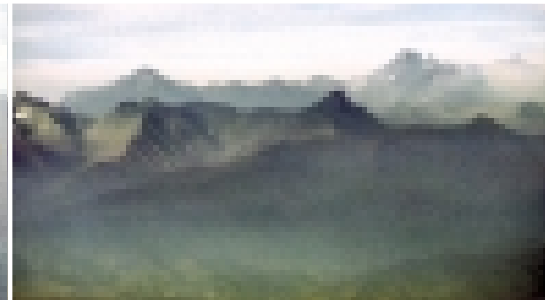
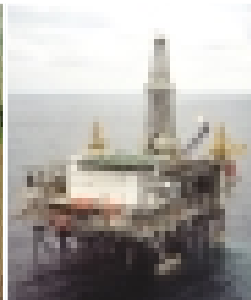
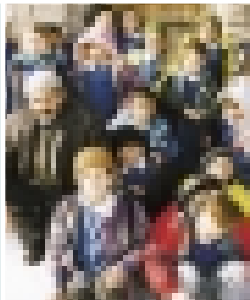


regional review

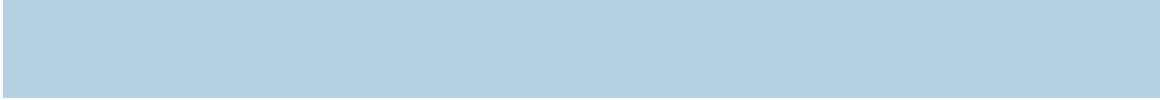
executive summary



economic, social and environmental overview of the ACG, BTC and Shah Deniz/SCP projects in the national and regional context of Azerbaijan, Georgia and Turkey

February 2003

For the purposes of simplicity and clarity, the Azeri-Chirag-Gunashli (ACG) project, the Baku-Tbilisi-Ceyhan (BTC) oil pipeline, the Shah Deniz gas field and the South Caucasus Pipeline (SCP) are collectively referred to in this Review as “the projects”. The members of the partnerships developing the projects are referred to as “the project sponsors”. This does not imply that the partnerships or the projects are identical. Each of the three projects (ACG, BTC, and Shah Deniz/SCP) has a distinct sponsor group governed by its own set of legal arrangements, as well as by distinct budgets, schedules and decision-making processes.



The Baku-Tbilisi-Ceyhan (BTC) pipeline is a project of regional significance as it represents the first direct transportation link between the Caspian and the Mediterranean avoiding the Turkish Straits.



Overview

The Caspian region has the potential to become one of the major oil and gas producing areas in the world. Estimated proven oil and gas reserves rank the Caspian region alongside the North Sea and the Gulf of Mexico. As production from older provinces declines, new sources of hydrocarbons, particularly from non-OPEC countries, are becoming increasingly important to the world.

For most of the 20th century the Caspian resources were developed to meet the needs of the former Soviet Union (FSU). With the dissolution of the Soviet Union in

December 1991 the Caspian Basin was opened to the outside world, both in terms of foreign direct investment into the region and resource exports to world markets.

The ability of the Azerbaijani Government to develop the country's oil resources following its independence was initially hindered by the absence of sufficient sources of capital and technology to develop the offshore and onshore reserves and associated viable export alternatives. The early 1990s saw the influx of a number of international petroleum companies, which entered into partnerships with the Azerbaijani Government through the Production

Sharing Agreement (PSA) framework, to develop the offshore and onshore reserves.

Azerbaijan is due to see enormous growth in oil production over the next five years. The major growth in oil production from Azerbaijan will arise





The Regional Review has been prepared as a means of communicating the projects sponsors' goals and expectations,

primarily as a result of the development of the giant **Azeri-Chirag-Gunashli (ACG)** oil field that lies about 100 kilometres off the coast of Baku and has estimated recoverable resources of 5.4 billion barrels. It is being developed by the Azerbaijan International Operating Company (AIOC), a group of ten major petroleum companies from around the world, and operated by BP. The ACG project is a four-phase development: the Early Oil Project (EOP) has been producing oil since 1997, Phase 1 is due to come on-stream in 2005, with Phases 2 and 3 following consecutively.

Oil exports from the development of ACG are expected to increase from current levels of 133,000 barrels a day to more than 1,000,000 barrels a day by 2009. This production alone could fulfil up to 10% of incremental global oil requirements over the next decade.

The landlocked nature of the Caspian Sea, combined with the limited capacity of pipeline and rail networks serving the region, and the reliance of these networks

on export via the Turkish Straits, has long posed a challenge for the long-term development and export of Azerbaijan's petroleum resources.

The **Baku-Tbilisi-Ceyhan (BTC) pipeline** is a project of regional significance as it represents the first direct transportation link between the Caspian and the Mediterranean which avoids the Turkish Straits. It will be the primary conduit for oil produced from ACG and will stretch 1,760 kilometres from Baku through Georgia to Ceyhan in south-east Turkey. From Ceyhan the oil will be loaded onto tankers and transported to international markets. BTC is owned by the Baku-Tbilisi-Ceyhan Pipeline Company (BTC Co) whose shareholders comprise a group of eleven petroleum companies with upstream interests in the Caspian region. BP will act as operator of the pipeline on behalf of BTC Co.

In addition to the oil developments, Azerbaijan will soon become an exporter of natural gas. This gas will come from the large **Shah Deniz** gas field that lies 100 kilometres offshore south-east of Baku, and has

estimated recoverable gas resources of 16 tcf (over 400 bcm). The gas will primarily supply the Turkish market. Azerbaijan and Georgia will also draw gas from the system as the main volumes are transported through the **South Caucasus Pipeline (SCP)** to Turkey. BP is constructing both the Shah Deniz production facilities and the SCP on behalf of another partnership of petroleum companies, several which are also partners in ACG and BTC.



