Chapter 13 Management and Monitoring

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13 MANAGEMENT AND MONITORING

13.1 Introduction

BP's general approach to environmental and social management applies the 'plan, do, check, act' principles of environmental and social protection.

These principles include:

- Plan – prior assessment of potential environmental and social impact
- Do – implementing design and mitigation measures that seek to avoid, reduce or minimise potential impact
- Check – monitoring performance and the efficacy of the mitigation measures that are implemented
- Act – auditing and tracking the implementation of corrective actions.

This section of the ESIA highlights how these principles shall be applied to the proposed SCPX Project within the construction and operation phases.

Environmental and social impacts in the construction phase are managed through the implementation of the construction-phase environmental and social management system (ESMS), which includes the Project environmental and social management and monitoring plan (ESMMP), provided in Appendix D, and supporting documents. The ESMMP contains a set of topic-specific management plans (e.g. waste management; pollution prevention) that address the commitments made in this ESIA. The commitments register set out in Appendix E is the definitive source of all such commitments made in this ESIA.

Section 13.2 describes the division of responsibilities between the Project, the main pipeline construction contractor(s) and various specialised contractors who will translate the commitments made in this ESIA into actions during construction and will be required to monitor and verify them. It specifies certain roles within each organisation and the scope of their responsibilities.

Section 13.3 describes the arrangements by which the Project will seek to implement the ESMS, and specifically the ESMMP presented in Appendix D, during the construction stage.

Within the operations phase the Project will seek to integrate into BP's Azerbaijan Georgia Turkey (AGT) Onshore Pipelines ESMS, which currently covers all three existing pipelines, including SCP. Section 13.4 briefly describes the arrangements for environmental and social management during the operational phase, once the proposed SCPX Project has been completed.

The construction and operational phases of the proposed SCPX Project will follow applicable existing BP policies and BP's corporate health, safety and environmental policy (see Section 6.5), and relevant aspects of BP operations management system (OMS) and local OMS (LOMS).

13.2 Construction Phase Roles and Responsibilities

13.2.1 BP

BP is responsible for the detailed design, procurement, construction and operation of the proposed SCPX Project on behalf of the SCP Company. BP is therefore referred to in this chapter when describing Project responsibilities.

BP has appointed a design engineer to undertake the detailed design of the Project in conjunction with the production of this ESIA. In due course, BP will issue technical bid documents for the various elements of the construction work scope. Where relevant, the bid documents will include a copy of the ESMMP.

BP will manage the construction phase of the Project, monitoring and auditing the technical, environmental and social performance of its contractors throughout the construction phase.

BP's construction-phase ESMS will include:

- The commitments register that BP has produced listing all the commitments within this ESIA that are to be implemented during the construction phase
- A legal register of legislation that is applicable to the SCPX Project
- The ESMMP that is presented in Appendix D, which will be reviewed and updated as needed as part of continuous improvement
- A schedule of monitoring, inspection and audit of environmental performance that includes checking that contractors are meeting the expectations set out in the ESMMP
- Implementation of an action tracking system to monitor the findings of inspections and audits that do not conform to the ESMMP and the implementation of corrective actions.

The following roles within BP's organisational structure have key responsibilities for its construction-phase ESMS:

- **Project manager:** has overall responsibility for putting the ESIA commitments into effect and for checking that personnel are aware of their individual responsibilities
- **Engineering manager:** responsible for technical execution of the Project design in a way that puts the ESIA commitments into effect
- **Construction manager:** responsible for implementation of the ESIA commitments on site
- **Logistics manager:** responsible for developing logistics plans that conform to the ESMMP
- **Environmental and social team**
    - **Environmental and social manager:** responsible for the effective implementation of environmental and social commitments and confirming that personnel on site are aware of their environmental and social responsibilities
    - **Environmental and social adviser(s):** responsible for monitoring compliance with environmental and social commitments, inspecting work for compliance with ESIA environmental and social commitments, raising and tracking corrective actions as necessary; compiling appropriate documentation as necessary; and providing advice and assistance to construction personnel on environmental and social issues
    - **Community liaison officer(s):** responsible for confirming that contractors and subcontractors comply with ESIA social commitments; interfacing between the Project and the public including Project-affected communities (PACs); raising and tracking corrective actions as necessary; compiling appropriate documentation as necessary; and providing advice and assistance to construction personnel on social issues
    - **Cultural heritage officer(s):** responsible for monitoring construction on site and confirming that the contractors and subcontractors comply with ESIA cultural heritage commitments; raising and tracking corrective actions as necessary; compiling appropriate documentation as necessary; and

providing advice and assistance to construction personnel on heritage issues.

