

7. Environmental and Social Aspects of the Baku-Tbilisi-Ceyhan Pipeline

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The BTC pipeline project was predicated by the environmental and social objective of delivering Caspian oil to international markets without adding to the ever-increasing growth in shipping traffic passing through the Turkish Straits. These Straits form the link between the Black Sea and the Mediterranean and bisect Istanbul, a UNESCO World Heritage city with a population of over 10 million. At full capacity the pipeline will avoid around 400 additional tanker movements a year, which approximates 35% of current tanker movements through the Straits.

Historically, pipelines have proved to be a much safer means of transporting large volumes of oil over large distances than other viable alternatives such as shipping or rail.² In theory, therefore, they represent the best option from an environmental and safety perspective. In practice, evaluation of the relative merits of pipelines versus shipping and rail requires a comparative assessment of a) the actual impact of the construction of a pipeline together with the risk and consequences of a spill during operation, and b) the risk and consequences of a spill from shipping or rail. The outcome of such an assessment is in turn dependent on a range of variables including the pipeline route, the likelihood of a spill, the potential spill volumes and the resources potentially at risk from spills from all three modes of transport.

Consideration of all these factors concluded that a buried pipeline from Baku to Ceyhan presented the lowest risk of an oil spill. Even in the event of an oil spill this option was assessed as having the lowest expected overall environmental cost – where expected overall environmental cost was estimated using historical data from previous spills occurring worldwide and in particular, data relating to the cost of clean-up, third party liability and natural resource damage cost.

² Statistics from the US Association of Oil Pipe Lines (AOPL) show an average spill amount of around one gallon per million barrel miles – equivalent to less than one teaspoon per thousand barrel miles. The European experience has been similar, with CONCAWE (Conservation of Clean Air and Water in Europe) reporting an average net spillage (the residual amount of oil left in the environment following clean-up) of two parts per million (or 0.0002%) of the oil transported through up to 30,800km of pipelines over a period of 25 years (refer to A Safe Plan of Action, Oil Spill Response Planning for the BTC Oil Pipeline; www.caspiandevlopmentandexport.com)

Having developed the concept of an export pipeline for Caspian oil, the challenge was to design, finance, permit and construct a technically and commercially viable project that minimized additional environmental risks.

Many of the challenges were of a kind that would be faced to varying degrees by all trans-national pipeline infrastructure projects. Many, however, are unique to the BTC project and reflect the environmental, social, cultural, political and historical issues and legacies of the region, as well as the aspirations of the host countries as they seek to assert themselves in a socio-political era very different from their recent pasts.

The following sections of this environmental and social overview highlight some of the unique aspects of the BTC project, the associated environmental and social issues and interdependencies, and BTC Co's responses to challenges they present.

Governing legal and policy regime

Government Agreements and Project Policies

The BTC project is governed by a set of interrelated and mutually reinforcing agreements among the host governments of Azerbaijan, Georgia and Turkey in the first instance, and BP and its Partners in the second. The complexity is typical of all large resource projects although accentuated in this case by the fact that BTC is the largest and most complex cross-boundary infrastructure project currently being undertaken in the world. It also represents the single largest foreign direct investment in each of the three host states.

The legal arrangements for BTC are intended to provide stable legal protection for all stakeholders – governments, investors, employees, landowners and other affected citizens. To ensure this, the parties have created a special legal regime that is designed to provide legal rules that are clear and that conform to the highest international standards.

The overarching legal regime is the Inter-government Government Agreement (IGA) between Azerbaijan, Georgia and Turkey. Annexed to the IGA are unexecuted forms of the Host Government Agreements (HGAs), one between each host country and the project consortia. Once versions of the IGA were ratified in each host government parliament they became binding international law and controlling domestic law in each respective country. In Turkey the legal regime also includes the Lump Sum Turnkey Agreement and a Government Guarantee.

Existing national laws in each host country that pertain to environmental protection, safety and emergency situations apply to the extent that they do not conflict with the IGA and/or HGAs. This includes the provisions of International Conventions in force in the host countries.

In an effort to ensure a uniform application of environmental, health and safety technical standards across the three jurisdictions represented by the host governments, the IGA includes a provision that states that “[such standards will be] in accordance with international standards and practices within the Petroleum pipeline industry (which shall in no event be less stringent than those generally applied in the European Union, EU) and the requirements as set forth in the relevant Host Government Agreement, which shall apply notwithstanding any standards and practices set forth in the domestic law of the respective State”. This general statement is elaborated in the respective HGAs.

The reference to EU standards effectively provides the benchmark for what is considered ‘international standards and best practices’ for the purposes of the project, although due to the need to partly debt fund the project, there is an additional requirement to conform to the environmental and social policies of a selection of International Financial Institutions (IFIs) including the World Bank Group (specifically the International Finance Corporation, IFC), the European Bank of Reconstruction and Development (EBRD) and various export credit agencies.

The project has also been developed in accordance with BP Corporate policies and the prevailing company goal of ‘*no accidents, no harm to people and no damage to the environment*’.

Project Compliance

In order to comply with the above requirements, the environmental and social approach to the project has been one of avoidance of adverse impacts and enhancement of positive impacts. Where it has not been possible to avoid adverse impacts, a sequential process of impact reduction, minimization, mitigation and where appropriate, offset compensation, has been followed. This has been achieved through an iterative engineering design process, environmental risk assessment and extensive public consultation, culminating in country-specific Environmental and Social Impact Assessments (ESIAs) and associated addenda also incorporated into the legal regime governing the project in each state.

These documents and the commitments contained therein were developed in order to further elaborate and apply the more general commitments set forth in the suite of Agreements, Conventions, laws, policies and guidelines referred to above. Following statutory periods of public review the documents were subsequently approved by the appropriate regulators, in some cases with conditions, and effectively form the license to operate. An additional set of documents that included, *inter alia*, an Environmental and Social Action Plan (ESAP), was prepared for the IFIs as part of the pre-conditions for project financing. The ESAP contains a detailed list of project environmental standards and guidelines.

Legal and Policy Challenges

Given the multitude of agreements, laws, international standards, best practices, norms and commitments applicable to the project, and their interpretation and implementation in three countries, it is not surprising that areas of uncertainty, confusion and in some cases conflict have arisen as the construction phase of the project has progressed. This is a result of many factors, some acting singularly, others in combination to varying degrees, but in all cases requiring additional attention - and in many cases action - by BTC. Key factors are as follows:

- *Environmental policy and management reform:* Azerbaijan and Georgia inherited from the Soviet Union a relatively developed command-and-control system of environmental laws, regulations and institutions. Under this system emission and discharge standards were typically developed as part of a 'fees and fines' mechanism to generate income for the State rather than provide a means of protecting the environment. It was also common for the responsibilities of various government agencies to overlap, creating conflicting activities and/or duplication of efforts. Furthermore, some environmental regulatory functions were delegated to organizations responsible for economic production.
- The transition to a market economy in Azerbaijan and Georgia is providing the impetus to integrate environmental concerns into new economic institutions and policies. But the pace of change has been slow. Meanwhile, Turkey's environmental policies are similarly undergoing reform but are being driven by a very different reason: to meet the obligations of EU membership (the so-called *acquis*). The fact that the most recent assessment indicates that the level of transposition (i.e., reform to EU requirements) with respect to the environment remains low, particularly in terms of air quality, waste management, water quality, nature protection, industrial pollution, risk management and administrative capacity, provides a noteworthy backdrop to the project.³
- *Role of the Member State in EU policy:* The European Community is driven to producing legislation that places obligations on the Member States to achieve desired results. This means that Community policy inevitably leaves some measure of discretion to the Member States. Policy only becomes truly functional when it is implemented in the Member States and has thereby become inseparably enmeshed with national policies and practices. This can be illustrated by the fact that many environmental Directives have taken the form of 'framework' legislation, leaving the

³ Commission of the European Communities, 2004 Report on Turkey's Progress to Accession COM (2004) 656 final

Member States with considerable discretion regarding their implementation. Other Directives are binding in terms of the results to be achieved but similarly leave to the Member States the choice of form and methods. Given that none of the host countries is a Member State, the project commitment to meet EU standards has required BTC to effectively proceed in an institutional and administrative vacuum in terms of guidance, interpretation and application, and rely heavily on its own resources and initiative in order to achieve acceptable outcomes.