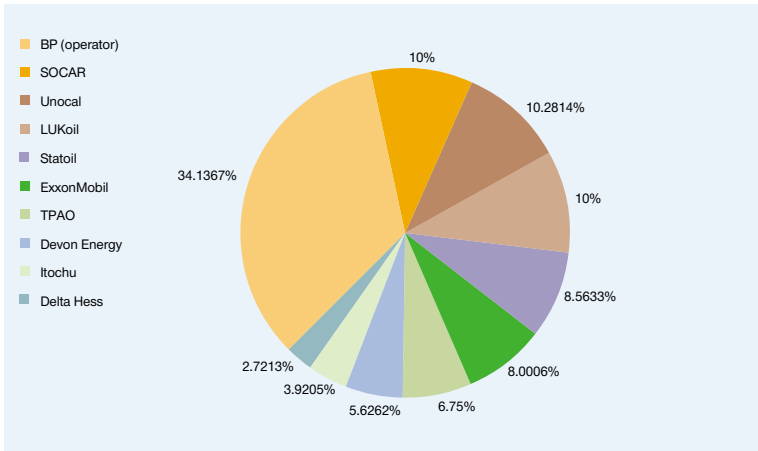


Figure ES-1: parent companies' percentage shares in AIOC

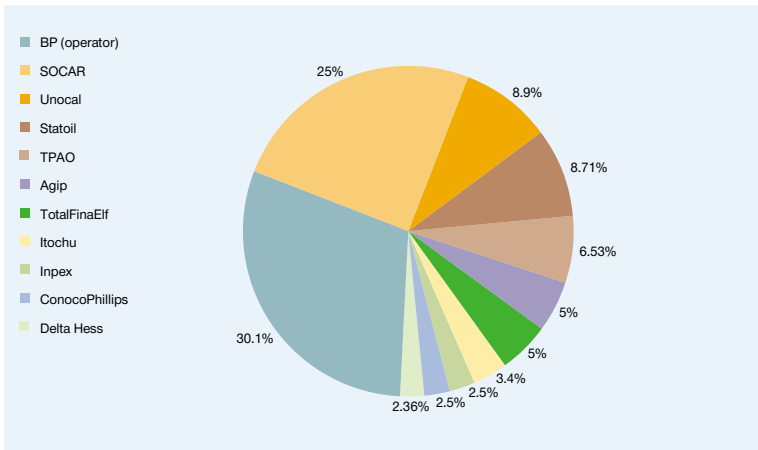


Figure ES-2: parent companies' percentage shares in BTC

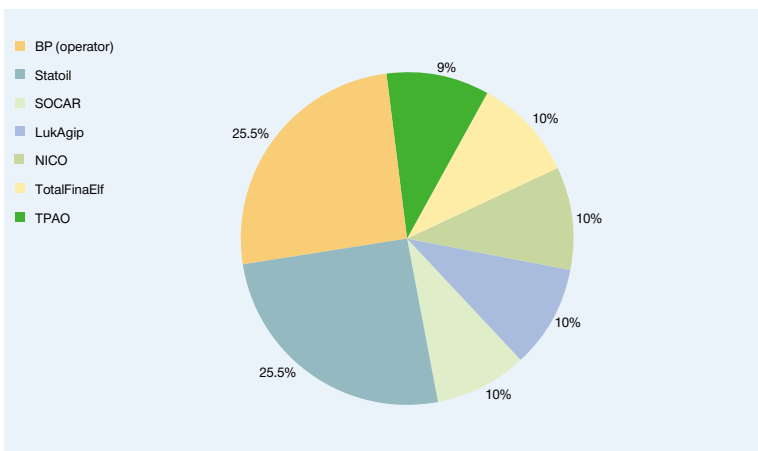


Figure ES-3: parent companies' percentage shares in Shah Deniz

All these projects are world-scale investments supported by the Governments of Azerbaijan, Georgia and Turkey, and backed by three different partnerships of national and international petroleum companies, as depicted in Figures ES-1 to ES-3.

Purpose of the Regional Review

The Regional Review has been prepared as a means of communicating the project sponsors' goals and expectations, and the broader issues that have been considered as part of these world-class projects. The sponsor companies, and BP as the operator for all the partnerships, have entered into a long-term business relationship with the people and governments of Azerbaijan, Georgia, and Turkey. Within this relationship, the sponsors intend to be strong, responsible, long-term partners.

The issues covered in this Review are complex and controversial, and in many respects outside the direct control of the projects. Many cannot be addressed directly by investors undertaking a commercial project. Many are predominantly, if not exclusively, the domain of sovereign governments. Nonetheless, the project sponsors recognize that they can provide both a positive influence and example in contributing to the wellbeing of the people of Azerbaijan, Georgia and Turkey.

This Review is intended to stimulate dialogue and the flow of information about the projects. It is based on the best information available to the Review team at the time of publication. Reader feedback is encouraged: the projects' website www.caspiandevlopmentandexport.com has been established to serve as a focal point for project information and to receive comments from the public¹.

¹ Readers without access to e-mail are also invited to send comments via the form attached to the main Review report.

BP's business activities are governed by its global business policies on health, safety and the environment; ethical conduct; employees; relationships; and finance and control. These policies support the principles set forth in the United Nations Universal Declaration of Human Rights and respect the International Labour Organization's Tripartite Declaration of Principles Concerning Multinational Enterprises and Social Policy and the OECD Guidelines for Multinational Enterprises. The Voluntary Guidelines on Security and Human Rights are part of BP's security management system. For more information on BP's policies, see www.bp.com



Regular reports will be published on the development and operation of the projects responding to external views and feedback.

Preparation of the Review

This Review is the result of 18 months of consultation, evaluation, analysis and writing. It addresses a number of important issues of broader national and regional socio-economic development interest that are potentially relevant to the development of these projects to

complement and supplement the Environmental and Social Impact Assessments (ESIAs). (The ESIA look at the potential environmental and social impacts of the projects on the biological, physical and human environment, and they are all available to the public¹). This Review attempts to identify and examine these broader issues and provide the basis for an ongoing dialogue between the project sponsors and relevant stakeholders. Many of the issues are of current attention in the World Bank Extractive Industries Review. The Review highlights the efforts already undertaken by BP and its partners, and illustrates a number of steps that will be taken going forward.

This Review is the result of 18 months of consultation, evaluation, analysis and writing.



Opportunities and challenges

The total investment required to realize all the projects, including investment already made, is of the order of \$20 billion². The oil and gas production facilities and pipelines in Azerbaijan, the pipelines in Georgia, and the pipelines and terminal in Turkey, represent the largest single foreign direct investment in each country, presenting both opportunities and challenges for the projects and for

the governments of each country. Many of the challenges are specific to the country in question. Some depend on the nature and scale of the investment and the status of the country's economic and social development. Some are common issues across the region.

Broadly speaking, the issues addressed by the Review can be divided into three categories – economic, social, and environmental, although many

¹ The ESIA's are also available on the public website: www.caspiandevlopmentandexport.com
² All dollar figures throughout the Review are US dollars.

Summary of principal opportunities and challenges

Economic

Oil and Gas Revenues
Employment, Procurement and the Non-oil Economy
Community/Social Investment
Domestic Energy

Social

Ethical Performance
Human Rights
Conflict

Environmental

Biodiversity
Oil Spill Response
Greenhouse Gas Emissions



are inter-related. Several issues are not within the direct control of the projects or the project sponsors.

Key questions

The analysis presented in this Review has been carried out to answer the following questions:

- What are the key opportunities and challenges presented by the projects at national and regional levels?
- Where are the projects and their sponsors able to exert direct influence to maximize the opportunities and minimize the challenges?
- Where are the projects limited in their ability to influence directly? In these cases, can anything be done?
- Is there anything else that the project sponsors should be considering as they implement international standards that can benefit Azerbaijan, Georgia, and Turkey over the lifespan of the projects?