13.2.2 Main Construction Contractors

The main construction contractor(s) will be expected to conform fully with those aspects of BP's construction-phase ESMS for which he will be responsible (see Table 13-1). The contracts will require the early works and main works contractor(s) to develop their own ESMS for the Project that is consistent with BP's Project ESMS. The contractors' ESMS will include compiling a set of implementation plans that match with the management plans in the Project's construction phase ESMMP (Appendix D). The implementation plans will describe how the contractors will fulfil the environmental and social commitments stated in the ESMMP that have been derived from the commitments register in this ESIA.

The main contractors will be expected to appoint full-time, suitably qualified environmental and social managers to lead an environmental and social team that implements and monitors the environmental and social commitments contained in the ESIA. The team will include at least environmental and social advisers, community liaison officers and waste advisers as specified in the ESMMP.

13.2.3 Other Contractors

Where the ESMMP so specifies (see Table 13-1), other contractors will be required to develop environmental/social management plans and procedures that address particular issues associated with their work scope. They will provide suitably qualified personnel (e.g. field ecologists, archaeologists) to verify that the commitments in the ESMMP are implemented.

13.3 Construction Phase ESMS

13.3.1 Introduction

The Project ESMSs developed by BP and the construction contractor(s) will be used to deliver the environmental and social commitments made in the commitments register of this ESIA (Appendix E) and to coordinate and review the environmental and social performance of the Project at the construction stage. Implementation of the ESIA commitments is addressed in the management plans contained in the ESMMP (see Appendix D). Table 13-1 summarises the issues addressed in each of the management plans within the ESMMP.

BP's ESMS will form the framework for managing social and environmental issues throughout construction and will form part of the LOMS. It will be a requirement that the construction contractors' ESMS will provide the detail of how the commitments for which they have responsibility will be implemented. The construction ESMSs should be consistent with, but not necessarily certified to, ISO 14001.

The ESMSs will focus on the main mechanisms by which commitments are translated into practice, giving special consideration to:

- Practical training and raising the environmental and social awareness of personnel
- Supervision and monitoring of environmental and social issues in the field
- Continuous improvement of environmental and social performance throughout the Project.

BP's ESMS and the construction contractors' ESMS will each be commensurate with the scale of the Project and focus on the issues that are most important for managing environmental and social performance, without overburdening the Project with over-detailed systems.

13.3.2 ESMS Framework

Each ESMS will have a high-level document, e.g. a framework, setting out the main elements of the system.

Figure 13-1 presents an overview of the elements of the Project's ESMS 'plan–do–check–act' cycle. This document will establish a common understanding between the key staff involved in delivering effective environmental and social management of the Project.

