



# SUSTAINABILITY

FUTURE GROWTH

**FINAL REPORT OF THE:**

**INDEPENDENT ENVIRONMENTAL & SOCIAL  
CONSULTANT**

**ENVIRONMENTAL & SOCIAL REVIEW AND AUDIT**

**LUKOIL OVERSEAS SHAH DENIZ - STAGE 2 OF THE  
SHAH DENIZ PROJECT**

**AZERBAIJAN**

**May 2015**



## **INDEPENDENT ENVIRONMENTAL & SOCIAL CONSULTANT**

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## **LUKOIL OVERSEAS SHAH DENIZ - STAGE 2 OF THE SHAH DENIZ PROJECT**

### **AZERBAIJAN**

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Prepared for: European Bank for Reconstruction and Development  
Asian Development Bank  
Black Sea Trade and Development Bank

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## TABLE OF CONTENTS

<b>ACRONYMS AND ABBREVIATIONS</b> .....	<b>I</b>
<b>EXECUTIVE SUMMARY</b> .....	<b>I</b>
<b>ENVIRONMENTAL AND SOCIAL MANAGEMENT / STAKEHOLDER ENGAGEMENT</b> .....	<b>II</b>
<b>RESOURCE EFFICIENCY AND POLLUTION PREVENTION</b> .....	<b>IV</b>
<b>LABOUR AND WORKING CONDITIONS</b> .....	<b>IV</b>
<b>COMMUNITY HEALTH, SAFETY AND SECURITY</b> .....	<b>IV</b>
<b>INVOLUNTARY RESETTLEMENT</b> .....	<b>V</b>
<b>BIODIVERSITY CONSERVATION AND SUSTAINABLE MANAGEMENT OF LIVING NATURAL RESOURCES</b> .....	<b>VII</b>
<b>INDIGENOUS PEOPLES</b> .....	<b>VII</b>
<b>CULTURAL HERITAGE</b> .....	<b>VII</b>
<b>CONCLUSION</b> .....	<b>VIII</b>
<b>REPORT ORGANISATION</b> .....	<b>IX</b>
<b>1. INTRODUCTION</b> .....	<b>1</b>
<b>1.1 PROJECT OVERVIEW</b> .....	<b>2</b>
<b>1.2 SCOPE OF WORK</b> .....	<b>3</b>
<b>1.3 LENDER POLICIES</b> .....	<b>4</b>
1.3.1 Equator Principles and IFC Performance Standards .....	5
1.3.2 IFC EHS Guidelines .....	5
1.3.3 EBRD Performance Requirements and Sub-Sectoral Guidelines .....	5
1.3.4 ADB.....	6
<b>1.4 SOURCES OF INFORMATION</b> .....	<b>7</b>
<b>2. SUMMARY PROJECT DESCRIPTION</b> .....	<b>7</b>
<b>2.1 SD2 OVERVIEW AND LOCATION</b> .....	<b>8</b>
<b>3. INSTITUTIONAL AND LEGAL FRAMEWORK</b> .....	<b>12</b>
<b>4. ENVIRONMENT, SOCIAL, HEALTH &amp; SAFETY REVIEW AND AUDIT</b> .....	<b>15</b>
<b>5. COMPLIANCE AGAINST LOCAL LEGISLATION</b> .....	<b>15</b>
<b>6. COMPLIANCE AGAINST IFC PERFORMANCE STANDARDS</b> .....	<b>17</b>
<b>6.1 PERFORMANCE STANDARD 1 – ASSESSMENT AND MANAGEMENT OF ENVIRONMENTAL AND SOCIAL RISKS AND IMPACTS</b> .....	<b>17</b>
6.1.1 Environmental and Social Assessment.....	17
6.1.2 Management Systems .....	21
6.1.3 Management Programs .....	22
6.1.4 Organisational Capacity and Competency .....	23
6.1.5 Emergency Preparedness and Response .....	24
6.1.6 Monitoring and Review .....	24
<b>6.2 PERFORMANCE STANDARD 1 – STAKEHOLDER ENGAGEMENT REQUIREMENTS</b> .....	<b>36</b>
6.2.1 Stakeholder Engagement.....	36
6.2.2 External Communications and Grievance Mechanisms .....	39
6.2.3 Ongoing Reporting to Affected Communities .....	39
<b>6.3 PERFORMANCE STANDARD 2 – LABOUR AND WORKING CONDITIONS</b> .....	<b>45</b>
6.3.1 Working Conditions and Management of Worker Relationships.....	45



# SUSTAINABILITY

## FUTURE GROWTH

6.3.2	Protecting the Workforce .....	47
6.3.3	Occupational Health and Safety.....	47
6.3.4	Workers Engaged by Third Parties.....	49
6.3.5	Supply Chain .....	50
<b>6.4</b>	<b>PERFORMANCE STANDARD 3 – RESOURCE EFFICIENCY AND POLLUTION PREVENTION .....</b>	<b>58</b>
6.4.1	Resource Efficiency .....	58
6.4.2	Pollution Prevention .....	59
<b>6.5</b>	<b>PERFORMANCE STANDARD 4 - COMMUNITY HEALTH, SAFETY, AND SECURITY .....</b>	<b>70</b>
6.5.1	Community Health, Safety, and Security .....	70
6.5.2	Security Personnel .....	73
<b>6.6</b>	<b>PERFORMANCE STANDARD 5 – LAND ACQUISITION AND INVOLUNTARY RESETTLEMENT .....</b>	<b>80</b>
6.6.1	General.....	80
6.6.2	Displacement .....	84
6.6.3	Private Sector Responsibilities Under Government-Managed Resettlement .....	85
<b>6.7</b>	<b>PERFORMANCE STANDARD 6 – BIODIVERSITY CONSERVATION AND SUSTAINABLE MANAGEMENT OF LIVING NATURAL RESOURCES .....</b>	<b>98</b>
6.7.1	General.....	98
6.7.2	Protection and Conservation of Biodiversity .....	102
<b>6.8</b>	<b>PERFORMANCE STANDARD 7 – INDIGENOUS PEOPLES .....</b>	<b>115</b>
6.8.1	Scope of Application.....	115
<b>6.9</b>	<b>PERFORMANCE STANDARD 8 – CULTURAL HERITAGE .....</b>	<b>116</b>
6.9.1	Protection of Cultural Heritage in Project Design and Execution.....	116
<b>7.</b>	<b>COMPLIANCE AGAINST IFC EHS GENERAL GUIDELINES .....</b>	<b>124</b>
<b>8.</b>	<b>COMPLIANCE AGAINST THE EQUATOR PRINCIPLES.....</b>	<b>128</b>
<b>9.</b>	<b>COMPLIANCE AGAINST EBRD PERFORMANCE REQUIREMENTS .....</b>	<b>133</b>
<b>9.1</b>	<b>PR 1: TRAINING .....</b>	<b>133</b>
<b>9.2</b>	<b>PR 2: WAGES, BENEFITS AND CONDITIONS OF WORK .....</b>	<b>134</b>
<b>9.3</b>	<b>PR 4: ENVIRONMENT AND NATURAL RESOURCE ISSUES.....</b>	<b>134</b>
<b>9.4</b>	<b>PR 5: LOSS OF AMENITIES.....</b>	<b>134</b>
<b>9.5</b>	<b>PR 8: INTANGIBLE CULTURAL HERITAGE .....</b>	<b>134</b>
<b>9.6</b>	<b>PR 10: CORPORATE FINANCE .....</b>	<b>134</b>
<b>10.</b>	<b>COMPLIANCE AGAINST EBRD SUB-SECTORAL ENVIRONMENTAL AND SOCIAL GUIDELINES: PETROLEUM AND COAL PRODUCTS .....</b>	<b>151</b>
<b>11.</b>	<b>COMPLIANCE AGAINST ADB SAFEGUARD POLICY STATEMENTS .....</b>	<b>161</b>
<b>11.1</b>	<b>SAFEGUARD POLICY STATEMENT .....</b>	<b>161</b>
<b>11.2</b>	<b>INVOLUNTARY RESETTLEMENT SAFEGUARDS .....</b>	<b>161</b>
<b>11.3</b>	<b>GENDER AND DEVELOPMENT POLICY .....</b>	<b>174</b>
<b>11.4</b>	<b>INCORPORATION OF SOCIAL DIMENSIONS INTO ADB OPERATIONS.....</b>	<b>175</b>
<b>11.5</b>	<b>PUBLIC COMMUNICATIONS POLICY .....</b>	<b>177</b>
<b>12.</b>	<b>HIGH LEVEL COMPLIANCE ASSESSMENT OF ASSOCIATED INFRASTRUCTURE.....</b>	<b>179</b>
<b>12.1</b>	<b>INTRODUCTION.....</b>	<b>179</b>
<b>APPENDIX A:</b>	<b>DOCUMENT LIST .....</b>	<b>194</b>
<b>APPENDIX B:</b>	<b>IFC EHS GUIDELINES COMPLIANCE ASSESSMENT TABLE.....</b>	<b>198</b>