Principal findings of the Regional Review

Most observers that were consulted in the preparation of the Review acknowledge that the realization of the projects' contributions towards broader economic and socio-economic development will depend primarily on government policies and prudent management and use of oil and gas revenues (some of the initiatives being undertaken by the governments in Azerbaijan, Georgia and Turkey are listed in Box ES-1). Most observers agree that the projects can serve as an example and as a positive influence by engaging with stakeholders

Within the project teams, there is broad agreement that the projects should use best international practices and standards in project activities.

in constructive dialogue and building additional support, where appropriate. Within the project teams, there is broad agreement that the projects should use best international practices and standards in project activities.





The principal findings of this Review are as follows:

ECONOMIC

1. Oil and gas revenues Section 3 of the Review

Opportunities and challenges:

The ACG early oil scheme has now produced over 165 million barrels of oil and delivered bonus payments of over \$200 million and \$500 million as profit petroleum to the State of Azerbaijan. Current forecasts indicate that the ACG

project has the potential to generate between \$21 billion and \$58 billion in income for the Government of Azerbaijan over a 30 year-period¹ and a steady stream of transit income from the pipeline projects for Azerbaijan, Georgia and Turkey.

The bulk of these revenues will flow to Azerbaijan, where the hydrocarbon reserves are located. The magnitude of these revenue flows, which will be significant after 2005, can serve as a catalyst for further progress in the country's transition to a market economy. It may also pose some challenges, similar to those of other energy-rich countries. Particular challenges may stem from distortionary macro-economic impacts of large energy-related revenue flows or large fluctuations in oil revenues.

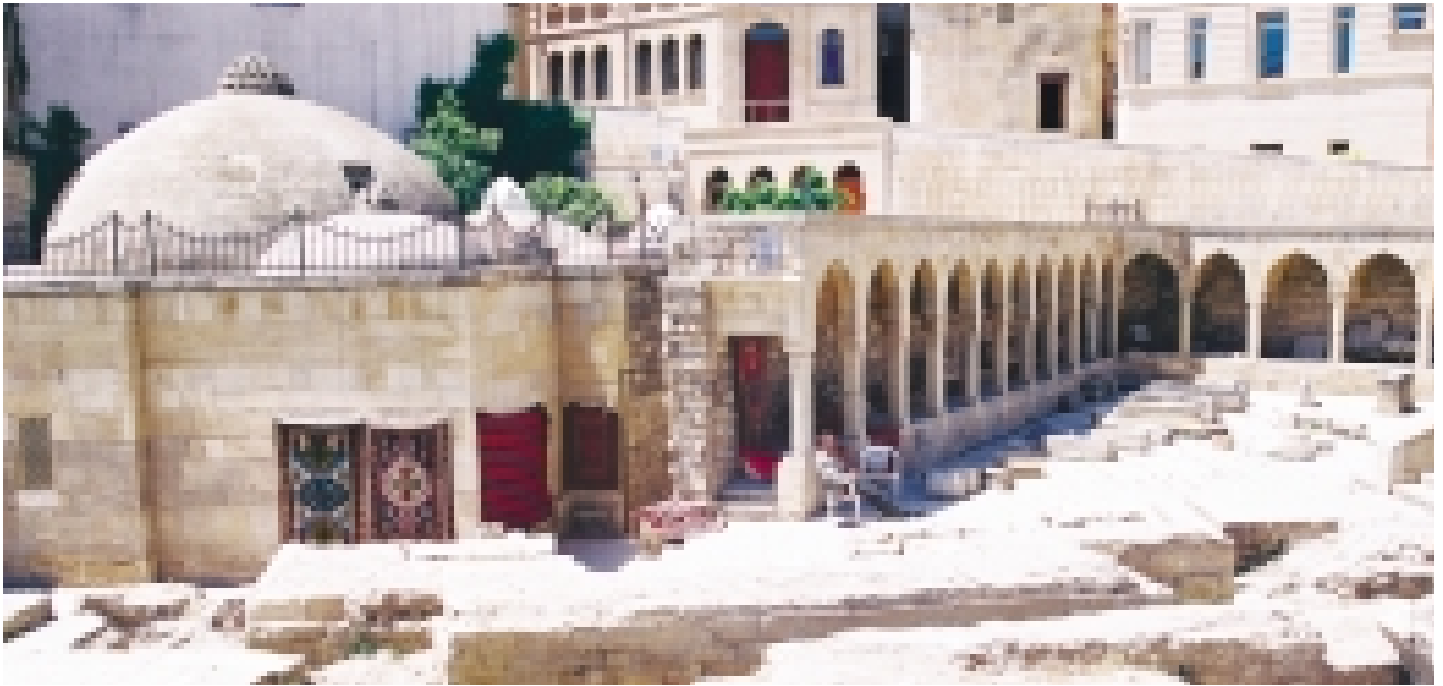
Realization and mitigation: In 2000, Azerbaijan created the State Oil Fund of the Azerbaijan Republic (SOFAZ) for the collection, investment and management of the revenues from oil and gas developments. This

is a potentially significant step in addressing the opportunities and challenges described above. Azerbaijan has been working with the International Monetary Fund (IMF) and World Bank to ensure that the Oil Fund is implemented effectively in order to maximize the benefits and minimize potential negative economic impacts.

By October 2002, the Oil Fund stood at over \$625 million. Azerbaijan's 2002 Poverty Reduction and Economic Development Plan has identified integrating mechanisms to link the preparation of the Government's budget and investment plans to the Oil Fund and the Government's poverty reduction plan. The extent to which the Oil Fund succeeds in collecting and securing the revenues from oil and gas developments, and in establishing and adhering to prudent and appropriate investment and spending decisions, will be fundamental to the long-term socio-economic prospects of Azerbaijan and its people.



¹ BP forecast, 2002, based on oil price scenarios between \$16/barrel and \$25/barrel.



The projects will provide a long-term, secure income flow to Azerbaijan, Georgia and Turkey.

could encourage new foreign direct investment into Azerbaijan, Georgia, and Turkey. The framework established within the PSAs and HGAs provides a stable and transparent legal and fiscal regime for the projects' investments, which could potentially serve as a model for encouraging other forms of foreign direct investment. Further, the projects can play a positive role by facilitating the development of local enterprise, which is discussed below.



Role of the projects: Management of the oil and gas revenues received by government is a sovereign responsibility. What the projects can do is promote transparency around the revenue flows by ensuring public access to the PSAs and Host Government Agreements (HGAs) for the projects. This step has been taken already with the placement of these agreements on the projects' public websites, www.ecbaku.com and www.caspiandevlopmentandexport.com. In addition, this Review includes a forecast of future revenue flows to the Governments of Azerbaijan, Georgia and Turkey.