- *Infrastructure:* Each of the host countries is characterized by weakly developed environmental infrastructure. This situation is particularly acute in Azerbaijan and Georgia. Accordingly, the project has committed funds to a conditioning improvement plan for a municipal waste disposal facility in Georgia with the objective that it becomes EU-compliant. The project is also part of an effort to construct a EU-compliant non-hazardous waste site in Azerbaijan. In Turkey waste is transported 800 to 1000 km to a EU-compliant landfill at Izaydas. Case Study 1 provides specific examples of the difficulties BTC has faced in terms of waste management, and how it has responded.
- *International standards:* The project is committed to comply with international standards and in particular the World Bank Group Safeguard Policies. It is recognized that there are gaps and deficiencies among individual Safeguard Policies and the set of policies as a whole. There is also a lack of clarity between the current Safeguard Policies and international standards.⁴ These deficiencies are partly due to the changes in attitude toward environmental and social issues since 1998 when the Safeguard Policies were last updated, and is particularly evident in the case of social issues where there has been a burgeoning increase in new initiatives that could be construed as best practice, notwithstanding differences in agenda and emphasis, and the resulting potential for conflict. As a result, IFC is revising the Safeguard Policies in order to improve their clarity, accessibility and implementation. They may also provide balance and direction with respect to social issues, although given the very nature of these issues there will always be scope for varied interpretation at the implementation stage. The revised and undated Policies are due for release at the end of 2006.

A number of issues relating to the interpretation of the IGA and HGAs have also been raised by various Non-Government Organizations (NGOs) with respect to the impact of the project's legal framework on the autonomy and policy-making discretion of the host governments. Issues have included public disclosure of

⁴ IFC Compliance Adviser Ombudsman (2003): A Review of IFC's Safeguard Policies

project documents, security and human rights, third party access to local courts, compliance with evolving international standards and labor norms.

BTC responded to these concerns with the development and public disclosure of a Joint Statement,⁵ forming part of the legal regime established by the provisions of the IGA and HGAs. The human rights issue was further addressed via the *BTC Human Rights Undertaking*, an irrevocable and legally binding instrument that will, *inter alia*, prevent BTC Co from seeking compensation from a host government for breach of the applicable HGA in circumstances where that host government was acting reasonably to fulfill an obligation under an international labor, health, safety, environment or human rights treaty, to which it is a party.

Route selection and pipeline design

Delivering Caspian Oil to World Markets: Transportation Modes and Route Options

The Caspian region has abundant oil and gas reserves. For most of the 20th century the Caspian resources were developed to meet the needs of the former Soviet Union. With the dissolution of the Soviet Union in December 1991, the Caspian Basin was opened to the outside world, both in terms of direct foreign investment into the region and resource exports to world markets under a regime of independent states. Supply exceeds the domestic demand for oil in the Caucasus and Central Asia, and local demand is unlikely to grow significantly in the near future. All increased production is therefore likely to be exported.

The development of Azerbaijan's hydrocarbon resources had been prevented in the first instance by the absence of sufficient sources of capital, experience and technology to develop the offshore and onshore reserves. Development had also been constrained by the virtual land-locked geography of the Caspian Sea, the limited capacity of pipeline and rail networks serving the region, and the reliance of these networks on export via the Turkish Straits.

A principal consideration in establishing an export supply route was to develop a commercially viable option that minimized environmental risk – primarily through avoidance of the Turkish Straits – and delivered the oil to an appropriate location to enable its sale on world markets. The route needed to be analyzed in consideration of its long-term security prospects and also required the ongoing support of both Azerbaijan, as the sovereign owner of the oil resources, and of the countries whose territories it crossed.

A number of options were reviewed to test these considerations: a route directly to the eastern Mediterranean; a western route via Georgia to the Black Sea; a northern

⁵ Joint Statement on the BTC pipeline project, May 16, 2003 (refer to project web site: www.caspiandevlopmentandexport.com)

route to the Black Sea through Russia and a southern route to Iran. Both the western and northern options only delivered oil to the Black Sea, and would necessarily involve onward passage through the Turkish Straits. These options were therefore deemed unacceptable. A southerly route through Iran was dismissed due to external political considerations. Therefore, a route via Turkey was considered the best alternative with Georgia selected as the transit country to enable the pipeline to reach Turkey, as political considerations ruled out both Armenia and, as noted above, Iran.

An independent Environmental Risk Assessment commissioned by BP and conducted by Woodward Clyde in 1997 examined the relative risks and expected environmental costs associated with the transportation of oil from Baku to a common point on the Mediterranean, accessible via Turkey. This was subsequently refined to the port of Ceyhan for reasons of access, safety, and existing infrastructure.

It was recognized that the potential environmental and social impact of oil pipelines ultimately depend on the final route selected and a wide range of project-specific details that can only be assessed on a case-by-case basis. Accordingly, definition of the actual pipeline route and design involved a multiple-stage, iterative process whereby a 10km corridor of interest was defined before being narrowed down to a final 8m-wide pipeline corridor that will be maintained throughout the operating life of the pipeline.

Route Refinement and Design Optimization

The overriding principle that applied throughout the corridor evaluation process was one of problem and issue identification and avoidance. The corollary to this principle was a detailed knowledge of constraints and sensitivities along and adjacent to the corridor of interest. This was developed through a detailed assessment of a range of issues including terrain, environmental and social constraints, archaeological and cultural sites, geohazards, safety, technical feasibility, constructability, security, access, cost, schedule, and operability. Government and NGOs, local and international scientists and technical experts, and communities located along the length of the pipeline were consulted throughout this process and proved to be valuable sources of information.

The key considerations and constraints associated with route selection altered and were refined as the route was narrowed from a 10km wide Corridor of Interest to the Construction Corridor (terms defined in the HGAs), with the emphasis shifting from one of avoidance to one of optimization and minimization of impact, and mitigation. A key outcome of the route selection process was that the route avoids all settlements and households, thereby ensuring that no people required physical displacement or relocation.

In parallel with the route refinement activities, conceptual engineering design evolved through a series of iterations into detailed engineering design, with the specification of critical pipeline elements such as depth of burial, pipeline diameter, pipeline wall thickness, the number and location of pump stations, pump driver selection including choice of fuel, and number and location of valve stations. Environmental and social issues were major considerations in all respects.

Despite efforts to avoid impacting the physical and social environment through route selection and design modification, some residual impacts and risks are inevitable for a project of this size. In southwestern Georgia, for example, the presence of a dominant ethnic Armenian enclave and related administrative district, supported by a strong Russian military presence centered around Akhalkalaki, effectively created a 'no go' area due to security concerns. To avoid this area the route had to pass further to the north and through the Borjomi region, an area renowned for commercial and economic activities including skiing and bottled mineral water companies. The Borjomi case study (Case Study 2) explains the background to this decision and illustrates the range of additional impact prevention, mitigation and contingency measures adopted in recognition of these sensitivities.

Land acquisition and compensation

Processes and Issues

A key project objective was to avoid the physical relocation of dwellings. While this was achieved, the project will disrupt land use activities and the livelihoods of a large number of households to varying degrees.

The pipeline construction Right of Way (ROW) affects approximately 4,100 households in Azerbaijan and a further 1,800 in Georgia. In Turkey the ROW passes within 2 km of 296 villages and affects more than 13,000 parcels of land, the majority of which are privately owned. As many as 62,000 individual land shareholders will be affected, of which approximately 20% are absentee owners.

Land required for the project will either be purchased or leased. Landowners are being compensated for the permanent acquisition of land as well as economic losses equivalent to the value of the improvements and standing crops on their land. Tenants and other land users are being paid for three years of lost crop production, as determined by the scheduled time required for construction and reinstatement. In most cases the disruption to land use and livelihood will be less than three years, with land users resuming normal activities once the construction phase has finished and the ground reinstated.

Some restrictions will apply for the life of the project but in terms of agriculture these will generally be limited to a narrow strip of land immediately overlying the buried pipeline. For example, the cultivation of deep-rooted plants or trees will be disallowed within the 8m-wide zone referred to above, whereas the construction of buildings for example will be disallowed within specified distances from the pipeline (defined as a 58m-wide corridor for the BTC/SCP ROW and 4-15m from the pipeline centerline in Turkey. Cropping and grazing will generally be allowed to proceed unimpeded.