## TABLES

Table 6.1	Compliance Evaluation – Assessment and Management of Environmental and Social Risks and Impacts.....	27
Table 6.2	Compliance Evaluation – Stakeholder Engagement and Development .....	40
Table 6.3	Compliance Evaluation – Labour and Working Conditions .....	51
Table 6.4	Compliance Evaluation – Resource Efficiency and Pollution prevention.....	66
Table 6.5	Compliance Evaluation – Community Health, Safety, and Security .....	74
Table 6.6	Compliance Evaluation – Land Acquisition and Involuntary Resettlement .....	86
Table 6.7	Compliance Evaluation – Biodiversity Conservation and Sustainable Management of Living Natural Resources .....	108
Table 6.8	Compliance Evaluation – Cultural Heritage .....	119
Table 8.1	Compliance Evaluation – Equator Principles.....	129
Table 9.1	Compliance Evaluation – EBRD Performance Requirements.....	135
Table 10.1	Compliance Evaluation – EBRD Sub-Sectoral Environmental and Social Guidelines: Petroleum and Coal Products .....	153
Table 11.1	Compliance Evaluation – ADB Involuntary Resettlement Safeguards.....	166
Table 11.2	Compliance Evaluation – ADB Gender and Development Policy Assessment.....	174
Table 11.3	Compliance Evaluation – Incorporation of Social Dimensions into ADB Operations .....	176
Table 11.4	Assessment of ADB Public Communications Policy.....	177
Table 12.1	High Level Compliance Evaluation – Associated Infrastructure .....	180

## FIGURES

Figure 1.1	Overview of the SD2 Project.....	2
Figure 2.1	Location of the Shah Deniz Contract Area and Existing Shah Deniz and ACG Oil and Gas Offshore Facilities.....	9
Figure 2.2	Scope for the SD2 Project.....	11
Figure 5.2	Legal Hierachy for SD2 Project.....	16

## ACRONYMS AND ABBREVIATIONS

ADB	Asian Development Bank
ATA	Amec-Tekfen-Azfen
bcma	billion cubic meters per annum
BDJF	Baku Deepwater Jacket Factory
BOP	Blow Out Preventer
BSTDB	Black Sea Trade and Development Bank
BTC	Baku-Tbilisi-Ceyhan
CAP	Corrective Action Plan
CDF	Community Development Framework
CDP	Community Development Plan
CERP	Community Emergency Response Plan
CFC	Chlorofluorocarbon
CHMP	Cultural Heritage Management Plan
CHMMP	Cultural Heritage Management and Monitoring Plan
CHSS	Community, Health, Safety, and Security
CSR	Corporate Social Responsibility
EBRD	European Bank for Reconstruction and Development
ECAs	Export Credit Agencies
EHS	Environment, Health and Safety
EIA	Environmental Impact Assessment
EIW	Early Infrastructure Works
EMP	Environmental Management Plan
EPs	Equator Principles
EPS	Environmental Protection Standards
ERMP	Employee Relations Management Plan
ES	Environmental and Social
ESAP	Environmental and Social Action Plan
ESHS	Environmental, Social, and Health and Safety
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESMS	Environmental and Social Management System
ESR	Environmental and Social Review
ETN	Environmental Technical Note
FFD	Full Field Development
FGR	Flare Gas Recovery
FID	Final Investment Decision
GHG	Greenhouse Gas
GIIP	Good International Industry Practice
GOO	Global Operations Office
HCFC	Hydrochlorofluorocarbon
H&S	Health and Safety
HR	Human Resource
HSES	Health, Safety, Environmental and Social
HSE	Health, Safety and Environmental
HUC	Hook-Up and Commissioning
HWTF	Hazardous Waste Treatment Facility
IBA	Important Bird Area
IESC	Independent Environmental and Social Consultant
IFC	International Finance Corporation
ILO	International Labour Organisation