Beyond these efforts, successful implementation of these projects



2. Employment, procurement, and the non-oil economy

Section 4 of the Review

Opportunities and challenges:

Development of the offshore oil and gas fields and the onshore pipelines offers a variety of direct and indirect opportunities to stimulate employment and local business within all three countries, particularly in Azerbaijan. Already BP (in its role of project operator) directly employs close to 1,350 people across the three countries and spends \$50 million annually in Azerbaijan on operational expenses. 80% of those currently employed are

nationals and of those, national staff fill over 60% of professional positions. Further, contractors and suppliers employ thousands of additional people stemming from the procurement of goods and services (eg, drilling, supply boats, catering).

As is true with the oil and gas industry around the world, the projects are capital intensive. Labour requirements occur primarily during the construction phases. Nevertheless, employment created by the projects (whether temporary or permanent) is important given the high level of unemployment and underemployment

in Azerbaijan, Georgia and eastern Turkey. The community surveys and consultations conducted for the ESIs indicated that securing employment is one of the primary concerns for communities that are immediately affected by the projects and for the wider population. Although a precise number has yet to be developed, as many as 10,000 people could be employed temporarily by the projects' construction contractors during peak construction activities across the three countries. For the pipeline projects, many of these jobs will be on a rolling basis with the





The aim is to build local supply capability, promote international standards, and increase opportunities for local business.



pace matched to the speed of pipe-laying and with people temporarily employed to work on specific sections of the route. Following construction, BP estimates that around 1,800 people will be directly employed by 2005/06 to support the operations phases. These will be primarily technical jobs, such as technicians, engineers, drillers, and project and business managers.

The projects will continue to require a wide range of goods and services. Current estimates indicate that spending for goods and services sourced from within the three countries could be as high as \$4.8 billion through the construction phases. Expenditure during the operations phase of the upstream projects in Azerbaijan is forecast to reach \$300 million per annum by 2010. For the pipeline projects, operational expenditure is forecast to peak by 2009 at \$200 million per annum for the three countries combined. All expenditure in-country is expected

to have an additional “multiplier” effect on the local economies (estimated to be circa 1.4), under which monies spent trigger secondary spending on raw materials and other local goods and services, with corresponding employment and economic benefits.

The projects plan to create the maximum employment and procurement opportunities possible in Azerbaijan, Georgia and Turkey, given actual needs. The oil and gas industry is a highly-competitive

international business, and the projects need to guard against creating unrealistic expectations. *Role of the projects:* During construction, local employment targets will be set for each project, to be overseen by BP. Information and recruitment centres and training programmes have been established for the ACG project where construction activity is already under way. Similar programmes will be established for the other projects to ensure people in local communities have a better opportunity to win these jobs.



Much of this new gas is expected to be used for power generation, as electricity supply currently fails to meet demand in all three countries.



Following construction, operations phases will require people with a range of technical and business skills, mostly skilled engineers, drillers, and production operators and technicians, as well as administrative and business support personnel. To maximize local labour opportunities and ensure that qualified staff are available when required, a long-term view of future operations requirements is being developed and a comprehensive training programme implemented as early as possible. The projects have begun implementing a recruitment strategy that emphasises early hiring and comprehensive technical and business training. A National Technical Training School in Baku will train over 200 trade technicians between 2001 and 2005. In addition, there are plans to recruit Azerbaijani university graduates into a special programme that provides

operations and engineering training over a three-year period.

To expand opportunities for local businesses, the projects have established the Enterprise Centre in Azerbaijan, a major new undertaking which promotes local business and provides a one-stop shop for companies to learn about potential business and procurement opportunities¹.

The aim is to build local supply capability, promote international standards, and increase opportunities for local business. The Enterprise Centre is already providing training, advisory and consultancy services for hundreds of local businesses and has developed a register of available local suppliers. There are plans to leverage the capabilities of the Enterprise Centre with those of the Baku-based Business Development

¹ The Enterprise Centre has a website and contacts can be made through the site: www.ecbaku.com



Effective implementation of these projects could induce further foreign direct investment.



Alliance (BDA) and other local and international organizations that foster small and medium enterprises. International Finance Corporation's (IFC) small and medium enterprise (SME) coordinator is already housed, along with the BDA, in the Enterprise Centre facility to enable coordination of efforts and project synergies.

3. Community and social investment

Section 5 of the Review

Challenges and opportunities: Traditionally, the development

of large projects has been accompanied by sponsorship and philanthropic contributions to local communities. The projects intend to go beyond this approach by establishing a community investment programme. The aim of the programme is to use the investments as a catalyst for building sustainable local economic and community capacity. As with employment, a large part of the challenge is to balance real opportunities with high community expectations. Many people are looking to the

participating companies to address significant social needs, including the provision of essential services that lie within governments' sovereign remit.

Role of the projects: The projects will be implementing a multi-million dollar programme of community investment, with the aim to support local social infrastructure and stimulate economic opportunities. The programme will be based on best practices developed by donor and development agencies and will involve non-governmental organizations (NGOs) and other





As operator, BP has world-class business policies on health, safety and the environment, ethical conduct, employees, relationships, and finance and control.

organizations as implementing partners. The first application of these practices by the ACG project is leading to the design of a water and sanitation project in the Sangachal area which will be implemented through a partnership with the communities, NGOs and local authorities. A Request for Proposals has been published in each country by the ACG and BTC projects to enable NGOs and other organizations to submit project proposals, with implementation commencing in early 2003.



BP's broader social investment programme will support education, local enterprise development and other activities which extend the contributions to the wider population.

The projects are exploring ways to fund activities jointly with other donors or create partnerships with other organizations, including the

international finance institutions (IFIs). For example, in October 2002, several projects were jointly funded with Eurasia Foundation to support business ethics and commercial law and accounting courses in Azerbaijan. Another project is being considered to foster SMEs in Azerbaijan that would be supported

jointly with IFC and a German development agency.

4. Domestic energy
Section 6 of the Review

Opportunities and challenges: The dissolution of the Soviet Union resulted in the fragmentation of an integrated energy network that

provided cheap energy for its citizens. The downturn in economic activity following Azerbaijan's and Georgia's independence in the early 1990s left these countries without the financial capability to construct reliable national energy systems or upgrade and maintain equipment and energy infrastructure. The problem of access to energy is compounded by the fact that, historically, energy prices have been substantially lower than the cost of supply, and energy companies seldom recovered full payment from their consumers. The accumulation of arrears or payment in barter goods have in turn resulted in difficulties maintaining energy systems and buying fuel. Georgia has had particular difficulties paying for imported oil and gas. The inefficient use of energy is prevalent throughout the region due to a combination of old generating equipment and inefficient fuel sources (such as mazut – heavy oil), losses throughout the distribution system, and lack of incentives for users to reduce waste.