The land acquisition and compensation process has been in accordance with World Bank Group requirements relating to involuntary resettlement (which includes economic displacement), the HGAs and laws and regulations of the host countries. Particular attention is being directed towards vulnerable and disadvantaged groups such as those without formal title to land and others defined in terms of gender, age, ethnicity and religion. The process has also involved extensive consultation and public disclosure activities, as defined in country-specific Public Consultation and Disclosure Plans and Guides to Land Acquisition and Compensation.

BTC has taken the additional step of involving independent NGOs in each country to provide third party verification of the fairness and transparency of the land acquisition proceedings. Here, the intent has been to assist project-affected people in understanding their rights and obligations, and provide advice during negotiations where necessary.

Grievances and Disputes

Grievance and dispute resolution mechanisms were established in each country in accordance with the IFC requirement 'that projects sponsors ensure that procedures are in place to allow affected people to lodge a complaint or claim (including claims that derive from customary law and usage) without cost and with the assurance of a timely and satisfactory resolution of that complaint or claim'⁶. These mechanisms were not intended in any way to usurp the rights of affected people to seek recourse through various avenues provided for under local law. Rather, the intent was to offer a mechanism to achieve prompt redress for complaints at a project level, without prejudice to the complainant's right to apply to the courts directly. The nature of grievances and effective performance of the redress process is subject to internal and external monitoring, with the outcomes being publicly disclosed on a quarterly basis.

⁶ IFC Handbook for Preparing a Resettlement Action Plan (2001)

Host Country Laws and Establishment of Resettlement Action Plan (RAP) Funds

It was recognized at the outset that there were significant differences in host country law with respect to land title, land acquisition and compensation rights. In Azerbaijan it was necessary for the State to lease land required for temporary purposes from the individual landowner and then grant usage rights to the project for the three-year construction period. Land required for permanent facilities was purchased by the State with usage rights being conferred to the project until the termination of the HGA and abandonment of the facility.

In Georgia the project has been required to purchase the land directly from the landowners, rather than leasing land from the State or landowners, because Georgian law does not provide lease rights that would give the project the legal certainty to construct and operate the pipeline.

In Turkey, Botas⁷ will temporarily or permanently acquire the required land, depending on the intended use of the land, and transfer these rights to the project.

Other differences in the land acquisition and compensation process presented more significant challenges for the project. In Georgia and Turkey, special measures had to be implemented to compensate people who, under local law, had no legal entitlement, yet were eligible in accordance with international standards (in this case the World Bank Group Safeguard Policy OD 4.30, Involuntary Resettlement).

BTC responded by establishing RAP Funds in both countries in order to cover situations where local law does not provide for compensation, and supplement other household compensation entitlements for loss of land, assets and livelihood. Other special groups unique to each country also qualify under the terms of the Fund, for example those groups in Georgia who would normally receive communal grazing fees (the *sakrebulos*) from herders affected by construction activities, livelihood losses experienced by fishermen operating in the vicinity of Ceyhan Marine Terminal, who under local law are not entitled to compensation, and private landowners who are facing difficulties due to the complexities of the cadastral system.

The Georgia RAP Fund has allocated \$1.1 million to provide compensation to eligible people while the Turkey RAP Fund has a \$2 million budget. These sums are in addition to the minimum compensation amounts required under relevant national laws.

In Azerbaijan there has been no need to establish a RAP Fund as the government has agreed to compensate affected people and groups according to World Bank

⁷ Botas is the State-owned Turkish pipeline transportation company that is contracted to BTC under the terms of a Lump Sum Turnkey Agreement to design and construct the pipeline and facilities in Turkey

Group principles, even in cases where these exceed requirements under Azerbaijani law.

Major Challenges

Perhaps the single most significant challenge relating to land acquisition and compensation was the identification of legal title and the rights of informal users (e.g., communal grazers) and absentee owners, particularly in villages without cadastral records (see below). This challenge lies at the heart of most of the land-related claims before the host government courts and the land-related human rights allegations raised by NGO against the project.

Other major challenges included:

- Assessment of the level of compensation payments with limited historical market data
- Ensuring that individuals entered into land acquisition contracts freely, well informed and aware of their legal rights
- Preventing land speculators, illegitimate claims, extortion and corruption
- Return of usage rights and/or ownership rights⁸

An indication of the complexity of these issues in the three host countries can be illustrated by reference to land ownership laws in Turkey, its policy and legislative framework for the acquisition of and compensation for land and assets, and their combined effects on the project.

Land in Turkey may be held by private owners in one of two forms: by registration of the ownership and the issuance of a deed reflecting title to the land (i.e., registered ownership), or by customary use and occupation of land (i.e., customary ownership). Of the private lands to be acquired the project has identified 6,737 private land parcels and 2,598 customary owned land parcels. Determination of the ownership of registered land is complicated by factors such as multiple ownership, out of date deeds, and conflicting customary and registered ownership claims. Additionally, villages typically have usage rights on common lands (particularly pasture land) although the legal owner of the land is the State.⁹

In terms of land acquisition (formally referred to as expropriation in Turkey), the Constitution requires that the project can only gain access to the land and commence construction after the rightful owners/users are fully informed of the need for expropriation, are provided opportunities to voice their concerns, have

⁸ Refer also to Caspian Development Advisory Panel, Interim Report on Azerbaijan and Georgia, August 2003, p83; www.caspsea.com

⁹ Caspian Development Advisory Panel, Report on Turkey and related Security and Human Rights Issues in Azerbaijan, Georgia and Turkey, December 2003, p60; www.caspsea.com

reviewed and challenged the valuation of their affected assets and have received full payment of their entitlement deposited in a national bank in the name of the owner. Also, all owners are entitled to compensation irrespective of whether they have title deed or customary ownership of land.

As noted above, approximately 20% or over 12,000 of the 62,000 individual land shareholders affected by the project are absentee owners. The task of identifying, locating and then informing these owners in accordance with the above requirements has presented the project with a major exercise with significant scheduling implications.

Under Turkish Expropriation Law there are generally two ways to acquire land: through amicable agreement or through a court process. Every effort was made by the project to settle acquisition through an amicable agreement, however due to the issue of multiple landownership and poor maintenance of title deed records the project was only able to settle 61% of private land parcels through amicable agreement. In lieu of amicable agreement, the BTC project applied to the courts for urgent expropriation under Article 27 of the Expropriation Law.

Article 27 is effectively an expedited alternative to the ordinary process for the exercise of eminent domain¹⁰ and has been applied during the BTC project in instances where land owners were absent and a) could not be located, b) could not complete the registration process due to multiple ownership issues or c) have not provided Powers of Attorney to their relatives who remain in the villages.

In response to concerns from some international NGOs and others on the greater than expected reliance on Article 27, the project modified the process by allowing more time for the identification and notification of owners, and ensuring that, following acquisition, owners receive their share of compensation as soon as they complete the deed title registration process, even if absentee part-owners have yet to come forward.

Sustainable Investments, Offsets and Related Initiatives

Creating Lasting Benefits

The BTC project is predicted to bring significant social, economic and community-related benefits to Azerbaijan, Georgia and Turkey. These will be manifested in the form of employment and associated investment in the development of employees, purchase of goods and services from local businesses, development and enhancement of local infrastructure and generation of revenues for the host

¹⁰ Refer to: Caspian Development Advisory Panel, December 2003, p65; *ibid*

governments, which in turn can serve as a catalyst for the countries in addressing key social and economic needs.

BP and its partners recognize that, historically, ‘traditional’ benefits accruing from natural resource development projects such as those outlined above have not always resulted in a lasting positive legacy in the host countries, particularly at the local community level. A variation of this theme is the creation of ‘boom and bust’ economic conditions whereby sudden stimulation of local economies and high demand for labor during construction falls away sharply at the commencement of operations.

To redress this situation and demonstrate its long-term commitment to the region, BTC, in conjunction with the South Caucasus Pipeline project (SCP), has implemented a number of sustainable development initiatives that are capable of delivering benefits that extend well beyond the construction phase of the project. These are additional to the numerous programs and initiatives that are being implemented to mitigate predicted and potential environmental and social impacts. Offset projects have also been developed to compensate for impacts that cannot be mitigated.