IP	Indigenous Peoples
ISD	Inherently Safer Design
JV	Joint Venture
KBA	Key Bird Area
KPI	Key Performance Indicator
LARP	Land Acquisition and Resettlement Procedures
LOMS	Local Operating Management System
LOSD	Lukoil Overseas Shah Deniz
LTMOBM	Low Toxicity Mineral Oil Based Muds
MEG	monoethylene glycol
MMP	Management and Monitoring Plan
MOP	Mutual Operations Plan
MP	Management Plan
MSDS	Material Safety Data Sheet
NGO	Non-Governmental Organisation
NO <sub>2</sub>	Nitrogen Dioxide
Nitrous Oxide	Nitrous Oxide
NORM	Naturally Occurring Radioactive Material
OHS	Occupational, Health and Safety
OMS	Operating Management System
OSPAR	The Convention for the Protection of the Marine Environment of the North-East Atlantic
OSRP	Oil Spill Response Plan
PAHs	Polycyclic Aromatic Hydrocarbons
PPE	Personal Protective Equipment
PSA	Production Sharing Agreement
PS	Performance Standard
PR	Performance Requirement
RfP	Request for Proposal
RAP	Resettlement Action Plan
SCP	Southern Caucasus Pipeline
SCPx	SCP Expansion
SD	Shah Deniz
SDB	SD Bravo
SDB-PR	SDB Production and Risers
SDB-QU	SDB Quarters and Utilities
SEE	State Ecological Expertise
SEP	Stakeholder Engagement Plan
SMP	Social Management Plan
SOCAR	State Oil Company of the Azerbaijan Republic
SOP	Standard Operating Procedure
SPS	Safeguard Policy Statement
SSF MP	Small-Scale Fishing Management Plan
ST	Sangachal Terminal
Sustainability	Sustainability Pty Ltd
TAP	Trans Adriatic Pipeline
TANAP	Trans Anatolian Pipeline
TKAZ	Tekfen Azfen Alliance (construction contractor)
TSP	Total Suspended Particle
VOC	Volatile organic compounds

## **EXECUTIVE SUMMARY**

This report summarises the environmental and social review (ESR) and audit for the Lukoil Overseas Shah Deniz (LOSD) for Stage 2 of the Shah Deniz (SD2) Project in Azerbaijan. The Project involves all the aspects of the upstream Stage 2 operations, including two new bridge-linked offshore platforms; 26 gas producing wells which will be drilled with two semi-submersible rigs; 500km of subsea pipelines to link the wells with the onshore terminal; upgrades to the offshore construction facilities; and expansion of the Sangachal Terminal (ST) to accommodate the new gas processing and compression facilities.

The European Bank for Reconstruction and Development (EBRD) is leading the Environmental and Social Review for possible financing of the SD2 Project on behalf of a group of lenders (the Lender Group) including the Black Sea Trade and Development Bank (BSTDB), Asian Development Bank (ADB) and other possible commercial banks. Sustainability Pty Ltd (Sustainability) was engaged as the Independent Environmental and Social Consultant (IESC) and presents this environmental and social review and audit report as the findings from the assessment of the Project's compliance with the Lender Groups' environmental and social performance standards, requirements and policies. The Lender Group is considering finance to LOSD, a 10% shareholder of the Shah Deniz JV. Therefore, this ESR review does not address whether the Project will go ahead, but rather whether to provide financing to LOSD for their portion of the Project. The SD2 Project is currently under the early phase of construction and will be operated by BP's Azerbaijan-Georgia-Turkey (AGT) Region.

The ESR and audit includes a review of (1) publicly available environmental and social documentation and (2) information provided by BP as part of the review, which is not available in the public domain. This included review of the Environmental and Social Impact Assessment (ESIA) documentation for the SD2 Project and associated facilities; documents provided by LOSD to support the evidence requested from the IESC and the outcomes of a site visit to the Shah Deniz (SD) Project HSE team in Leatherhead UK, BP's SD2 Project team in Baku and a site visit to the onshore ST expansion component of the SD2 Project at Sangachal.

The review and audit findings identified a comprehensive environmental and social impact assessment process has been undertaken for the SD2 Project, which is the latest assessment for the SD Project that was initially subject to ESIA for Stage 1 in 2002. The 2014 ESIA for SD2 has been developed from a body of knowledge gained from operation of the Stage 1 Project since 2006 and the associated environmental and social monitoring and management programmes that have continued since the initial ESIA studies. The operational knowledge gained from the SD Project, together with the understanding gained on the environmental and social aspects of the Project have informed the identification, scoping and assessment of impacts for the 2014 SD2 ESIA.

In general, the ESIA provides a systematic and detailed assessment of the significant environmental and social aspects of the SD2 Project. Baseline environmental and social data are comprehensive, being developed from monitoring programmes refined over a 10 year period. The impact assessment methodology is sound and consistent with Good International Industry Practice (GIIP). The impact assessment scoping process used for the SD2 ESIA has applied past Project experience to identify those environmental and social aspects that are likely to be significant for SD2. This process allows the SD Project Operator to design the SD2 Project such that significant impacts are avoided where possible or substantially mitigate those impacts using proven methods and technology.

The scope of the ESR and audit of the SD2 Project included a review against Lender Group environmental and social performance standards, requirements and policies that differ from the environmental and social criteria and impact assessment and management methodologies applied to the SD Project through both statutory requirements and Operator (BP) standards. These differences are recognised by the IESC with the review and audit findings discussed within the context of the intent or objective of the Lender Group requirements and

policies rather than a systematic procedural assessment of compliance that may otherwise apply in the case of an ESIA being developed with the objective of meeting Lender Group environmental and social criteria.

The ESR and audit findings also recognised that LOSD, as the party seeking finance from the Lender Group, is not the Operator of the SD Project and has limited ability to influence the Project's environmental and social performance. LOSD is also limited in its ability to facilitate the Project's demonstration of environmental and social performance in compliance with Lender Group policies and standards. To that end, the IESC findings recognise that compliance with Lender Group obligations is assessed on the basis of information that may be incomplete and with limited access to the Operator or its contractors. Where incomplete or limited information was available to evaluate compliance with Lender Group standards and policies, the IESC considered past performance and practices applied at the SD Project and applied professional judgements based on knowledge of BP's practices, policies and management systems applied globally.

The IESC assessment findings where compliance with the Lender Group environmental and social criteria has not been fully demonstrated are summarised below. These findings are presented against the relevant Lender Group requirements that have been aggregated where these requirements are similar.

## **ENVIRONMENTAL AND SOCIAL MANAGEMENT / STAKEHOLDER ENGAGEMENT**

***IFC Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts / EBRD PR 1: Environmental and Social Appraisal and Management / EBRD PR 10: Information Disclosure and Stakeholder Engagement / EBRD Sub-sectoral Guidelines / Equator Principles 2 – 6 / ADB Safeguards Policy Statement***

### **Assessment methodology**

The construction phase shipyards in Azerbaijan used for fabrication of the offshore Shah Deniz Bravo (SDB) jackets and topside are subjected to a narrow assessment of potential impacts in the SD2 ESIA (Chapter 5.6) limited to noise and non-Greenhouse Gas (GHG) air emissions. The ESIA discusses a number of possible shipyards, including the Baku Deepwater Jacket Factory (BDJF) Yard, may be used in combination for the SD2 Project requirements and also discusses minor upgrades to be undertaken at selected yards including refurbishment of site services such as sewage treatment and waste management. IESC discussions with BP indicate that the Amec-Tekfen-Azfen (ATA) and BDJF yards are being used for the fabrication of jackets and topsides, and that the ATA yard was expanded for the SD2 Project requirements. The ESIA does not provide sufficient detail (based on lender requirements) of the land requirements, land use or potential environmental and social impacts associated with the expansion.