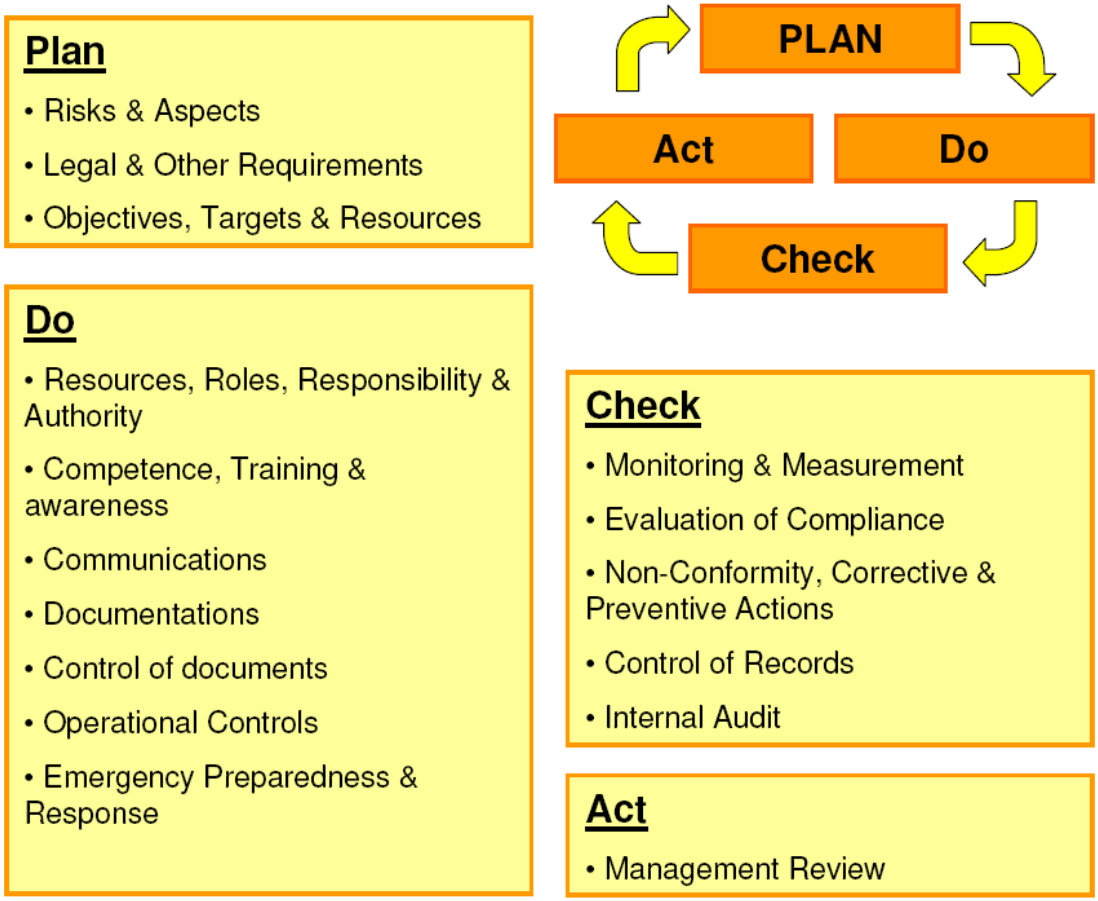

Figure 13-1: SCPX Project ESMS Elements

13.3.3 Plan

The 'plan' stage of the cycle seeks to identify hazards and risks to the Project, e.g. through the ESIA process, resulting in a commitments register for the Project. Planning also involves the identification of legal and other requirements (e.g. the developing legal and permit registers and sets goals and targets such as key performance indicators (KPIs).

The commitments register for the Project (see Appendix E) lists the commitments that have been generated through the Project's comprehensive ESIA process. The register assigns each commitment that will be implemented in the 'do' stage of the management cycle to an appropriate plan in the ESMMP, and clarifies whether the responsibility for producing a plan to implement the commitment lies with the Project or with a contractor. Operation-phase commitments are assigned to the operations management system. The commitments register is a live document that BP intends to update during the course of the Project.

13.3.4 Do

BP will apply a management-of-change procedure so that any changes during the final design and construction stages are subject to scrutiny and that any implications for environmental, social or cultural heritage issues are identified, approved and addressed.

13.3.4.1 ESMMP

The construction-phase ESMSs will include the ESMMP (see Appendix D) that describes:

- The legislative framework for the Project
- Guidance for international industry practice
- Roles and responsibilities of BP and of the contractor
- The actions needed to avoid and/or mitigate environmental and social impacts and to put the commitments in the ESIA into effect
- The monitoring and reporting requirements for environmental and social performance
- The requirement to carry out inspections and audits, and to implement corrective actions using an action tracking system.

The ESMMP contains the management plans listed in Table 13-1. This table also outlines general responsibilities for development of implementation plans relating to each management plan. The construction contractors will be required to develop an ESMS, including implementation plans that are in line with the management plans in the ESMMP and give details of how commitments will be implemented and monitored. The construction contractors will submit implementation plans to BP for approval before construction begins. BP will assure that the contractors' implementation plans and associated procedures and method statements incorporate the relevant environmental, social and cultural heritage requirements stated in BP's ESMMP.

BP will also develop an emergency response plan, and the contractor(s) will produce a stand-alone emergency response plan that bridges with the BP document.