The ACG project will provide additional supplies of associated gas for Azerbaijan, and the Shah Deniz project will help meet domestic needs in Azerbaijan and Georgia, as

The projects will implement community and environmental investment programmes with the aim of offering benefits that can be long-lasting.

well as shipping larger volumes to Turkey. Much of this new gas is expected to be used for power generation, as electricity supply currently fails to meet demand in all three countries. The new gas supply will help decrease Azerbaijani and Georgia's reliance on heavy oil for electricity production, resulting in local environmental benefit. The principal challenge for the projects is managing expectations: some people in Azerbaijan and Georgia hope the projects will solve all the energy problems faced by the countries.

Role of the projects: The problems associated with access to energy

in Azerbaijan and Georgia are symptomatic of the post-Soviet transition process and consequently, one of the key socio-economic issues that require effective government policymaking. A variety of bilateral and multilateral aid programmes are working with Azerbaijan and Georgia to address the energy issue, and both countries have started privatization of certain elements of the energy sector.

Associated gas from the ACG project is owned by the Azerbaijani Government, and it could supply Baku area power stations. The provision of Shah Deniz gas to Georgia as agreed under the HGA





could be sufficient to generate about 20% of Georgia's winter peak load needs, or 80% of Tbilisi's peak load needs after the initial build-up period. In addition, revenues earned by the governments from project operations could help support energy infrastructure investments. However, the governments recognize that sustained improvements in access to energy in Azerbaijan and Georgia will depend primarily on effective reform of the energy system, to address the

existing technical, institutional and commercial constraints while providing a social safety net for disadvantaged people. The projects have already provided technical assistance to Azerbaijan to assess its gas infrastructure, which led to the development and implementation of a master gas plan. Similarly, management and technical assistance to Georgia is being provided to help the Government address its winter energy needs.

Some individual project partners have contributed to the winter heat assistance programme in Georgia, although recognizing that continued financial assistance will not lead to sustainable improvements. As part of the projects' community and social investment programme, opportunities may also arise to work with local communities on a small-scale to help meet local community energy needs.

The projects can serve as an example and as a positive influence.



SOCIAL

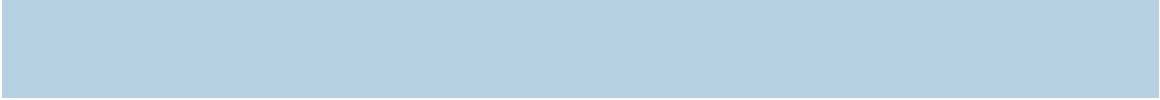
1. Ethical performance **Section 7 of the Review**

Opportunities and challenges: In all three countries, governments have committed to combat corruption and improve administrative governance and transparency. Overcoming corruption is driven by both economic logic – corruption stunts growth and hinders foreign direct investment – and the countries' development aspirations. Effective implementation of these government efforts could induce further foreign direct investment.

Some external observers of the projects have expressed concern that the agreements between the host governments and the project sponsors are less than transparent. They have also voiced concern about the projects being implemented in a less than ethical manner and that revenues from the projects will reinforce corrupt behaviours. The projects provide

the opportunity to demonstrate that business can be conducted in an ethical and transparent manner. For example, the PSAs and HGAs have already been made available on the projects' public website. These agreements provide the legal framework by which the projects will operate. Elements of the agreements could serve as a model for other types of ventures. The projects can also serve as a model for good corporate governance. In Azerbaijan, the State Oil Fund could serve as a model for government transparency regarding the use and management of the country's oil and gas revenues. Much information on the Oil Fund, including its first external audit, is published on its website www.oilfund.az
Role of the projects: The projects aim to implement their activities in accordance with high standards of business ethics. As operator, BP has world-class business policies on health, safety and the environment (HSE),

ethical conduct, employees, relationships, and finance and control. These policies have been and will continue to be integral to how its business is conducted. They include a prohibition on bribery, facilitation payments and corruption. The policies also cover BP's contractors, and BP is working proactively to ensure that the policies are adopted through all aspects of its business activities, including contracting to hiring new recruits. Auditing by a number of internal and external groups will provide further reinforcement to employ transparent and ethical behaviour across the projects. A 24-hour telephone hotline has been established so that any known or suspected breaches of policies can be reported confidentially and anonymously. Reported breaches will be investigated with integrity while respecting the law and individual human rights.



The projects have a positive role to play in relationships with external institutions – to assist in the exchange of information, ideas and experience. For example, the Enterprise Centre holds workshops with local companies on the ethical conduct standards adopted by the projects and what these standards mean in business practice.

The publication of this Review is a further contribution to openness. The Review includes important information on the projects, the legal agreements that underpin them, and the processes and procedures that will ensure they contribute to transparency and good governance. Further, revenue flows to the three governments (which are projected in this Review) will be reported on a regular basis in accordance with the terms and conditions set out in the Agreements.

2. Human rights
Section 8 of the Review

Challenges and opportunities: The sponsors are committed to having

the projects serve as a positive example in relation to human rights. Those employed on the projects will have the chance to improve their standard of living and further their development. The projects intend to extend benefits by providing opportunities for local business and by making community and social investments. Respect for culture, individual dignity and human rights will dominate all interactions.

Oil and gas development requires the creation of careful working relationships with governments, communities and individuals over matters such as land acquisition and security. All landowners and land users affected by the projects will be treated fairly and with respect for their individual and human rights. As in any country, sovereign governments will hold the responsibility for safeguarding their people and important infrastructure facilities.

Role of the projects: The projects do not anticipate having to physically relocate any households. The BTC

The very development of the projects reflect new levels of mutual interdependence of the sovereign states of Azerbaijan, Georgia and Turkey.





and SCP pipelines will be buried, with land reinstated for use following construction. Any economic displacement of landowners and users will be compensated fairly using a transparent and consultative process that aims to provide opportunities for economic enhancement. Procedures and mechanisms associated with the land acquisition and compensation process are reported in 'Resettlement Action Plans' which were released publicly to the communities and to the general public on the projects' public website'.

Security considerations are an integral part of project decision-making and project design. In particular, the pipelines have been routed as far away as possible from conflict zones and areas with known security concerns, which should minimize the need for security interventions. The projects themselves will provide their own unarmed security guards at the terminals and above ground facilities, and will use locally hired unarmed staff to regularly patrol the pipeline route.

The Voluntary Principles on Security and Human Rights are embedded

into BP's security management system. The projects are consulting with governments on human rights principles and on security measures relating to the projects. Consultation with governments, NGOs and other experts will be ongoing through the life of the projects to ensure that potential issues are identified, supplemented by a robust community relations programme.