Lender Group requirements and policies stipulate that third parties' EHSS performance is under the responsibility of the Project. Significantly, the IESC found that the ESIA lacks sufficient social baseline information for the ATA fabrication yard to demonstrate that social impacts are appropriately identified and that the social management plans (SMPs) in place are sufficient for compliance with lender standards. This site was not confirmed for use by the Project at the time of ESIA development and was presented as an option, not fully defined or assessed. However, it is now one of two construction yards in operation for the Project, and the ATA Yard is only undertaking work for BP.

### **Area of impact**

The IESC found that the Project Area of Influence is not fully described for all Project activities and phases, resulting in limited demonstration that the environmental and social management programmes are sufficient to mitigate such associated impacts. The area of influence is identified for the ST expansion based on social baseline and modelled impacts from the construction and operational phase of the Project. However, similar

assessments are not provided for other Project activities described in the ESIA, including shipyards and waste management facilities, where the extent of or potential for impacts to nearby communities is unclear.

The reported socio-economic baseline conditions do not appear to have been used to carry out an evidence-based social impact assessment. Impacts to villages neighbouring the ST, for instance, are not differentiated to reflect their different circumstances. In addition, while vulnerable groups have been identified at the wider level in the ESIA, the impact assessment appears generic. The environmental and social management programmes have not been verified by the IESC to confirm the mitigation and management activities to be undertaken to ensure these groups are not disproportionately affected by the Project. Again, the baseline social data provided in the ESIA appears to be of insufficient detail to allow effective monitoring of the effectiveness of social impact management programmes within affected communities.

### **Management systems and plans**

The IESC notes that the Project has various management plans (MPs) in place for its existing SD operations, and that construction phase management and monitoring programmes favour impact and risk avoidance. These plans measurable targets and indicators and assign clear roles and responsibilities for time-bound implementation. However, it appears that there are some deficiencies in particular in SMPs, such as addressing unplanned but predictable developments (e.g. not clearly linking any population influx monitoring to a MP to respond where necessary), engagement with affected communities on emergency preparedness and response (see below), and measures to manage Small Scale Fishing / Livelihood Restoration for those displaced by temporary onshore/nearshore pipeline works (commitment to develop this MP has been made but is not yet complete).

For all Environmental and Social Management Programmes developed for the SD2 construction phase, a significant deficiency and non-conformance to Lender Group requirements - is that these plans have not been publicly disclosed during the ESIA process and are not currently available to the general public. Additionally an Environmental and Social Action Plan is not evident.

### **Emergency preparedness**

Details of roles and responsibilities in emergency preparedness and response were not available for the IESC review, including recognising and preparing for different requirements of vulnerable people within communities.

### **Stakeholder engagement, consultation and disclosure**

The ESIA documents the disclosure steps that were taken (namely, scoping consultation workshops and draft ESIA report release for consultation), as well as the high level issues that were raised during the consultation process. While the ESIA consultation was recognised as appropriately undertaken, ongoing Project consultation and stakeholder engagement is not clearly defined in the disclosed documents (or those reviewed as part of this assignment). Ongoing engagement and participation at the local level, including the implementation of the grievance mechanism, was not sighted for review by the IESC for the construction phase. The Stakeholder Engagement Plan (SEP), informed by the analysis of past engagement and the Stakeholder and Socio-economic Survey (SSES), documents engagement activities and requirements broadly, but targeted and ongoing engagement activities directed to each of the stakeholder groups are not defined. Again, finer analysis of stakeholder groups would be anticipated (e.g. by village rather than regional description) including with those who will be most affected as well as those with professional and regulatory interests, and evidence that this has been based on the Operator's experience with the SD Project. It is evident that ongoing engagement activity is the responsibility of the Social Performance team and Community Liaison Officers (CLOs) at the village level, but documentation to support these activities (ongoing stakeholder analysis and planning, ongoing disclosure, participatory processes, documentation of the grievance mechanism and ongoing reporting to affected communities) was of limited availability to the IESC.

The nature and extent of local level engagement is not clear; it is not clear to the IESC if local ongoing engagement is not happening or just not documented. For example, the grievance processes are reported to be in place but whether there has been any training/communications for the public about how to access and use the process is not known. Similarly, mechanisms for reporting back to communities on implementation of Environmental and Social Management Plans (ESMPs) are defined in the Environmental and Social Management and Monitoring Plan (ESMMP) (six monthly, and by request of communities), but it is understood that this ESMMP (and subsequent ESMPs) has not been disclosed, at least through the ESIA process. The IESC confirms that the intent of the Operator's stakeholder engagement processes and standards are consistent with the Lender Group performance requirements but Operator implementation of these processes was unable to be verified.

The IESC also found no evidence of efforts to engage with affected communities around third party managed Project sites, e.g. construction yards, or the waste facility, or arrangements/coordination efforts with the third party operators of those sites. It has not been demonstrated that the Operator or its contractors have engaged with State Oil Company of the Azerbaijan Republic (SOCAR)/the municipality / other relevant agencies for the purposes of determining responsibilities for and implementing disclosure, consultation and stakeholder engagement activities with those potentially impacted communities near these facilities.

## **RESOURCE EFFICIENCY AND POLLUTION PREVENTION**

### ***IFC Performance Standard 3, EBRD Performance Requirement 3, ADB Safeguard Policy Statement***

No substantial deficiencies were identified as a part of this review against resource efficiency and pollution prevention criteria.

## **LABOUR AND WORKING CONDITIONS**

### ***IFC Performance Standard 2: Labour and Working Conditions / EBRD PR 2: Labour and Working Conditions***

No substantial deficiencies were identified as a part of this review against labour and working conditions criteria.

## **COMMUNITY HEALTH, SAFETY AND SECURITY**

### ***IFC Performance Standard 4: Community Health, Safety and Security / EBRD PR 4: Community Health, Safety and Security***

Community health, safety and security (CHSS) issues are not assessed in great detail in the SD2 or the Early Infrastructure Works (EIW) ESIA documents (for example, antisocial behaviour and social conflict), or they are scoped out (for example, road/rail disruption, health and safety risks and impacts as a result of onshore pipeline works). Further to PS1 above, deficiencies identified by the IESC include:

- specific baseline conditions do not appear to have been used to carry out an evidence-based social impact assessment (e.g. preparedness for emergencies that respond to specific community vulnerabilities);
- no Community Health and Safety MP is in place, or, other SMPs do include community health, safety and security actions but these have not been sighted by IESC; and
- scoping out various issues yet requiring management actions to mitigate any impacts (e.g. fencing around onshore pipeline works, traffic hazards) means that these issues may not be managed appropriately.

However, the Operator has described HSE leadership, planning and management, legal and regulatory framework, as well as management of contractor health and safety, security, environmental and social responsibility, and self-verification in the Programme HSE MP, demonstrating an established system in place for addressing emergencies. As with other SMPs, this does not appear to have been publicly disclosed, which is inconsistent with the requirements of the Lender Group policies.