The ESMMP is not a legally binding document. While it draws on and replicates commitments made in the main body of the ESIA, it does not make (and should not be read as making) any new, amended or additional commitments by the Project. The definitive source for all commitments made in this ESIA is Appendix E Commitments Register. The ESMMP is a tool designed to help implement those commitments and is considered a "live" document that is likely to evolve during the lifetime of the proposed SCPX Project to encompass the construction and commissioning phase. The plans will be updated to include regulator and stakeholder feedback received during the disclosure of the draft ESIA and as necessary as the Project proceeds. The ESMMP provides details of how the Project proposes to implement and monitor the commitments made in the ESIA.

BP has developed a public consultation and disclosure plan (PCDP) for the Project to ensure effective management of consultations with third parties during the design and construction stages of the Project (see Appendix C). BP intends to update the PCDP as necessary during the Project to reflect the status of planned activities.

Table 13-1: ESMMP Management Plans

ESMMP Section	Plan	Issues Covered
7	Reinstatement plan	• Top soil and sub-soil management • Erosion control during construction (e.g. at crossings, steep slopes, trench breakers) and after construction • Engineered reinstatement of ROW and watercourse crossings

ESMMP Section	Plan	Issues Covered
		• Seeding and matting
8	Ecological management plan	• Ecological training • Location of protected species and sensitive areas • Preconstruction ecological surveys • Habitat and species protection before and during construction (e.g. working width restriction, translocation, avoiding seasonal sensitivities, traffic restrictions, code of conduct, aquatic environment protection) • Biorestoration (e.g. re-vegetation, selection and procurement of seeds, seeding methods, seed collection, replanting) • Monitoring and reporting
9	Waste management plan	• Waste management training • Identification and classification of waste • Waste hierarchy and waste minimisation strategy (i.e. reduction at source, reuse, recycling, energy recovery, responsible disposal) • Waste handling (i.e. collection, segregation and containers, storage and treatment, transport and documentation, disposal) • Monitoring and reporting
10	Pollution prevention plan	• Pollution prevention training • Energy efficiency (vehicle and equipment selection and maintenance) • Emissions and dust management (i.e. vehicle, equipment and generator emissions, dust management) • Wastewater management (e.g. run-off, trench dewatering, hydrotest water disposal and use of chemicals in hydrotest water, vehicle and equipment washing) • Sewage treatment and disposal • Noise and vibration management • Oil and chemical management (i.e. storage, handling and spill prevention) • Treatment contaminated soil • Management of hazardous liquid waste • Monitoring and reporting
11	Resource management plan	• Training (incl. energy efficiency and water use minimisation) • Aggregates management (estimation of requirement, identification of quarries and borrow pits, transportation, control of third parties) • Water management (water supply, hydrotest water abstraction
12	Construction camp management plan	• Consultation with local communities before construction camp is developed • Restriction of access to camp and use of its facilities • Training (incl. induction briefing on camp rules and awareness of local issues and sensitivities) • Camp rules (e.g. discipline and restrictions on alcohol, drugs; noisy activities and illegal activities, community liaison, ethnic tensions, market distortion and communicable diseases)
13	Infrastructure and services management plan	• Disruption to infrastructure (transport; electricity; irrigation) • Prevention and repair of community infrastructure damaged by Project activities • Management of disruption to communities and individuals
14	Community health, safety and security plan	• Worker-community interaction (e.g. spread of communicable diseases) • Management of construction sites (e.g. access to ROW and open trench philosophy) • Traffic safety (e.g. control of traffic flows through villages)
15	Community liaison plan	• Community liaison officer (CLO) requirements • Maintaining good relations with communities, landowners and land users (e.g. meetings, complaints management procedure) • Community access
16	Local recruitment and training plan	• Local recruitment for construction-phase workforce • Skills and HSE training (for all personnel)

ESMMP Section	Plan	Issues Covered
17	Procurement and supply plan	• Maximising local procurement of goods and services • Transparency of procurement process
18	Cultural heritage management plan	• Ensure avoidance of heritage impacts • Mitigation measure to reduce impact to heritage where avoidance is not possible • Protection of heritage sites during construction • Monitoring and reporting of results
19	Land management plan	• Assessment of additional land • Spoil disposal sites and borrow pits • Land acquisition and compensation requirements • Monitoring and reporting

13.3.4.2 Training

At the 'do' stage of the ESMS cycle, training is fundamental to the successful delivery of the ESIA commitments.