In developing the sustainable investment program, the BTC and SCP projects appreciate the challenge, not least because of the geographic spread of the projects across three countries, the number of communities that could potentially benefit from such initiatives and their expectations, but also because of the need to strike a balance between creating the seeds for projects that have the potential to be self-perpetuating and provide lasting benefits, and creating the perception (or indeed expectation) that the initiatives replace the role of government. It was also important not to create a situation where communities benefiting from such initiatives developed a dependency on their ongoing funding.

The sustainable investments take one of three forms: the Community Investment Program, the Environmental Investment Program and the Regional Sustainable Development Program. Each is discussed briefly below. The Offset Program is also briefly described, although it was conceived for different reasons and has a slightly different purpose.

Community Investment Programme (CIP)

The overall objective of the CIP is to fulfil BTC’s and SCP’s commitment to generate “economic benefits and opportunities for an enhanced quality of life for those whom our business impacts”. The CIP aims to improve:

- Living conditions and access to basic needs, such as clean water, electricity, schools, health and sanitation facilities through the rehabilitation of social and economic infrastructure without the need to create parallel structures

- Utilisation of production facilities and inputs through technical improvements, credits, management and training, and marketing support in the agricultural and service sectors
- Income-earning and economic opportunities for local people through access to micro-credit schemes, training and capacity building

The capacity of communities to self-organise, manage and self-initiate community driven development through community mobilisation initiatives and activities¹¹

It is proposed that these aims will be achieved through interventions that focus on sustainable and long term benefit, through participatory methodologies that empower communities to solve their own problems and through interventions that are needs-driven and “owned” by community members.

In each of the three countries the community projects have been designed in consultation with local communities and a range of other stakeholders. In Azerbaijan, CIP is active in about 107 communities, in Georgia 80 and Turkey 285 villages, with 43 to be added in the near future. Implementing Partners (IPs) have been selected through a Request for Proposal process. In Azerbaijan and Georgia the IPs are international NGOs partnered with national NGOs. In Turkey the IPs are two national NGOs, a university and a consultancy.

The dominant themes at the heart of CIP match the needs of communities close to the pipeline route and typically fall into the following categories:

- Economic opportunities and income generation
- Strengthening rural and agricultural systems
- Strengthening community institutional capacity
- Improving access to training and education
- Health and sanitation
- Rehabilitation of existing social and economic infrastructure

Some examples of specific projects being conducted in each of the host countries are as follows:

- Azerbaijan: community mobilization and capacity building; health care; micro-finance
- Georgia: renewal of rural infrastructure; agricultural support; support for income generation through micro-credit (see case study below); energy efficiency; social services; capacity building; school improvements, including infrastructure rehabilitation and teacher training

¹¹ Refer to project web site: caspiandevlopmentandexport.com

- Turkey: employment and income generating activities; agriculture support activities (vaccinating cattle, sheep and chickens; artificial insemination programs; training of farmers and trainers in animal husbandry, improvements in crop management; and orchard management); social infrastructure improvements; capacity building

The CIP is independently monitored and the results publicly disclosed. The overall CIP budget allocation is \$25 million, comprising \$8 million each for Azerbaijan and Georgia and \$9 million for Turkey. The third Case Study illustrates how the BTC project is as much about people living comparatively simple lives with modest expectations but with dignity and strong will power, as it is about geopolitics, Oil Funds and export supply routes. It describes an example of where the CIP is not only stemming the flow of people who are leaving a Georgian village as a result of decaying infrastructure and dwindling opportunities, but is helping to build for the future. CIP implementing partner CARE is completing the project.

Environmental Investment Programme (EIP)

The EIP aims to promote and conserve biodiversity, where possible by supporting existing national and regional strategies. The program is being implemented via a series of projects that collectively aim to fulfill the following objectives:

- To provide additional benefits (i.e., additionality) that go further than just mitigation of impacts
- To address areas of key stakeholder concern as identified in the ESIA consultation process
- To respond to ongoing biodiversity-related initiatives, issues and suggestions raised by stakeholders during the consultation process
- To promote involvement and commitment of people living in the vicinity of the project in the conservation of biodiversity through public awareness and education¹²

Unlike CIP projects, EIP projects tend to be more regional than community-based because they concentrate on particular species and habitats. For example EIP is looking to fund a Cross Caucasus Project that addresses the socio-economic, political and institutional threats to, and opportunities for, conservation and biodiversity in the region, within the framework of national biodiversity strategies and international conventions to which the host countries are parties. Habitat projects include conservation and restoration of Tougay forest, semi desert conservation and management, and forest habitat enhancement.

¹² Refer to project web site: caspiandevlopmentandexport.com

As with the CIP, the EIP is being implemented via IPs (typically International NGOs). Where possible and relevant, local communities are involved.

As at the end of 2004, four EIP projects were in the planning phase, six in the definition stage while 15 have progressed to implementation. The EIP will be independently monitored and the results publicly disclosed. The overall EIP budget is \$9.3 million.

Regional Sustainable Development Programme (RSDP)

The RSDP is a \$25 million pledge to regional development over a ten-year period starting in 2005. It will form the core of BP's commitment to the people of Azerbaijan, Georgia and Turkey to create sustainable benefits for local communities over the longer term and to make a central contribution to the responsible use of revenues generated as a result of the company's activity. The RSDP at present comprises two main activities:

- The Regional Development Initiative: This is envisaged as a large-scale, country and region-wide program. It will include projects that will endure and have an impact for some time. These projects will be designed to cover the lifetime of BP's projects. The programs will be aligned with government policy in each country and will be partnered by multilateral development agencies, IFIs and BP's project partners. The focus will be on enterprise development, good governance and improving access to energy. Capacity building and educational/vocational training will be intrinsic to all three themes.
- The Future Communities Program: This is envisaged as the main vehicle for the BP's future relationship with, and investment in, those communities (limited to the four kilometer BTC/SCP pipeline corridor and settlements near terminals and pump stations) most directly affected by the project's operations. It will build on the construction-phase CIPs and will be driven by themes and projects identified by the communities themselves with an emphasis on community mobilization and capacity building.

In order to ensure compliance with World Bank Group Safeguard Policies OP4.04 on Natural Habitats and OPN 11.03 on Cultural Property, BTC has committed to implement offset mitigation where significant residual impacts¹³ have been identified for natural habitats and cultural property. For example, where the pipeline ROW has been unavoidably routed through a forested area, the area of forest removed is being recreated at a nearby location as compensation for the fact

¹³ Defined as those impacts occurring *after* the application of mitigation measures

that the forest cannot be restored in its original location because of planting restrictions that apply to the ROW following reinstatement.

To facilitate project management and to exploit potential synergies with EIP, a number of the Offset projects are managed as part of the EIP. There are eight Offset projects with a combined budget of approximately \$2.5 million.

Transparency

Corporate Commitment

Transparency has been a theme that has affected the BTC project at all levels and reflects BP's corporate commitment to open accountability as a means of strengthening governance and reducing corruption, conflict, and poverty.

This commitment has been manifested in many forms. First and foremost, BP took the unprecedented step to publish the full text all of the agreements BTC has entered into with the Host Governments on the project website. Additionally, BP and the Azerbaijan government are committed to honor the principles embodied in the UK government's Extractive Industries Transparency Initiative (EITI), to which BP has publicly committed. EITI is intended to increase transparency associated with payments by extractive industries to governments and government-owned industries. The Azerbaijan government has piloted this initiative and formed a commission to assist in its implementation. BP Azerbaijan has been involved, along with other foreign and local extractive industry companies and a coalition of NGOs, in defining the procedures it will follow.

The Azerbaijan government has recently published the first Azerbaijan EITI report. Meanwhile, BP has just published its first Azerbaijan Sustainability Report and, in response to EITI, includes aggregated and disaggregated data relating to the amount and nature of financial transfers associated with its various operating entities, including BTC.

