were elaborated in the ESIA report and villagers' concerns were allayed during public meetings held as part of the ESIA process.
- Compensation: The ESIA study identified the families and villages that would be affected. Individual families were approached and in most cases agreement was reached on financial compensation. A special programme was set up

to compensate the affected villages in cash or kind, e.g. by constructing a bridge, upgrading feeder roads, repairing a school. The ESIA study indicated the impacts on biodiversity and this resulted in prolonged discussion between BP and the MoE on the compensation ratio. Finally it was agreed that compensation would be paid for 105 hectares of forest lost as a direct result of the pipeline construction. In addition, BP, IFC and EBRD jointly launched a regional compensation programme of US \$100 million for Georgia.

Results of the NCEA advisory reports

- The NCEA advisory reports increased the legitimacy of the ESIA decision-making process and ensured that international good practice was applied concerning environmental mitigation measures.
- The NCEA advisory reports played a role in separating the facts from the preconceptions. One preconception was that the number of temporary jobs created by the project would be 40,000: a more accurate estimate would be 2,500. The NCEA also dismissed the preconception that oil might contaminate Borjomi's mineral water.
- The Georgian Minister of the Environment noted that the NCEA advisory reports strengthened the Ministries position in the dialogue and negotiation with BP and within the cabinet on, for example, compensation rates for biodiversity loss.
- NGOs stated that the reports strengthened their position when lobbying for changes in the project design with the IFIs.
- The staff from BP's environmental and social department in Georgia stated that the NCEA advisory reports strengthened their position within the company.
- At two points of time in the ESIA process, relations between BP and the Ministry of Environment became so deadlocked that the NCEA was called in to mediate, with the result that communications subsequently improved and the project development resumed.

Lessons learned

1. In the HGA signed by the president and agreed by the Parliament, many decisions had already been made and standards had been set. Besides, the proponents of the scheme had already made numerous decisions in the preparatory phase of the technical design studies. This limited the opportunities of the ESIA to study the full range of alternatives. The lesson learned is that it is important to start the ESIA at an earlier stage. Also, at the start of an ESIA, the decisions already taken – which in this case appeared to have not been very well known to the Minister of the Environment – should be properly analysed.
2. An extensive visit to the site of the proposed corridors by the organisation and/or experts tasked with preparing the ToR for the ESIA proved to be very valuable, as so little site-specific information was otherwise available. Such visits should be made as early as possible in the ESIA process.

3. At the time, there was a huge difference in experience in the oil and gas sector and environmental impacts between BP on the one hand and the Georgian government on the other. The lesson learned is that in developing countries, capacity development within government (including Ministry of Environment) is a prerequisite for the execution of an adequate ESIA, decision-making and monitoring.
4. An independent advisory body that is accepted as such by all stakeholders can play a crucial role in strengthening both the quality and the legitimacy of the decisions made. To ensure its credibility for all stakeholders, such a body should have no stake in the final outcome of the process and its findings should be based on expert knowledge and be made publicly available.

NCEA's role – advising the Minister of Environment on the ESIA process (scoping, reviewing and monitoring) in the period 2001-2004:

- The NCEA issued an advisory report on the Terms of Reference of the ESIA in June 2001.
- The NCEA reviewed the quality of the ESIA report and made recommendations, first advisory review in July 2002, second advisory review in November 2002.
- The information provided by BP for the permit (to start the construction of the pipeline) was reviewed by the NCEA in October 2003.
- In December 2004 the NCEA reviewed the quality of the monitoring programme and implementation process and published its final report.

Above mentioned the NCEA advisory reports are available on our website www.eia.nl

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More information

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