The proposed SCPX Project construction activity will be of relatively short duration, so establishing key environmental and social requirements at the outset is important to the provision of effective training. The main training elements required are:

- Management briefings
- Induction training for BP, construction contractor(s) and subcontractor staff
- Toolbox talks.

Management briefings
An environmental and social training session will provide the BP project management team with overview of the ESMMP and a common understanding of roles, responsibilities and Project standards.

Following award of contract, a second environmental and social training session will seek to ensure that the BP project management team and the construction contractors' senior personnel adopt a coordinated approach to implementing the requirements stated in the ESMMP, and to affirm BP's commitment to good environmental performance and to establishing good community relations.

Induction training
In the ESMMP:

- The local recruitment and training plan prescribes the delivery of induction training (in Azerbaijani, or English, as appropriate) to the construction workforce. It also specifies the delivery of ES training and skills training (including toolbox talks) to the construction workforce
- The construction camp management plan requires a camp induction that will address camp security, health and safety, code of conduct, local cultural sensitivities and camp emergency evacuation.

All Project construction staff will receive an environmental and social induction that will explain the key requirements common to everyone on the site. The induction will have a strong focus on visual presentation (graphics, illustrations, diagrams, photographs etc.) and will contain simple, clear messages.

Toolbox talks
In addition to toolbox talks delivered by the construction contractor(s) as part of skills training, BP's environmental and social advisers, community liaison officers (CLOs) and

cultural heritage officers will deliver talks to contractor and subcontractor personnel to make them aware of BP's commitments to avoid and/or mitigate specific environmental and social impacts that relate to their tasks, particularly where the impacts are significant, or where the requirements are not covered in the general induction. This could apply to personnel involved in:

- Clearing of fly-tipped waste and contaminated soil before construction
- Right-of-way and facility site preparation (covering such matters as the archaeological watching brief; fencing for public protection; avoiding encroachment into areas off the ROW and working areas and accidental damage to sensitive receptors; correct storage of topsoil; and relocation of sensitive fauna)
- Pipeline lowering and laying (covering such matters as procedures for correct compaction, grading and topsoil replacement)
- Construction of rail, road and river crossings (covering such matters as the particular procedures for construction and reinstatement in these areas and expanding and reinforcing pollution control awareness and training, in particular for the watercourse crossings)
- Hydrostatic testing (covering such matters as pollution prevention and erosion control)
- Driving (covering such matters as vehicle routes, safe driving and vehicle maintenance).

13.3.5 Check

13.3.5.1 Monitoring, inspections, reporting and audits

The ESMMP specifies key indicators for environmental and social performance. The contractors' implementation plans will be required to provide monitoring data on these indicators is gathered and reported to BP.

Some of the management plans in the ESMMP require the contractors to carry out regular (e.g. weekly) documented inspections of certain day-to-day items such as pollution control, waste storage, and traffic movements. The contractors' implementation plans will be required to develop pro formas for the inspections so that the findings of these inspections are reported to BP. In addition, certain requirements (e.g. adherence to ROW speed limit) are best monitored through informal daily observations, which are made while staff are travelling around the works.

The amount of reporting required by the ESMS will be commensurate with the scale and length of the Project. The construction contractor(s) will be required to generate a combined environmental and social report each month and submit it to BP for review. The report will include:

- KPI data (e.g. waste volumes, types and disposal; complaints received and resolved)
- Activities carried out (e.g. surveys, translocation, meetings with communities, site inspections and findings)
- Status of non-conformances identified during inspections
- Environmental, social and cultural heritage issues arising in the course of the works (e.g. contaminated land discovered, archaeological finds and ecological issues).

The construction contractor(s) will be required to prepare and submit to BP individual reports after any environmental or social 'incident' and 'near-miss' (e.g. spills, pollution incidents, environmental damage, accidents, complaints from communities and neighbours).