3. Conflict **Section 9 of the Review**

Opportunities and challenges:

It is important that the projects understand past and possible future



conflicts in the region to help identify any direct linkages with project activities and avoid the potential for any unintended consequences. The most significant unresolved conflict in the region is over Nagorno-Karabakh. Other areas have a history of conflict and the projects need to be implemented in ways that do not exacerbate these conflicts.

Role of the projects: The projects aim to avoid becoming a catalyst for ethnic or other conflict. They seek to have a positive impact overall, for example, from project activities that

contribute to local economic development and from company practices that encourage tolerance and ethnic diversity.

Conflict prevention has been considered through a combination of internal risk assessments, social impact assessments, communications and consultations with stakeholders and experts, and project planning. These efforts are reflected in project decisions relating to issues such as pipeline route selection, facility design, and community relations and investment. Community consultations

have revealed that people in the three countries generally welcome development of the projects. Most importantly, all existing and known potential conflict areas have been carefully avoided in determining the route for the pipelines. The pipelines do not enter Nagorno-Karabakh or areas of unrest in Georgia, and they do not pass through provinces in Turkey that have been subject to a state of emergency in the last decade. Alternatively, the projects can be viewed as contributing to cooperation between the countries of Azerbaijan, Georgia and Turkey as illustrated, for example, by the Intergovernmental Agreements (IGAs) for the BTC and SCP projects.

ENVIRONMENT

1. Biodiversity

Section 10 of the Review

Opportunities and challenges: The ACG, BTC and Shah Deniz projects are located in a region with diverse ecological conditions. Large areas suffer from environmental decay, with land degradation and soil erosion posing major problems in Azerbaijan, Georgia and Turkey. Economic decline,





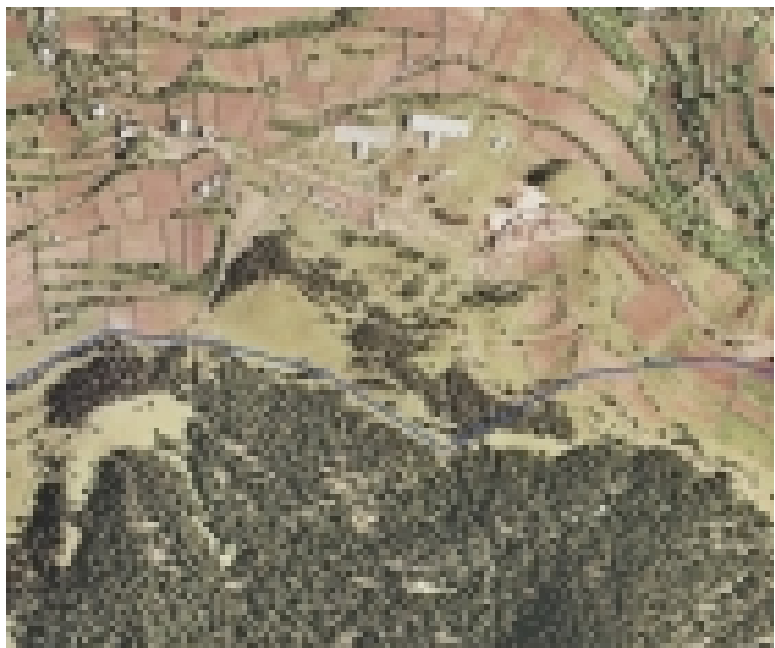
civil conflicts, natural disasters and the emergence of refugee and internally displaced population problems have increased poverty levels, particularly in rural areas. This has led to illegal logging, over-grazing, hunting, and wood scavenging from forests for heating and cooking, with consequent demands on natural resources. Areas of undisturbed natural communities are especially valuable as refuges for many plant and animal species, in maintaining basic ecological functions and preventing further degradation. Designated protected areas conserve and enhance natural habitats and biodiversity.

The Caspian Sea area displays significant evidence of environmental decay, resulting from years of pollution from older-generation land-based sources, including oil extraction and refining. The combined impact of these and other environmental stress factors is illustrated by the collapse of the Caspian fishing industry, and in particular, the collapse of the sturgeon fishery.

The projects present a variety of opportunities relating to biodiversity, including the transfer of international environmental protection standards and practices, and the use of

environmental impact assessment methodologies to prevent and minimize potential adverse impacts. For example, to minimize the projects' direct effects on biodiversity, facility siting and pipeline route selection have been avoided in areas of high biodiversity. Many secondary effects on biodiversity can be limited by adopting international standard design specifications, emissions standards and targeted mitigation measures. Risk assessments and appropriate design modifications can minimize the likelihood of an oil spill. There are opportunities to go beyond mitigation by supporting

The projects will be an important contributor to the realization of the east/west energy corridor linking Asia and Europe.



There are some initiatives being taken by the Governments of Azerbaijan, Georgia and Turkey that are of vital importance to maximizing the projects' contributions towards national socio-economic development and poverty reduction. Of particular importance are:

- The development of Poverty Reduction Strategy Papers (PRSPs) in Azerbaijan and Georgia, and Turkey's five-year economic development plan. The PRSPs identify the frameworks for economic growth and poverty reduction and are used by international organizations, including the IMF and the World Bank, to identify assistance programmes.
- Establishment of the State Oil Fund of the Republic of Azerbaijan (SOFAZ) to receive and invest Government revenues from the development of Azerbaijan's oil and gas resources.
- The development of the Azerbaijan National Contingency Plan that sets out Governmental interactions in relation to oil spill contingency.
- The reforms being introduced in Azerbaijan and Georgia associated with their recent membership of the Council of Europe and the other structural economic and institutional reforms being made as part of the transition process. These cover economic and social policy, environmental management, human rights and corruption.
- The major reforms being carried out in Turkey as part of the programme for accession to the European Union (EU). These cover economic, environmental and social policy, including wide-ranging measures to protect and promote human rights and reduce corruption.

In taking forward these key initiatives the Governments have access to support and advice from the key international organizations including the European Commission, the IMF, the World Bank and United Nations agencies. Non-governmental and civil society organizations are developing rapidly in Azerbaijan, Georgia and Turkey.

Box ES-1: Governmental initiatives

projects which protect and enhance biodiversity.

Role of the projects: During the pipeline route selection and facilities siting process, particular emphasis was placed on avoiding sensitive and protected areas. As a result of numerous re-routings and route refinements, eight internationally or nationally-designated protected areas are avoided by the pipelines' route including the Borjomi-Kharagauli National Park and the State Nature Reserve within this National Park, the Ardahan Forest in Turkey, Lake Jandar on the Azerbaijani/Georgian

border, the nationally designated Gorchay and Shamkir Reserves in Azerbaijan, and the Kelkit Wildlife Protection Area in Turkey.