## **INVOLUNTARY RESETTLEMENT**

### ***IFC Performance Standard 5: Land Acquisition and Involuntary Resettlement / EBRD PR 5: Land Acquisition, Involuntary Resettlement and Economic Displacement***

In line with the mitigation hierarchy, options were considered to optimise land take and so design out environmental and social impacts in the Project design stage. The Project induces some economic displacement of fishing households in the vicinity of the export gas pipeline and monoethylene glycol (MEG) pipeline shore crossing. The IESC also identified limited baseline social information regarding the land subject to the ATA construction yard expansion.

#### **Economic displacement and livelihood restoration**

Impact assessment on enforcement of the marine exclusion zone recognised the potential impact to small scale fishermen, resulting in a fishing livelihood baseline survey being undertaken to gather additional information on small-scale fishing activities within Sangachal Bay and the nearshore environment. The baseline determined that livelihood restoration is required to compensate the fishermen's temporary loss of access to natural resources of the Bay. This will be developed as a Small-Scale Fishing Management Plan (SSF MP); it will include the mechanisms to be used to engage with Project-affected fishing households to validate information underpinning the impact assessment and to ascertain their preferences and priorities in relation to mitigation measures. Further, it will identify specific measures to address the needs of vulnerable fishing households (75% of, or 45 impacted fishing households).

While work has commenced to progress livelihoods restoration, and some agreements may have been reached, it is not confirmed whether final agreements or compensation payments were in place with fishermen prior to construction and thus at the time of the livelihoods impacts occurring. An Entitlements Matrix has been developed but the methodology is not discussed, and the payment schedule is not specified in the documentation at this point. Further, a grievance process specific to livelihood restoration is also required and should be in place prior to loss of access to natural resources, including training to ensure stakeholders know how to use it if necessary. This may have been implemented but could not be confirmed by the IESC.

#### **Physical displacement and resettlement**

The IESC found insufficient evidence to determine whether the ATA yard expansion results in any displacement without a comprehensive social baseline of the surrounding area. The nature of the arrangements between the ATA Yard and the Operator are not clear, and so lines of responsibility in documentation of yard activities (as per PS1) and on the communities potentially displaced by it (as per PS5), are also not clear.

#### ***ADB Social Safeguards Policy Statement: Involuntary resettlement***

ADB Safeguards Policy Statement #3: Involuntary Resettlement Safeguards is triggered for physical displacement and economic displacement whether such losses and involuntary restrictions are full or partial, permanent or temporary. Further to IFC PS 5 findings, this addresses the economic displacement of fishermen from the Sangachal Bay only.

#### ***1. Compensation, Assistance and Benefits for Displaced Persons***

A Livelihood restoration framework, through a SSF MP, is yet to be established by the SD2 Project. It will include identification of appropriate (financial and non-financial) livelihood restoration measures by agreement with stakeholders, for the duration of the temporary loss of access. This loss of access will apply during the construction period from February 2015 for approximately 9 months, after which access will be reinstated. Eligible households must have been in the Project area prior to the cut-off date; this date is not yet set or communicated to IESC.

Based on lender requirements, compensation is required to be paid before displacement, while full implementation of the resettlement plan might take longer. The Operator has not yet documented a date for delivery of the SSF MP covering the compensation measures. The compensation measures have been developed and documented in an Entitlements Matrix but the IESC is not aware that the methodology behind the matrix is documented or publicly disclosed.

## ***2. Social Impact Assessment***

The Operator has identified displaced persons through the baseline survey (Nov 2014), building on data obtained during the SSES (2011), and was validated during another field input (February 2015). An inventory assets, livelihoods and income estimate, presented as gender disaggregated data could additionally be developed as part of the future planned validation field survey, which may have been done with the Entitlements matrix. The terms of reference for the validation work have not been viewed by IESC to verify content of this work plan.

Fieldwork should identify individuals and groups who may be differentially or disproportionately affected by the Project, in order to develop specific measures to address the needs of vulnerable households (Livelihoods Baseline survey, s.1.4). This is anticipated to be documented in the Livelihoods MP.

## ***3. Resettlement Planning***

Resettlement plan objectives are to ensure that livelihoods and standards of living of displaced persons are improved, or at least restored to pre-project (physical and/or economic) levels and that the standards of living of the displaced poor and other vulnerable groups are improved, not merely restored (para 17). BP has committed to doing so through a SSF MP (Livelihoods Baseline Survey s.1.4), which will include:

- The mechanisms to be used to engage with Project-affected fishing households to validate information underpinning the impact assessment and to ascertain their preferences and priorities in relation to mitigation measures;
- Identification of appropriate livelihood restoration measures (financial and non-financial)
- Identification of specific measures to address the needs of vulnerable households;
- The grievance procedure for small-scale fishermen, in line with the existing grievance procedures of the SD2 project;
- The methods that will be used to implement the livelihood restoration measures identified including schedule, organisational responsibilities, and the mechanisms that will be used to agree the measures with stakeholders including the local government, Ministry of Ecology and Natural Resources (MENR) and the fishermen;
- The methods used to monitor and evaluate implementation of the livelihood restoration measures; and
- Estimated budget for implementation (Livelihoods Survey s.1.4).

The Operator has indicated that compensation payments will be based on legal requirements and past experience of compensation by the Operator in SD1 phases of the wider project (interview with Operator 20.11.14), and qualified experts should prepare the resettlement plan (para 24).

#### ***5. Information Disclosure***

ADB requires a range of documentation to be disclosed on the ADB website relating to the resettlement. Documentation requirements for disclosure will be subject to discussion with ADB for determination.

#### ***6. Consultation and Participation***

Meaningful consultation is required with affected persons (para 28); a detailed engagement plan for this purpose has not been sighted/yet to be developed.

#### ***7. Grievance Redress Mechanism***

A mechanism is to be established to receive and facilitate the resolution of affected persons' concerns and grievances for small-scale fishermen, in line with the existing grievance procedures of the SD2 Project, (Livelihoods s.1.6). A timeframe for its development has not yet been identified or if this has been implemented, the documentation was not available to IESC for review.

#### ***8. Monitoring and Reporting***

The SSF MP will include the methods used to monitor and evaluate implementation of the livelihood restoration measures, in compliance with the SPS.

## **BIODIVERSITY CONSERVATION AND SUSTAINABLE MANAGEMENT OF LIVING NATURAL RESOURCES**

### ***IFC Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources / EBRD PR 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources***

No significant deficiencies were identified as a part of this review by the IESC against biodiversity conservation and sustainable management of living natural resources criteria.

## **INDIGENOUS PEOPLES**

### ***IFC Performance Standard 7: Indigenous Peoples / EBRD PR 7: Indigenous Peoples***

It is considered that the criteria for Indigenous Peoples are not triggered for this Project.