BP and the construction contractor(s) will conduct audits to track progress and performance in implementing the commitments in the ESMMP and the effectiveness of the mitigation measures implemented in avoiding environmental and social impacts. The schedule of these audits will be determined after the contract has been awarded, but the aim will be to audit all elements of the contractors' ESMMP during the construction phase. The frequency of auditing for individual commitments will be reviewed regularly and adjusted as necessary to take account of audit findings.

BP will also carry out spot check audits of any issues of which it becomes aware that are considered of particular concern.

13.3.6 Act

13.3.6.1 Corrective action

The inspection and audit processes described in Section 13.3.5 will be documented with non-conformance reports (NCRs) and corrective action requests (CARs). Both BP and the contractor(s) will develop and maintain action-tracking systems to monitor the effectiveness of actions taken in response to NCRs and CARs.

BP's environmental advisers, CLOs and cultural heritage monitors will track the implementation of corrective actions and will update the construction manager and the environmental and social manager daily on non-conformances that require follow-up actions.

13.4 Operations Phase ESMS

BP will operate the SCPX pipeline system, pigging station and block valves using an operations environmental and social management system that is certified to ISO 14001 and therefore will be based on the 'plan-do-check-act' cycle. The Operations ESMS will be developed prior to commencement of SCPX operations and transition plans will be developed to assist with the movement from the construction to the operations phase ESMS.

Similar to the construction management system, the primary functions of the Operations ESMS will be to:

- Operate SCPX in accordance with relevant legal and regulatory standards and BP policy
- Implement the commitments made in the ESIAs relating to operations.

Through a management system that mirrors the ISO 14001 environmental management system, SCPX will regularly assess the environmental and social aspects and impacts of its activities; develop objectives and targets to address any significant aspects; appropriately resource and train staff; and monitor and audit the success of its actions in addressing the significant impacts. This system will be implemented with the aim of ensuring continual improvement in performance.

Key components of the Operations ESMS, consistent with ISO 14001 requirements are shown in Table 13-2.

Table 13-2: ISO 14001 EMS Commitments

ISO 14001 EMS Components	
1. EMS General Requirements	10. EMS Documentation
2. Environmental Policy	11. Document Control
3. Environmental Aspects	12. Operational Control
4. Legal and other requirements	13. Emergency Preparedness and Response

5. Objectives and Targets	14. Monitoring and Measurement
6. Environmental Management Programmes	15. Non-Conformance and Corrective Action
7. Structure and Responsibility	16. Records
8. Training and Awareness	17. Environmental Management System Audit
9. Communication	18. Management Review

The management system will be integrated as far as practical into the existing AGT Onshore Pipelines ESMS. The operations commitments included within this ESIA will be implemented through the management system.

The following existing plans will be updated to incorporate SCPX or new plans developed as required:

- Emissions management
- Community liaison, safety infrastructure and services
- Employment and training
- Waste management
- Ecological management and monitoring
- Cultural heritage management
- Local procurement and supply management.

In addition, the existing SCP Emergency Response Plan (ERP) will be reviewed and amended with regard to the location of the new section of pipe and the new facilities.

13.5 Community Development Initiative (CDI)

Since 2003, BP and its partners in the BTC and SCP pipeline projects have been implementing an extensive community development initiative (CDI; previously referred to as community investment programme, CIP) in the Project-affected communities (PACs) along the BTC and SCP pipelines.

The main goal of CDI is to build and maintain positive relationships with the pipeline communities by socio-economic development in the communities.

Recognising the commitment of BP and its partners to support enhancement of the quality of life of the communities in the country and based on the stakeholder development strategy, the decision was made to continue supporting CDI along the BTC and SCP pipelines after completion of the third phase of the CDI due in April 2012.

Phase 4 of the CDI programme, planned to commence in May 2012, will take into account the scope of the SCPX Project. This may result in an increased number of communities benefiting from CDI, as the programme will now also include those communities that are newly affected by the SCPX Project.

Community programmes, enterprise development, energy efficiency and capability building for local stakeholders are being considered as the most suitable areas for further intervention taking into consideration country specifics and the results already achieved through the previous phases of CDI. Where new PACs are identified, a separate needs assessment will be undertaken in the newly affected communities to determine the main areas of programme intervention and methodology to ensure consistency of approach with the wider CDI.