The projects recognize, however, that there will be some unavoidable potential impacts on natural habitats. Extensive direct mitigation measures will be implemented during the projects' execution aimed at the removal or reduction of potential adverse impacts on natural habitats or their functions. These measures include restrictions on the conversion of natural habitats, restoration of degraded habitats, and retention of

strategic species. Furthermore, erosion control and bio-restoration standards will apply.

In addition to the direct mitigation and management measures outlined above, a voluntary environmental investment programme (EIP) and a regional biodiversity action plan (BAP) will be developed, covering investment in environmental projects to maintain and enhance biodiversity. To date, the projects have supported several biodiversity initiatives, including a tortoise breeding project at Sangachal and a study of Caspian Sea fish. Individual project partners have also supported a joint project with the Caspian Environmental Programme on the development of a biodiversity convention. The BTC EIP strategy is currently being developed in consultation with NGOs and biodiversity experts, with implementation commencing in 2003.

Recently, NGOs and other agencies in Azerbaijan and Georgia were invited to submit biodiversity project

proposals as part of a “biodiversity competition”. These proposals were evaluated through a two-stage process consisting of a scientific advisory panel of national scientists and international experts and an internal awards committee comprised of environmental and social investment experts. Evaluation criteria included scientific soundness, sustainability, potential for dual benefits relating to both climate change and biodiversity, and performance measurement. As a result of this competition, awards were made to several NGOs in Azerbaijan and Georgia. Further plans are being developed in Azerbaijan, Georgia and Turkey that are likely to emphasize protected areas and

The BTC pipeline was chosen as the environmentally optimal mode of transporting oil from the Caspian region to world markets.

species, areas of high ecological significance outside protected areas, and capacity building for biodiversity management. The EIP and BAP will be aligned with other project-related investment programmes, in particular the community and social investment programmes.

2. Oil spill response

Opportunities and challenges: Oil spills from offshore and onshore exploration, production and transportation represent a potentially significant environmental issue – one that has been recognized and addressed throughout the project design and planning stages with the intent of creating an inherently robust system. While the technical





engineering and management methods and systems have greatly reduced the likelihood of an oil spill occurring, all responsible operators plan for the remote possibility that a spill may occur. For this reason it is standard industry practice to complement spill prevention measures with oil spill response plans to limit the effects of a spill, and facilitate restoration of affected areas.

The effectiveness of oil spill response, clean-up and damage restoration depends on rapid and effective mobilization of resources and equipment and excellent logistics and communications. By the time the projects commence operations, oil spill prevention and response measures will be in place.

Role of the projects: The potential for oil spills resulting from accidental events has been considered since the early stages of project design with the focus first and foremost on spill prevention. Most significantly, the BTC pipeline was chosen as the

environmentally optimal mode of transporting oil from the Caspian region to world markets compared to other transport modes; this pipeline route avoids adding to oil spill potential in the Turkish Straits. All the projects are designed to reduce the physical likelihood of oil spills. Among other measures, this includes minimizing the number of potential leak sources, optimizing pipeline block valve locations, designing adequate corrosion protection and secondary containment systems, and instituting procedural measures to prevent and minimize spillages.

While the technical, engineering, and management methods and systems have greatly reduced the likelihood of a spill occurring, oil spill response plans for the projects will be completed before commencement of operations. These plans will address the responses required in the unlikely event of a spill occurring in one country that could potentially impact another. Oil Spill Response Framework documents have been prepared and are publicly

available on the projects' website. The project sponsors aim to ensure that incident response capabilities are in line with international standards and accordingly will provide a rapid and effective response if the need arises, building on the current response mechanisms for the Early Oil Project and on BP's corporate incident management systems.

The projects recognize the importance of governments' role in oil spill response and the fact that some administrations are under-resourced. For this reason, the projects have provided and continue to provide financial and technical support for a range of organizations and activities aimed at enhancing regional capacity to respond to oil spills. These measures include:

- Regional organizations: several of the partners provide financial and technical support for the Caspian Environmental Programme and are members of the Mediterranean Oil Industry Group

Oil and gas will continue to provide the bulk of existing and incremental energy supply for decades to come.

- Industry initiatives: members of a steering group established as part of an industry-led initiative to enhance marine oil spill response in the Caspian/Black Sea region
- Technical initiatives: development and dispersant testing and approval programme
- Government support: assisting the Azerbaijani Government to prepare its National Contingency Plan; creation of a government liaison position within BP's Incident Management Team to promote co-operation and co-ordination

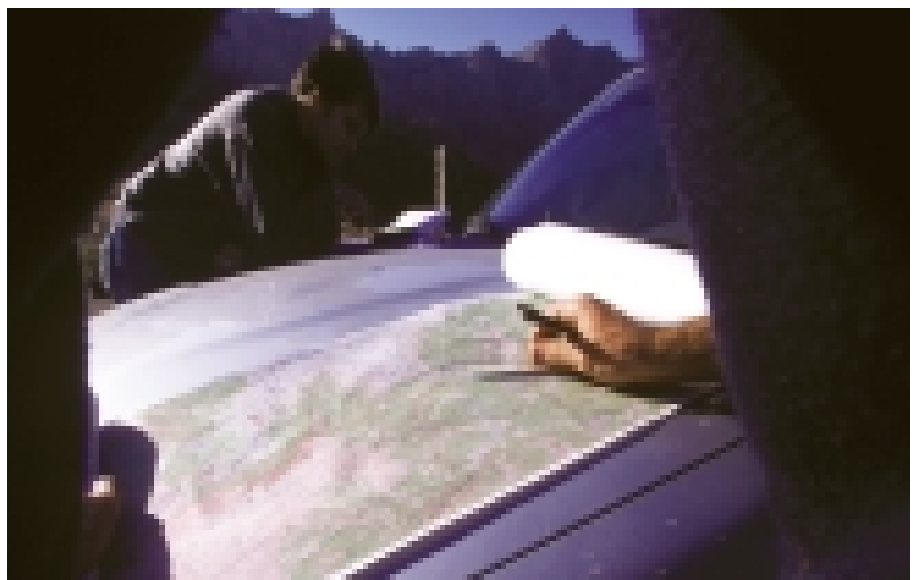
3. Greenhouse gases

Opportunities and challenges: There is serious concern that increased atmospheric concentrations of greenhouse gases (GHGs), mainly CO₂ from the burning of fossil fuels for energy, contribute to global warming and climate change. The project sponsors acknowledge the

important role cleaner fuels and increasingly renewable energy play in contributing to GHG reduction, but the transformation of the energy mix on a global scale remains a long-term global challenge. Oil and gas will continue to provide the bulk of existing and incremental energy supply for decades to come.