## **CULTURAL HERITAGE**

### ***IFC Performance Standard 8: Cultural Heritage / EBRD PR 8: Cultural Heritage***

#### **Tangible heritage**

As with earlier comments on targeted consultation, there appears to be a potential deficit of documentation on targeted consultation. In this case, a lack of evidence of targeted consultation relating to on cultural heritage with individuals or groups with specialist interests, outside the regulatory bodies.

#### ***EBRD PR 8: Cultural Heritage***

#### **Intangible Heritage**

Additionally, PR8 requires the assessment of intangible cultural heritage. While the Institute of Archaeology and Ethnography has been engaged in a watching brief on SD2, it is not evident what if any intangible cultural

heritage investigation has occurred, is ongoing, or planned for the future. Intangible cultural heritage investigation is not a requirement of local laws or the Product Sharing Agreement related to SD2.

## **CONCLUSION**

The review and audit findings identified a comprehensive environmental and social impact assessment process has been undertaken for the SD2 Project which is generally considered to be a high standard, consistent with GIIP. The ESIA represents the latest assessment for the SD Project that was initially subject to ESIA for Stage 1 in 2002. The 2014 ESIA has been developed from a body of knowledge gained from operation of the Stage 1 Project since 2006 and the associated environmental and social monitoring and management programmes that have continued since the initial ESIA studies. The operational knowledge gained from the SD Project, together with the understanding gained on the environmental and social aspects of the Project have informed the identification, scoping and assessment of impacts for the 2014 Project ESIA.

Material non-compliance with Lender policy is:

- PR1 (paragraphs 14 and 15), PR10 (paragraph 17): Absence of documentation in an ESAP; Disclosure of information did not include all of the proposed mitigation measures and implementation issues, specifically, the Environmental and Social Management Plans. This includes the Stakeholder Engagement Plan, which has the potential to materially impact how the operator conducts engagement and disclosure activities including those disproportionately impacted by the Project, vulnerable groups, and workers.

In general, the ESIA provides a systematic and detailed assessment of the significant environmental and social aspects of the Project. Baseline environmental and social data are comprehensive, being developed from monitoring programmes refined over a 10 year period, although some limitations of social baseline have been identified for the onshore components of the Project which are located away from the ST and surrounding areas (including the construction shipyards. The impact assessment methodology is sound and consistent with GIIP. The impact assessment scoping process used for the ESIA has applied past Project experience to identify those environmental and social aspects that are likely to be significant for SD2. This process allows the Operator to design the Project such that significant impacts are avoided where possible or substantially mitigated using proven methods and technology.

The deficiencies identified through the environmental and social audit are largely due to differences between the environmental and social performance criteria applied by the Lender Group and the compliance requirements applied for the SD Project which are reflected in the ESIA, including the statutory requirements and the Project Operator (BP) standards. The most significant variation from Lender Group standards and policies relates to the lack of public disclosure of environmental and social management plans and stakeholder engagement plans developed for the construction and operational phases of the Project.

The IESC notes that some deficiencies identified through the ESR and audit may have resulted from to limited access provided to the IESC to Project information. It is recognised that LOSD, as the party seeking finance from the Lender Group, is not the operator of the SD Project and has both limited ability to influence the environmental and social performance and limited ability to demonstrate the Project's environmental and social compliance with Lender Group policies and standards.

## REPORT ORGANISATION

Subsequent sections of this Environmental and Social Review to Support Financing report are organised as follows:

- Section 1 – Introduction;
- Section 2 – Summary Project Description;
- Section 3 – Institutional and Legal Framework;
- Section 4 – Environment, Social, Health and Safety Review and Audit Overview
- Section 5 – Compliance with Local Legislation;
- Section 6 – Compliance against the 2012 International Finance Corporation (IFC) Performance Standards (PSs) and Local Legislation;
- Section 7 – Compliance against IFC General Environmental, Health, and Safety (EHS) Guidelines;
- Section 8 – Compliance against the Equator Principles (EPs);
- Section 9 – Compliance against the European Bank for Reconstruction and Development (EBRD) Environmental and Social (ES) Policy and Performance Requirements (PRs);
- Section 10 – Compliance against EBRD Sub-Sectoral Environmental and Social Guidelines: Petroleum and Coal Products;
- Section 11 – Conformance against Asian Development Bank (ADB) Safeguard Policy Statement (SPS), ADB Gender and Development (GAD) Policy, ADB’s Policy on Incorporation of Social Dimensions into ADB Operations, and the ADB Public Communications Policy.
- Section 12 – High-level assessment of export gas pipelines projects against Lender Group requirements for associated facilities.

The basic findings of the review are presented in the form of observations, comments, and recommendations according to each standard assessed against. Direct comparison between each requirement and reviewed Project documentation is provided in a table format at the end of each section where relevant comments and suggested action, if necessary, to achieve compliance are also included. Descriptions of the Project have been provided only to a degree necessary to provide context for the observations and recommendations provided in the text.

## **1. INTRODUCTION**

This report summarises the environmental and social review (ESR) and audit for the Lukoil Overseas Shah Deniz (LOSD) Stage 2 of the Shah Deniz (SD2) Project in Azerbaijan. The Project involves all the aspects of the upstream Stage 2 operations, including two new bridge-linked offshore platforms; 26 gas producing wells which will be drilled with two semi-submersible rigs; 500km of subsea pipelines to link the wells with the onshore terminal; upgrades to the offshore construction vehicles; and expansion of the Sangachal Terminal (ST) to accommodate the new gas processing and compression facilities.

The Final Investment Decision (FID) for Stage 2 of the Project was made on 17 December 2013 (Stage 1 development/production is ongoing). The European Bank for Reconstruction and Development (EBRD) is leading the ESR for possible financing of the Stage 2 Project on behalf of a group of lenders (the Lender Group) including the, the Black Sea Trade and Development Bank (BSTDB), the Asian Development Bank (ADB), and other possible commercial banks. The Lender Group is considering finance to LOSD, not the entire Shah Deniz Company (an unincorporated Joint Venture [JV]) and not to the Operator, BP Caspian. LOSD is a 10% shareholder of the JV. LOSD is Lukoil Overseas' 100% subsidiary. Therefore, this review does not address whether the Project will go ahead, but rather whether to provide finance to LOSD for their portion of the Project. Lukoil Overseas is a holding company that manages Lukoil's participation in exploration and production projects outside Russia. In Azerbaijan the Lukoil group has various oil and gas activities, and a network of petrol stations.

As mentioned above, the Project Operator is BP Caspian, and the Lender Group proposed financing is to LOSD, a 10% shareholder of the Project. This presents an atypical situation as the Lender Group is asked to finance a minority shareholder of the Project and therefore the relationship is not with the majority shareholder, nor is it with the Operator of the facility.