Other highlights that reflect BTC's corporate commitment include the public disclosure of the Production Sharing Agreements, the IGA and HGAs (including a citizen's guide), as well as the environmental, social, technical and safety standards that will apply. The company has also held a series of workshops, briefings and seminars with local media, covering aspects of the oil and gas industry such as the principles of the Production Sharing Agreements and the fundamentals of tax. These initiatives are designed to help the local media report BTC's activities in an informed and objective way, thereby stimulating a more open and transparent public debate.

A wide range of project-specific activities compliment the corporate initiatives outlined above. Of these, three themes illustrate the scale of BTC's commitment to

transparency: public consultation, disclosure, and monitoring. These are outlined below.

Public Consultation

Consultation with stakeholders has underpinned all project activities from the outset as BTC strived to meet the following self-imposed objectives:

- All stakeholders should have access to project information
- The information should be easily understood
- Locations for consultation should be accessible to all who want to attend
- Measures are put in place which ensure that vulnerable or minority groups are consulted
- A high level of awareness among communities and other stakeholders about the nature of the project, its likely impact and proposed mitigation measures, should be established
- Input from stakeholders on proposed mitigation measures, in particular through consultation with a representative sample of communities along the pipeline route and in relation to specific types of project activities, should be achieved
- Expectations among communities and other stakeholders should be managed

In order to meet these objectives, as well as HGA and IFI requirements, formal Public Consultation and Disclosure Plans were developed for each country. These documents were appended to the ESIA's and made available to the public in relevant national languages.

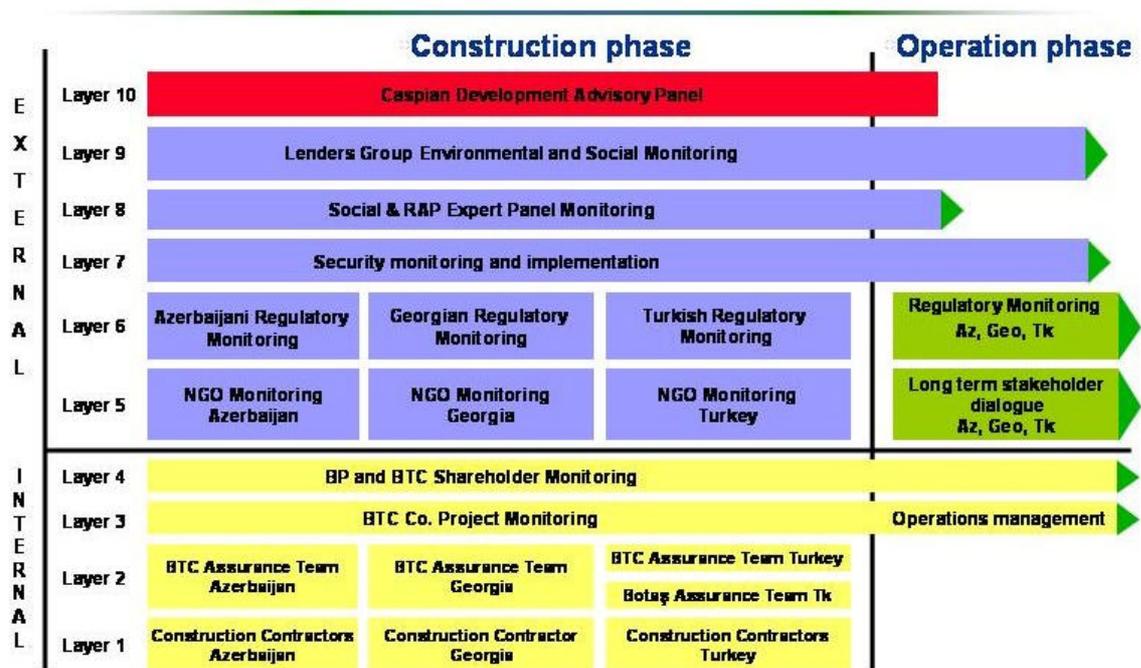
A critical element of the consultation process has been the day-to-day, grass-roots consultation with project-affected communities by dedicated Community Liaison Officers. These people provide the critical link between BTC and the communities along the route of the pipeline and around the facilities.

Disclosure

Since the public release of the ESIA's in 2002 and the submission of the ESAP to the IFIs in 2003, disclosure activities have continue unabated with the results of various internal and external monitoring activities (see below) continuing to be communicated in a variety of forms, fora and languages, depending on the intended audience. A summary of activities is published quarterly, via hard copy and on the project's website. The Executive Summary of each Quarterly Report is also translated into the multiple languages spoken in the host countries.

The scale of the disclosure effort is illustrated in Case Study 4. Here, a selected list of statistics is presented for Turkey. Comparable disclosure activities were undertaken in Azerbaijan and Georgia.

Figure 1. Monitoring, Assurance, and Oversight of BTC



Monitoring

The project’s monitoring activities are extensive and can be categorized as either internal or external, as illustrated by figure 1, above. Internal monitoring refers to monitoring that is carried out by contractors (self audit), BTC/Botas personnel, or external (independent) third parties on behalf of the aforementioned parties. Reports from internal monitoring are not normally published externally. They are however available for review by external monitors.

On the other hand, external monitoring is carried out at arms length from the project through third parties (e.g., government, or Lenders) and is always viewed as independent. Reports from external monitoring are normally published externally, except in the case of regulatory monitoring.

One aspect of the external monitoring process that merits explanation is the role of Lender’s Independent Environmental Consultant (IEC). The IEC has been appointed to act on behalf of the Lenders to assess and report to the Lender Group on the compliance of the project with the ESAP, the associated Contractor Control Plans (see below), Contractor Implementation Plans and Procedures, and BTC/Botas management plans and systems. During construction the IEC team has

generally comprised two teams consisting of two specialists. Each team spends approximately two weeks every quarter auditing the project, and reports non-compliances against the ESAP as well as verifies closure of BTC's responses to non-compliance raised during previous audits. IEC reports are publicly disclosed on the project's website.

Social aspects of the project are similarly audited by the Social Resettlement Action Panel although the frequency of audits is six monthly.

Contractors and Environmental & Social Resources

Formalizing Environmental & Social Standards and Expectations

The environmental and social impacts associated with a pipeline of the size and complexity of BTC are considerably greater during construction than during normal operations. The selection and management of engineering, procurement and construction contractors therefore represents a critically important element in the process to deliver a world-scale project to international environmental and social standards.

BTC's approach was to prepare an Invitation to Tender that set out the policies and requirements that needed to be met by each contractor during the contract term. These policies and requirements reflected BP's standards and expectations on a range of environmental, social and ethical issues. Because the Invitation to Tender was part of the contract between BTC and the contractor, the contractors were committed to implement the policies and requirements therein. Failure to do so represented grounds for termination by BTC of the construction contract.

The situation in Turkey is somewhat different given that the project is being designed and constructed under the terms of the HGA, and a Lump Sum Turnkey Agreement between BTC and Botas, backed by a Government Guarantee. While the terms of the Turnkey Agreement require Botas to assume responsibility for implementing the provisions of the environmental and social management plans, contractors working under Botas are responsible for implementing and adhering to all of the mitigation measures outlined in the EIA and the associated management plans. BTC's role is therefore one of project assurance rather than direct supervision and control, and this has made the task of upholding the exacting standards of the project more difficult.

Contractor Control Plans (CCPs)

Given the importance of the role of contractors in building a project to international environmental and social standards, BTC developed the concept of CCPs to improve the link between the impact assessment theory and the practical

fulfilment of project commitments during construction, thereby improving the environmental and social outcome of this phase of the project. The CCPs also assisted by adding transparency as well as facilitating overall project assurance.

Contractors are traditionally provided detailed and often complex environmental and social impact assessments. They are then left to generate method statements that ensure all commitments are fulfilled. More often than not, this is a weak link in what is arguably the most important phase of the environmental and social assessment process, with the contractors not having the background knowledge, technical expertise, time, and sometimes incentive to develop method statements from such large, diverse documents. The net result is that the avoidance and mitigation measures detailed in ESIAAs are often not implemented effectively, do not meet desired environmental and social outcomes, or cost more through contractual disputes, non compliance actions and/or follow-up remedial works.

The CCPs adopted a performance driven approach and maximize the chance of ensuring that project commitments (on which the regulatory approval is based) are achieved both cost effectively and on schedule, as the contractor can clearly identify what has to be done.