As these projects are world-class oil and gas developments, the challenge, in relation to GHG emissions, is to develop the Caspian hydrocarbon resources while minimizing the net emission of GHGs to the atmosphere. There is no single solution to this challenge, rather the opportunities lie with a range of incremental savings. The projects have employed innovative project engineering design, improved resource utilization and energy efficiency measures.

Role of the projects: The projects have assessed their direct potential impact resulting from atmospheric emissions and sought to take all practicable measures to reduce these emissions. A number of key design and management decisions were made starting at the initial design stage and continuing into project definition, which has led to significant GHG reductions. For example, the projects included design measures and operating practices that aim to reduce flaring of gas, eliminate the need for an additional pipeline pump station, and optimize power and fuel sources, and have selected equipment judiciously (eg, turbo expanders). Benchmark comparisons with other regional and international projects indicate that the projects are among the most efficient on the basis of tonnes of GHG emitted per barrel of oil equivalent produced.



Current forecasts estimate that the projects will result in cumulative GHG emissions in the order of 100 million tonnes over 25 years; the EOP and ACG represent about 65% of this projection:

EOP	15 million tonnes
ACG	50 million tonnes
Shah Deniz	4.3 million tonnes
BTC	25-30 million tonnes
SCP	3 million tonnes

For Azerbaijan, these forecast emissions would constitute less than 5% of the country's national GHG inventory in 2010, the year in which maximum emissions from the combined projects are predicted. For Georgia and Turkey, the pipeline GHG emissions represent relatively minor contributions to national inventories.

An indirect benefit of the projects is that cleaner sources of energy are expected to be available for use by Azerbaijan, Georgia and Turkey. Much of the Shah Deniz gas could be used for power generation, which currently fails to meet demand, to varying degrees, in all three countries. This could help boost needed electricity supplies, and lessen Azerbaijan's and Georgia's reliance on mazut (a heavy fuel oil that is less efficient and more polluting than other fuel sources) for electricity production with corresponding environmental benefits, including reduction in CO₂ emissions. Similarly, under agreement with SOCAR on the treatment of associated gas from the ACG project, there is potential for additional supplies of gas to be added to Azerbaijan's energy system, potentially replacing higher polluting fuels. The actual magnitude of these



It is only through sharing learning and increasing our understanding that we can develop a clearer vision of what we need to do, so that our presence is a positive one.

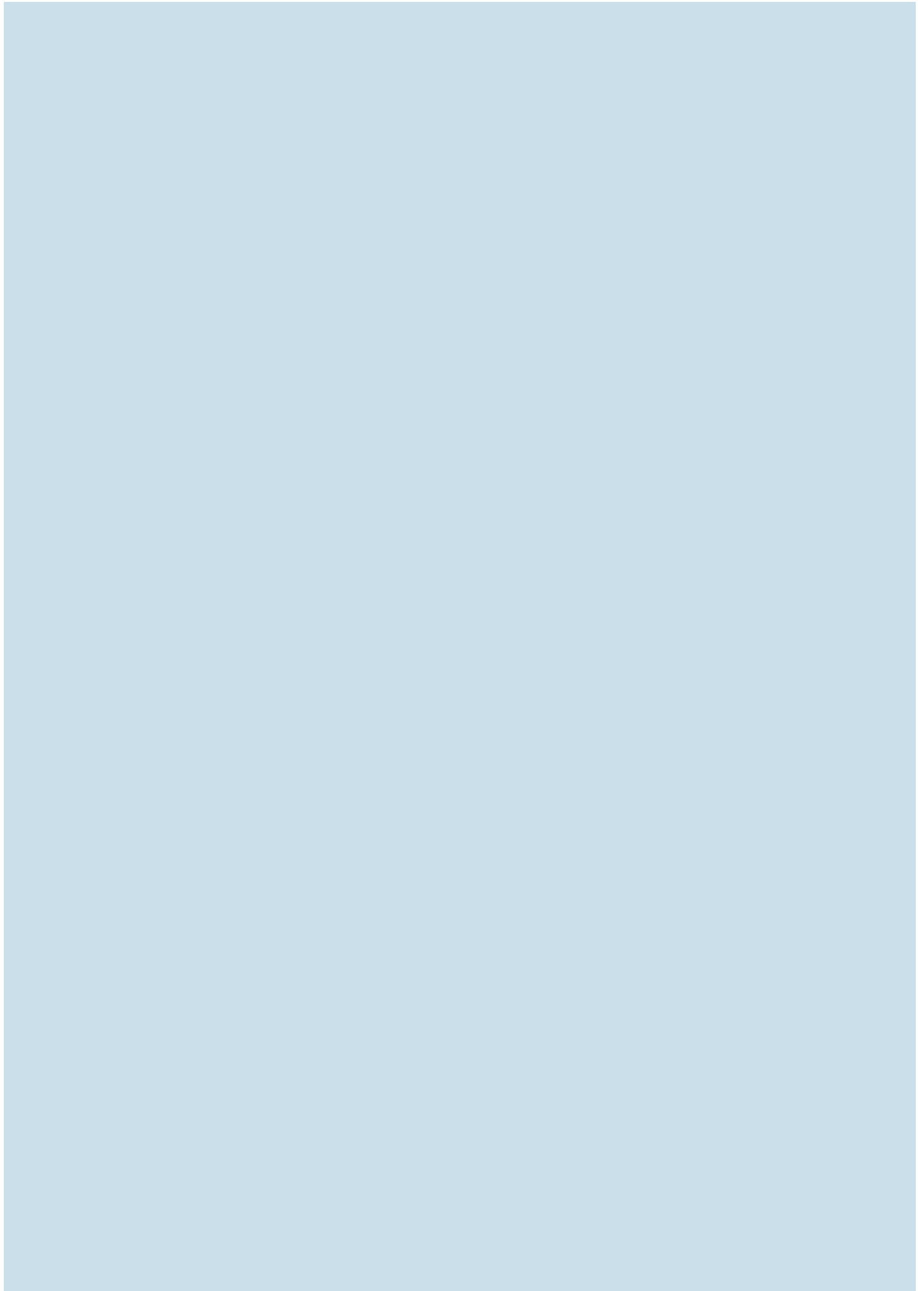
reductions can only be determined when a clearer understanding of the end use has been determined.

Measuring and monitoring performance

This Review covers a wide range of diverse topics and sets out the projects' aims in relation to issues where they can have a direct influence, as well as others where the potential for direct influence is limited. This Review reflects the early stages of a process. As the projects move from planning to construction

and into operations, there will be follow up consultation and reports tracking the issues and project activities in the region.

In the projects' aim to keep dialogue flowing and to obtain feedback and suggestions, further consultations will be planned over the next several months, and will continue through the life of the projects. An annual progress report will be published on the projects' economic, social and environmental performance.



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