Gas and condensate produced from the wells will be transported to the onshore ST where it will be treated to commercial quality. Condensate will be introduced to the liquid stream and shipped through the Baku-Tbilisi-Ceyhan (BTC) pipeline. Treated gas will be shipped through Azerbaijan and Georgia using the Southern Caucasus Pipeline (SCP) system, including the new expansion system, through Turkey using the Trans Anatolian Pipeline (TANAP) and through Greece and Albania and into Italy using the Trans Adriatic Pipeline (TAP). While these projects are not part of the proposed financing (and are under different ownership), as the SD Project is reliant upon these, they are considered to be Area of Influence (EBRD, ES Policy, 2008). Financing will not be used on the midstream pipelines of the SCP or any expansion thereof.

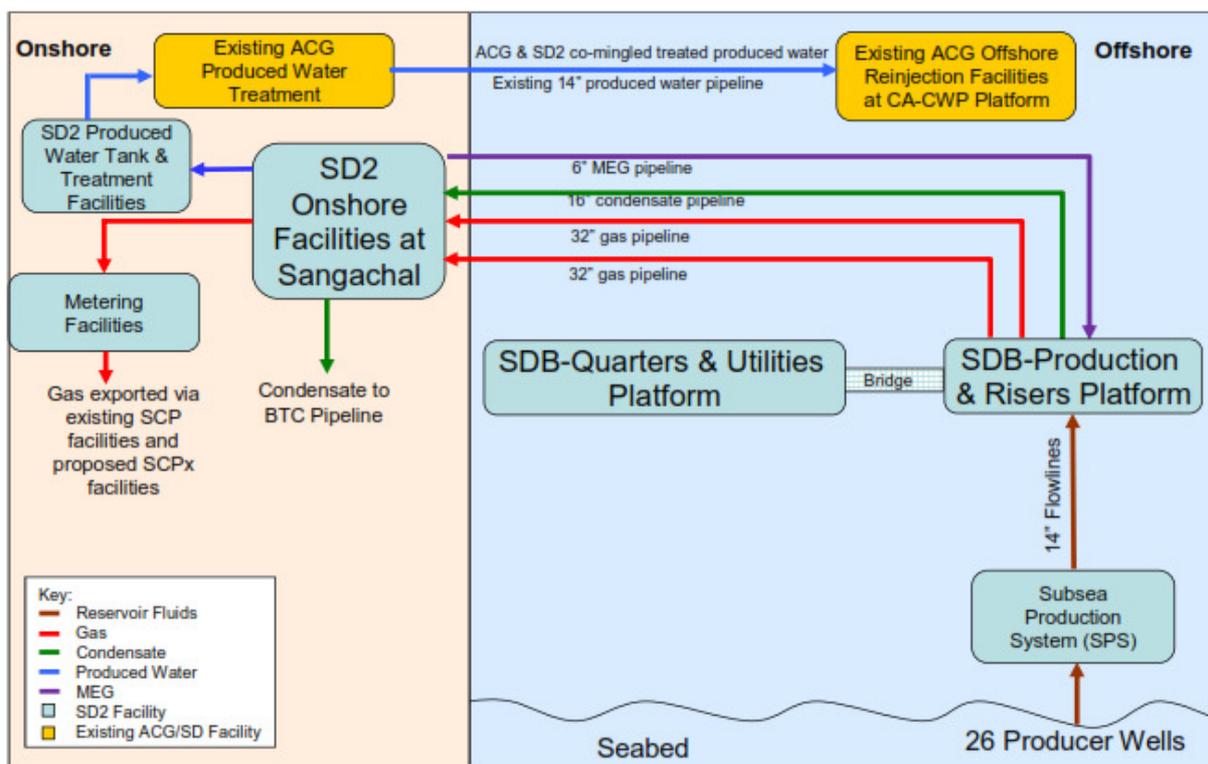
SD2 is a Category A project, requiring a comprehensive Environmental and Social Impact Assessment (ESIA) in accordance with EBRD Environmental and Social (ES) Policy and ADB Safeguard Policy Statement (SPS) Requirements. In addition to the ESIA, ADB's SPS also requires that for projects involving facilities and/or business activities that already exist or are under construction, the borrower/client will undertake an environment and/or social compliance audit, including an on-site assessment, to identify past or present concerns related to impacts on the environment, involuntary resettlement, and Indigenous Peoples (if applicable). Based on the above, the Lender Group engaged Sustainability Pty Ltd (Sustainability) as an Independent Environmental and Social Consultant (IESC) to review the existing ESIA documentation and conduct the ESR (to the extent possible based on available information) of the existing facilities. The main focus of the review is on the SD2 Project, however a cursory review (to identify main risks or gaps and discussion about the significance of any identified gaps) of the SCP expansion documentation is also within the scope of this review as it is considered within the Project area of influence.

## 1.1 PROJECT OVERVIEW

The SD2 Project represents the second stage of the SD field development and is planned to comprise (see Figure 1.1):

- A fixed SD Bravo (SDB) platform complex including a production and risers platform and a quarters and utilities platform, bridge linked to the SDB production and risers platform;
- Subsea manifolds and associated well clusters, tied back to the fixed SDB platform complex by flowlines;
- Subsea export pipelines from the SDB production and risers platform to ST and a dedicated monoethylene glycol (MEG) import pipeline from ST to the SDB production and risers platform.

In addition it is planned to expand ST to provide processing facilities for the SD2 Project. To accommodate the additional sales gas associated with the SD2 Project it is proposed to expand the existing SCP pipeline capacity. The SCP midstream facilities (downstream of ST) are not included in the SD Production Sharing Agreement (PSA) and will be developed and financed separately as the SCP Expansion (SCPx) Project. The SD2 Project includes the design and construction of the export compression, metering and associated utilities for SCPx Project at ST. All other SCPx facilities and activities are excluded from the SD2 Project scope.



**Figure 1.1 Overview of the SD2 Project**

## 1.2 SCOPE OF WORK

The general objectives of this review and audit are as follows:

- Summarise the relevant characteristics of the Project related to environmental, social, and health and safety (ESHS) aspects based on a review of existing information and a site reconnaissance. Relevant characteristics include: the Project description; institutional and legal framework; environmental and social conditions; ESHS impacts and risks; environmental and social mitigation and monitoring measures; and consultation with affected population.
- Evaluate the adequacy of the SD2 Project ESHS assessments and MPs and procedures and present conclusions and recommendations associated with identified issues.
- Confirm to the Lender Group the compliance of the Project development plan with applicable environmental and statutory requirements (see Section 1.3).
- Coordinate and assist the Lender Group, in the review process with reference to environmental and social matters in connection with the financing of the Project, including coordinating an integrated and streamlined information exchange process among the Lender Group.