Performance criteria to be met by the Contractor when implementing the mitigation measures are described in the CCPs, and the procedures to ensure that these criteria are met or exceeded are outlined. The means by which these performance criteria are met are determined by the individual Contractors, and described in detail in complimentary Contractor Implementation Plans and Procedures. This inherently flexible approach accommodates individual Contractor preferences and experience, local conditions etc.

The CCPs were an integral part of the ESAPs prepared for the Lenders as part of the loan requirements and now form the basis of the IEC External Monitoring programme described above.

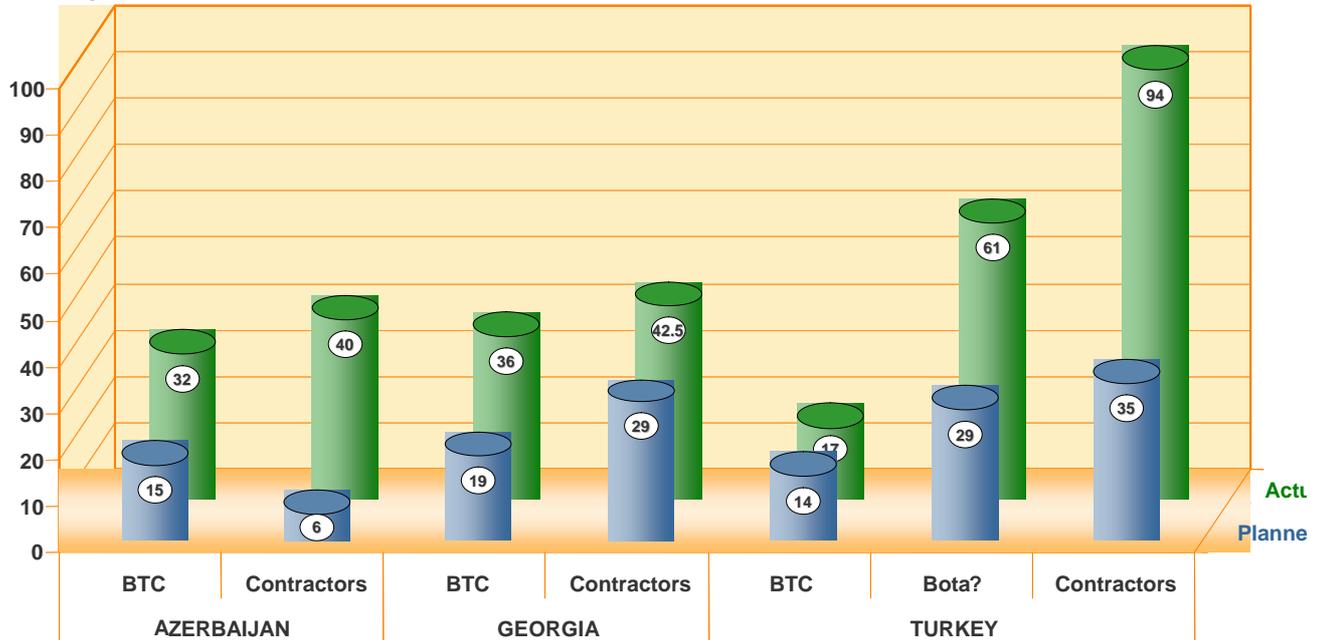
Environmental & Social (E&S) Staff Resources

One measure of the scale of the project and level of commitment regarding environmental and social performance can be seen from data relating to E&S staff resources, figure 2. These data show the original level of commitment, as given in the ESIAAs, compared with actual numbers 18 months into the construction phase. For BTC, 51 E&S staff were budgeted for the three countries. This number has almost doubled to just less than 100.

The growth in contractor E&S staff has been even more pronounced having more than doubled from approximately 100 to 237. The data indicate that Georgia has approximately twice the number of E&S staff resources when calculated on a

person/km of pipeline basis (0,31) compared with Azerbaijan and Turkey (both 0.16).

Figure 2: Number of Environmental & Social Personnel



NB: Excludes Core Management Team – planned 3, actual 9

From BTC's perspective, the growth in demand for E&S resources can be attributed to five main factors:

- Preparation of a large volume of material for Lender Group as a pre-condition to project financing. (In June 2003, IFC and EBRD approved a package of E&S documentation comprising some 11,600 pages for public disclosure containing several thousand commitments).
- Additional supervision of contractors
- Preparation, participation and follow-up with respect to the 10 layers of monitoring referred to in Figure 2
- Technical support to contractors, particularly with respect to waste management (e.g., waste water treatment plants, incinerators)
- A general underestimation of the resources needed to ensure effective implementation of all commitments

From the contractor's perspective, the principal reasons for the large difference between the planned and actual numbers of E&S staff probably indicates a lack of experience in applying international environmental and social standards to large infrastructure projects and therefore, under-scoping and under-resourcing at the outset.

Conclusion

The BTC project is a complex, world-scale project that is being executed within a legal framework that conforms to the highest international standards.

The varied and complex historical, political, institutional and cultural setting of the project, along with transitioning national environmental and social policies, constantly evolving international standards, and ever-increasing expectations has presented BTC with significant challenges in the design, planning and construction of the project. This is particularly true given the company's demanding self-imposed goals and recognition of the opportunity (and arguably need) to set new environmental and social standards for multinational, private sector infrastructure investments in developing and transition countries, given the recent and ongoing debate on extractive industries and their effect on the economic and social welfare of their host countries.¹⁴

Although the majority of the environmental and social commitments identified in the ESIA for the construction phase have been fulfilled, both BTC and their contractors found the full implementation of some a significant challenge, particularly at the outset of construction. This can be attributed to the following main reasons:

- *Application of EU legislation in non-Member States.* This has led to considerable debate on the interpretation and application of some legislation under local conditions, a role normally performed by Member State governments. In hindsight, more environmental and social technical input into the drafting of legal frameworks may have alleviated some of the difficulties that were encountered, without compromising outcomes
- *Weakly developed environmental infrastructure in the host countries* This has led to difficulties conforming to selected EU requirement, particularly waste management
- *Variable interpretation of international standards by IFIs, Export Credit Agencies, NGOs and BTC:* In finalizing the ESAP with the IFIs, policies and standards were variously interpreted, reflecting in part inconsistencies in the standards (including conflicts with local law) as well as their necessarily generic form (particularly in the case of social standards)
- *The sheer number of commitments.* Several thousand commitments were needed to ensure compliance with all the laws, policies, standards and conventions, and inevitably resulted in detailed and onerous implementation plans. Two key lessons are:

¹⁴ Refer: eireview.org

- Ensure commitments are not overly theoretical and difficult to apply in the real world
- Avoid conflicting and ambiguous commitments

Notwithstanding these challenges BTC has remained firm in its resolve to honor the provisions of the various project agreements, the ESIA's, the ESAP and BP's corporate policies, while the scrutiny of regular external audits and the visibility this provides has given additional emphasis to finding solutions to difficult issues.

Case Study 1: Establishing Waste Management Infrastructure in Georgia and Azerbaijan

The Inter-Governmental Agreement signed in November 1999 included a requirement to achieve EU standards for environmental protection. One of the areas in which this commitment posed the greatest challenge to the Project was waste management.

At the outset of the Project there was no existing waste infrastructure in either Azerbaijan or Georgia that met, or came close to meeting, these stringent requirements. Other challenges to achieving the goal included a lack of qualified waste management contractors and recycling facilities. Established practices for dealing with wastes were very different from those envisaged for BTC and it was apparent that a great deal of training would be required to change conventional behaviours. In Turkey facilities were available, albeit at some distance from the pipeline, for handling most waste streams.

As the generation of wastes was seen as an integral project activity BTC elected to assign direct responsibility for achieving the required standards for waste management to the main Construction Contractors, via strict requirements in the contract. Contractual requirements included the implementation of waste tracking systems under Duty of Care principles, establishment of Project dedicated waste facilities and a description of the legislation of relevance.

Construction contractors embraced these requirements in different ways. For example, in Azerbaijan the pipeline contractor sourced and purchased an incinerator, which was specified to meet EU standards, at a cost of almost \$1 million. They recouped some of the capital cost by reaching an agreement with the facilities contractor that would also see waste generated at the facilities being incinerated in this unit.

Initially the incinerator suffered a significant amount of downtime and it proved difficult to consistently achieve the emissions standards specified for the equipment. However, after a significant input of time, resources and additional

funding by BTC Co, the reliability and performance of the unit improved dramatically.

During the periods of incinerator downtime it was necessary to find an alternative disposal route for organic putrescible wastes, which could not be stored due to the health risk posed to workers. The only available solution was to dispose of these small waste volumes to a Government approved Municipal landfill site that did not meet EU standards. As offset mitigation for this non-compliant disposal of wastes, and in order to ensure long term security in waste disposal to an acceptable standard, BTC has contributed to several initiatives to improve the waste management infrastructure of Azerbaijan.

Firstly, BTC contributed to the upgrade of the Municipal landfill used for contingency disposal of organic wastes. Upgrade works centered on improving basic management of the site and the ability to properly handle wastes. In addition BTC contributed to the design, construction and operation of a new, EU compliant non-hazardous waste landfill in Azerbaijan. It is anticipated that this facility will be operational in 2006 and will be available to third parties.

The contractor in Georgia also purchased an incinerator that was installed at one of the pump station sites. This unit proved to be even more problematic than the one installed in Azerbaijan. Despite repeated interventions by BTC it was not possible for this unit to achieve the emissions standards claimed by the manufacturers and required by the Project.

Alternative reuse or recycling solutions were found for the majority of waste streams, however the Project was left with the issue of where to dispose of putrescible organic wastes. In consultation with the Government of Georgia it was decided that the best environmental option would be to utilize an existing Municipal landfill. As a way of improving conditions and waste management practices at this existing facility BTC funded the development and implementation of a conditioning plan for the landfill, as per the EU Landfill Directive, to be delivered in 2005.

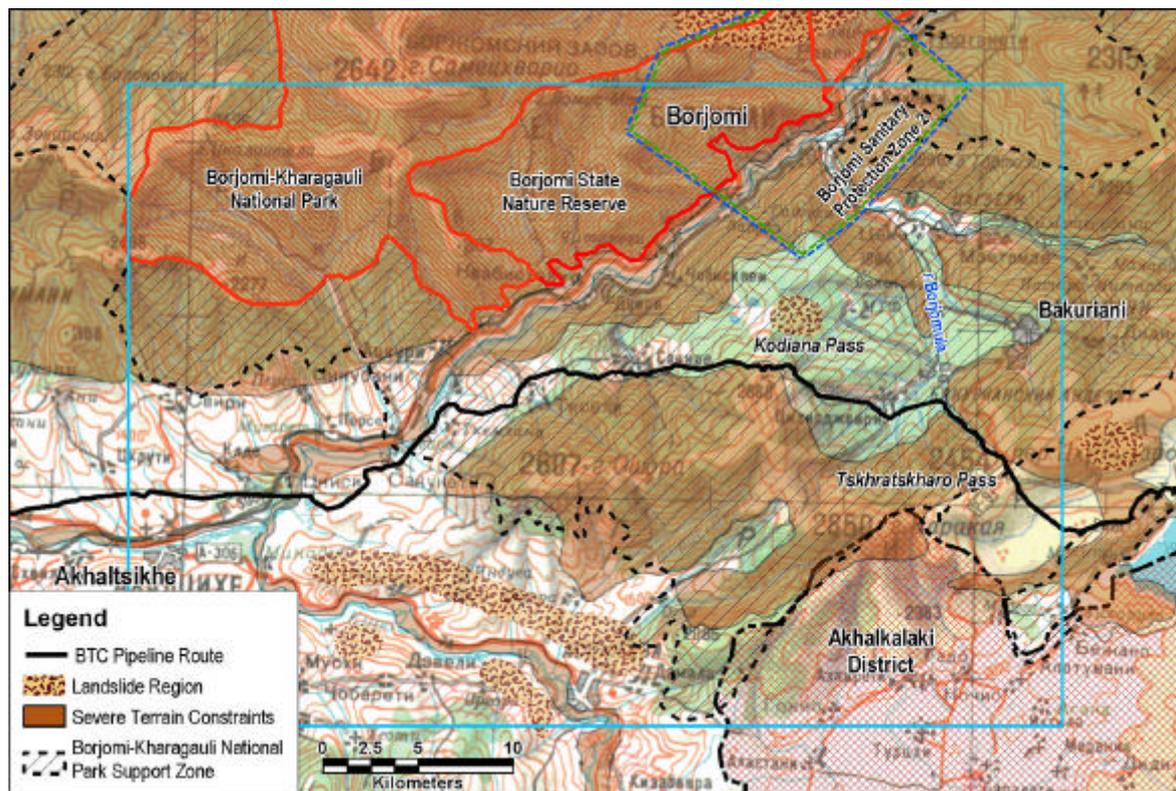
BP is also addressing longer term waste management issues in Georgia through a number of initiatives, for example, BP is funding the development of a EU-compliant non hazardous waste landfill for dealing with future wastes generated by BP. Alongside this BP has proposed to undertake a strategic waste management review for Georgia and to work with the Government of Georgia to improve the national capacity for waste management.

All hazardous wastes generated in both Azerbaijan and Georgia are currently stored in secure, project-dedicated areas, until such time as EU compliant disposal options become available. In Georgia several options are being pursued, including export of wastes in accordance with EC Council Regulation No. 259/93.

In Azerbaijan it is envisaged that hazardous wastes will ultimately be disposed of to a recently opened, World Bank financed, hazardous waste landfill.

Case Study 2: Route Selection Through the Borjomi Region of Georgia - the Kodiana Pipeline Section

Identification of a pipeline route through Georgia that minimizes environmental and social impacts was the subject of much debate and took several years. Early in the process one of the main options evaluated was to route the BTC pipeline through southern Georgia, which had the benefit of minimizing the length of the pipeline. However, this would have meant passing through Akhalkalaki District, with its population of predominantly Armenian descent and proximity to a Russian military base. The Georgian government was particularly concerned about the security risks imposed by the presence of the military base and instructed BTC not to route the pipeline through Akhalkalaki, views which were shared by international security advisors. This security concern forced the BTC pipeline route considerably further to the north, into an area of high mountain terrain - an area known as the Borjomi region.



Defining the route

The area in Borjomi, from Tskhratskharo Pass to Kodiana Pass (the 17 km Kodiana Section, refer to map), quickly developed into the most sensitive area along the entire BTC pipeline route due to a combination of real and perceived factors

associated with the natural characteristics and resources of the area. Four main issues dominated the route definition process:

Geohazards / terrain evaluation. A terrain evaluation and geohazard assessment was undertaken, consisting of a desk top study followed by a multi-disciplinary field trip looking at geohazard, environmental and constructability constraints. Landslides, debris flows, difficult relief, aggressive soils and river flash floods and scours were some of the specific geohazards identified and mapped, and subsequently ranked in order of severity.

Flora and fauna. This section of the pipeline route encroaches on the Support Zone of the Borjomi-Kharagauli National Park, which acts as a buffer to the more sensitive National Park. The vegetation of the Support Zone near the proposed pipeline is extremely diverse and is made up of alpine meadows, sub-alpine tall herbaceous communities, near-timberline vegetation and fragments of high-mountain forests. The mature forest blocks of the region provide habitat for a number of large mammals, including, wolf, brown bear, fox, hare, marten, wild cat, lynx, roe deer and wild boar. The region also forms part of the migratory link between the Greater and the Lesser Caucasus. The Support Zone also has many streams, rivers and small ponds, which are important for a number of endemic and Georgian Red Data Book-listed species of amphibians and reptiles. The areas also provides valuable habitat for a wide range of bird species.

Groundwater. From Tskhratskharo Pass to Kodiania Pass the route lies within the surface water catchment of the Borjomula river, where surface springs and thermal mineral springs discharge into the river. Water from the springs and the groundwater is widely sold as Borjomi bottled water, a resource regarded with a great deal of national pride in Georgia. Concern was raised over the potential effects on the groundwater of an oil spill during operation of the pipeline, however specialist consultants concluded that this was not possible for a number of reasons including the lack of a hydraulic connection between the rocks crossed by the pipeline and the mineral water bearing rocks, and the fact that the water bearing aquifer is pressurized. This issue has been considered very carefully in the project design (see below).

Tourism. The town of Borjomi which is some 15 km from the pipeline and village Bakuriani provide a centre for tourism activities in the region. Whilst this has decreased since Soviet times, tourists are still drawn to the area for such attractions as the downhill and cross-country skiing at the Bakuriani resort, the mineral water health spa at Borjomi and the other natural resources offered by the National Park. During the routing study the entire area was examined in a great deal of detail to find a route that did not traverse the Akhalkalaki District and which minimized the environmental and social impacts associated with these main issues.

Pipeline protection measures – design and management

The entire BTC pipeline system has been designed to meet or exceed the relevant international codes and standards, and to this end best practice leak prevention and detection methods have been incorporated into the design. In addition, further mitigation measures that go well beyond industry norms were put into place in the Borjomi section of the pipeline. Supplementary measures include the installation of additional block valves, burying the pipeline to a greater depth and numerous security measures to detect and deter casual or intentional access to the pipeline. Over and above this, BTC is discussing with the Government of Georgia additional secondary containment measures that could be constructed to help contain oil in the unlikely event of an oil spill.

Long term integrity of the pipeline will be ensured by inspection and planned maintenance activities. During routine pipeline operations, the pipeline will be regularly inspected by foot, vehicle or horseback patrols, to check on its physical condition and to ensure that no construction or excavation work in the area could inadvertently damage the pipeline. Additional resources will be utilized for surveillance in the Borjomi area. To facilitate a rapid and effective tactical response, an additional oil spill base has also been located in the Borjomi area.

Conclusion

BTC has recognized that a successful pipeline project is dependent on the implementation of all the commitments in the ESIA's. BTC has worked with the construction contractor to ensure that detailed method statements exist for all activities. Environmental awareness training has been provided dedicated to the Kodiana section of the pipeline.

The overriding aim of the project is to avoid damaging valuable environmental resources wherever possible and to reduce any unavoidable impacts to the minimum. In the Borjomi area in particular, potential impacts have been recognised and reduced through careful design to ensure that the pipeline presents as close to zero risk as possible.

Case Study 3: Helping to Create Conditions for Sustainable Development - Recreating Hope and A Future in Moliti Village, Georgia

The village of Moliti sits at 2,400m in the Borjomi region of Georgia, one of the highest points of the pipeline route. With a population of only 267 people and 65 families, it is a small village that was facing an uncertain future. One of these villagers is Armik Arutunyan, an ethnic Armenian, born in 1966 in Moliti. He had always said to himself, "If I get any amount of money in my hands I will take my family and go someplace else to live." His two brothers, one sister and their

families have done so. They left Moliti village and now live and work in Krasnodar, Russia. Armik was feeling abandoned.

A short while ago things started to get to the point of despair. "I was losing my staying power and also wanted to leave." He had nothing here, no water, the school was falling apart, and animals were dying. "I had made up my mind, it was time to go." He sold his tractor and a few cows and sheep to get money together to take his family and leave.

The many departures from Moliti are understandable as life in such an isolated village is not easy. "We never had any contacts with a NGO in the past we only heard stories of other villages getting help. Even the former government told us to move someplace else if we wanted to improve our situation."

Then the pipeline projects started and a CIP staff member, Zura Ioanidze, came and gave him hope to stay. "CIP helped not only on paper but with real things that were destined to help the whole village. It was the first time any promises were kept. Throughout my life here in Moliti I have seen promises made and then unfulfilled."

In addition to the water rehabilitation, projects to improve agriculture have provided direct benefits to people's lives in Moliti. CIP has imported and provided new seed potatoes to many farmers in Moliti. The new early variety of seed stock is well suited to the area. In the past the village's seed potatoes were old, genetically mixed and very vulnerable to pests. With the new seed, proper application of fertilizers and appropriate pest management, today's yields have increased 5-6 times from those in the past.

Armik insists on digging up one of his potato plants to display his crop. The enthusiasm is plain to see, in his and his children's manner. His youngest son, Gagik picks up one of the largest, robust potatoes of the lot and places a firm adoring kiss on its skin. "These are the nicest potatoes ever to come out of Moliti." Armik has good reason to be proud. The agriculture training that has been provided by CIP has not only allowed his potatoes to flourish but the whole village now has the feeling it will prosper.

CIP is also teaching the village how to work together to bring the benefits to everyone in the community. Armik and two other local farmers have established "demonstration farms" they have received 100kg of the new seed potatoes from CIP. After his harvest in a few weeks, he and another "demonstration farmer" will distribute 20 kg each to 10 neighbors who in turn will provide 10 kg to a vulnerable family or individual. They have learned a lot with CIP and have grown together as a community.

Armik also has seven cows, three calves and twenty sheep. In the years before vaccines became available, an average five or six of his sheep died each year. Three years ago an unknown virus made many animals in the village sick. Sadly twelve cows and more than one hundred sheep died that year. This is no longer a problem in Moliti now that CIP has provided training in proper livestock keeping. A regular visit by a veterinarian supplies vaccines to the livestock being raised, which has greatly improved the life expectancy of many animals. Pointing to the burnt spot where lightning struck his stone barn a month ago. "It's strange" Armik says with a shrug of his shoulders, "I lost one sheep to lightning this year and none to illness."

The many benefits provided through BTC and SCP seems to be reversing the migration that had become so familiar to Moliti. Previously the village was being drained of its younger generation, many of them leaving for greener pastures. Last year no young people returned to Moliti, but this year young people started to come back looking for houses. "15 years ago two of my best friends left with their families and went to Akhaliki region. This year they returned and are making a go of it."

Armik's outlook for the future and that of the whole village is bright. The people have hope that they can survive in Moliti. "Things are going forward. We now feel we are not so isolated and on our own. I am getting happier with my life here in Moliti" Armik says with an unshaven grin. "With the help of CIP we now all have the hope to carry us through the long Moliti winters."

Case Study 4: Public Disclosure In Turkey: Selected Summary Statistics

Environmental Impact Assessment

Full Draft EIA (90 copies) to:

- 20 State Authorities
- 10 Provincial governments
- 35 District Sub-governorship offices
- 8 National and 6 local university libraries along the pipeline route
- 3 main public libraries in Ankara and Istanbul

Full Draft (CD) EIA (288 copies)

Non Technical Summary (7000 copies) to:

- National and local NGOs and media
- 35 Public libraries in the provincial and district
- Centers along the pipeline route and Muhtars (village heads)

Community pamphlet (15,000 copies) to:

- Project-affected communities along the pipeline route, and those in the vicinity of the marine terminal (370 settlements)

BTC website: Full disclosure

Direct Engagement

- 10 Provincial governors
- 22 district sub-governors
- 208 Muhtars
- 1734 households representing 8,961 people interviewed through questionnaires
- Local NGOs and interest groups
- National NGOs, press and interest groups
- Fisherman, fishing industry representatives and other stakeholders in the vicinity of the marine terminal
- Settlements in the vicinity of the four pump stations
- and pressure reduction station

Resettlement Action Plan

- Ministeries
- Offices of Provincial Governors (10)
- Offices of District Governors (32)
- National universities (12)
- Regional universities (7)
- National libraries (3)
- Project website

The availability of the RAP was also publicized through press releases in the print media, and in public places by 23rd December. Press release was sent to all of the National newspapers (approximately 150) and televisions (approx 20) in Turkey and local newspapers along the pipeline route (23 local newspapers).

Guides To Land Acquisition & Compensation

- 87,000 copies of guides distributes to private/customary owners
- Public libraries in the district and provincial centers along the pipeline route
- University libraries in the provinces along the pipeline route
- Local and national NGOs Project website

Supplementary Consultation On Acquisition & Compensation

- First round of consultation and negotiation meetings with all affected settlements: 291 villages visited between November 2003 and January 2003
- Additional address/owner identification meetings in affected villages
- Second round of consultation and negotiation meetings in every affected settlement
- Consultation meetings with non-eligible users to develop RAP Fund
- Consultation with the users during user/crop identification study and crop assessment payments
- Consultation meetings with users of common lands to develop compensation methodology