These general objectives have been undertaken by Sustainability following specific tasks identified as follows:

**Preliminary Task:** Kick off Conference Call – this was carried out after contract inception to discuss the current status of the available ESHS documentation and the Project status. In addition, the call helped understanding specific Lenders’ and Project’s concerns, present the approach, draft preliminary logistics of the site visit, and establish information exchange procedures between Sustainability, the Lenders, and the Project;

**Task 1: Review of Background Information** – this included review of the ESIA documentation and associated Environmental and Social reports, plans, policies and strategies submitted provided by LOSD following various document requests. The document review focused on the following main areas:

- Completeness in terms of baseline environmental and social data and impact analysis methodology;
- Conformance with applicable national laws in Azerbaijan and Georgia;
- Conformance with international environmental agreements and good international industry practice (GIIP);
- Conformance with EBRD ES Policy (2008)<sup>1</sup> and Performance Requirements (PRs);
- Conformance with ADB SPS and other social requirements (ADB Gender and Development (GAD) Policy, ADB’s Policy on Incorporation of Social Dimensions into ADB Operations, and ADB’s Public Communications Policy);
- Conformance with applicable IFC Performance Standards (PSs) and Equator Principles (EPs);
- Status of (ESMPs) and Environmental and Social Action Plan (ESAP)/Corrective Action Plan (CAP);
- Status of Stakeholder Engagement Plans (SEPs) including internal and external grievance mechanisms;
- Health and safety (H&S) provisions and record for the Project, including pertinent H&S provisions as presented in the ESIA documentation, other pertinent information on the Project web site, and information on the Project web site to provide a bench mark of accident rates for the Project relative to industry norms.

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<sup>1</sup> The review of this project was initiated before 7 November 2014 and therefore the 2008 ES Policy was applicable..

**Task 2: Site Visit and Meetings with SD2 Project Personnel** – The site visit and meetings components included:

- Meetings with the SD2 Project design personnel at the KBR offices in Leatherhead, UK on the 17 November 2014;
- Meetings and interviews with BP’s SD Project team in Baku, Azerbaijan on 20 November 2014; and
- A site visit to the ST SD2 construction site on 21 November 2014 which included meetings with construction Health, Safety and Environmental (HSE) personnel, and review of the current construction site.

**Task 3: Environmental and Social Due Diligence Report** – An initial Draft Environmental and Social Review and Audit Report was submitted subsequent to the site visit on 27 February 2015 for circulation, review and comment by the Lender Group. The Draft Report identified a number of evidence gaps that prevented demonstration of Project compliance with the lender policies and performance standards/requirements. LOSD facilitated additional environmental and social discussions with the Operator and a document request to address the evidence gaps. An additional package of environmental and social information was provided by LOSD to Sustainability on 27 April 2015 and the report findings have been updated accordingly in this report.

A series of additional information requests were made through Lukoil to the Operator to seek documentation in support of filling gaps in the audit information.

This Final Report is issued as finalised.

It should be noted that this Environmental and Social Review and Audit Report is aimed at providing a “snapshot” in time of the Project’s level of compliance against Lenders’ requirements as of April 2015 when the last documents were provided to the IESC by LOSD.

### **1.3 LENDER POLICIES**

The review and audit has focused on evaluating social and environmental changes brought about by the Project and on assessing the implementation and effectiveness of proposed mitigation measures. The basis for evaluating the Project in terms of Lender policies is defined as follows:

- Equator Principles III (2013);
- IFC Sustainability Framework – 2012; including the Environmental and Social PSS
- IFC General EHS Guidelines;
- EBRD ES Policy and PRs;
- EBRD Sub-Sectoral Environmental and Social Guidelines: Petroleum and Coal Products;
- ADB SPS and other social requirements (ADB GAD Policy, ADB’s Policy on Incorporation of Social Dimensions into ADB Operations, and ADB’s Public Communications Policy);
- The Project’s ESMPs; ESAP/CAP; SEPs including internal and external grievance mechanisms; and Health and Safety provisions and record for the Project;
- Applicable national laws in Azerbaijan;
- Conformance with international environmental agreements and good international industry practice; and
- Any other environmental or social regulation or standard as the Lender Group may indicate they expect to apply to the Project.

### **1.3.1 Equator Principles and IFC Performance Standards**

Within the above list, the controlling standard and the basic premise used by the IESC has been to establish compliance of the Project with the EPs. These Principles represent the benchmark for determining, assessing, and managing social and environmental risks in project financing. Development of the EPs began with meetings between the World Bank/IFC and a small number of commercial banks in 2002 and has developed into a final policy statement with a revised set of Principles that were released in July 2006. Currently 80 major commercial banks and Export Credit Agencies (ECAs) follow the EPs as the basis for their own environmental and social policies and standards. Other ECAs and multilateral banks either directly follow IFC standards and guidelines or have their own that closely follow those of the IFC. As such, compliance with the EPs is expected to generally encompass the requirements of the Lenders.

The basic core of the EPs is compliance with the IFC PSs listed below:

- PS1: Assessment and Management of Environmental and Social Risks and Impacts;
- PS2: Labour and Working Conditions;
- PS3: Resource Efficiency and Pollution Prevention;
- PS4: Community Health, Safety and Security;
- PS5: Land Acquisition and Involuntary Resettlement;
- PS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources;
- PS7: Indigenous Peoples; and
- PS9: Cultural Heritage.

These PSs are in turn supported by Guidance Notes that serve to explain the means to achieve compliance with the PSs, as well as General and Industry Sector Environmental Health and Safety Guidelines, which provide industry specific directives.

The EHS Guidelines (currently dated April 30, 2007) contain the performance levels and measures that are generally considered to be achievable in new facilities at reasonable costs by existing technology. When host country regulations differ from the levels and measures presented in the EHS Guidelines, projects are usually expected to achieve whichever is more stringent. Therefore, the IESC review and audit also took into account those EHS Guidelines that are relevant to the Project characteristics.

### **1.3.2 IFC EHS Guidelines**

The EHS Guidelines are technical reference documents with general and industry-specific examples of GIIP. They contain the performance levels and measures that are normally acceptable to the World Bank Group and that are generally considered to be achievable in new facilities at reasonable costs by existing technology. The World Bank, IFC and the Multilateral Investment Guarantee Agency (MIGA) use them. When host country regulations differ from the levels and measures presented in the EHS Guidelines, projects are expected to achieve whichever is more stringent. If less stringent levels or measures are appropriate in view of specific project circumstances, a full and detailed justification for any proposed alternatives is needed as part of the site-specific environmental assessment. This justification should demonstrate that the choice for any alternate performance levels is protective of human health and the environment.

### **1.3.3 EBRD Performance Requirements and Sub-Sectoral Guidelines**

EBRD-financed projects are expected to be designed and operated in compliance with good international practices relating to sustainable development. To assist clients and their projects achieve this, the EBRD has

defined ten performance requirements covering the key areas of environmental and social issues and impacts. In order to obtain financial support from the EBRD clients should meet a set of 10 PRs, as follows:

- PR 1: Environmental and Social Appraisal and Management;
- PR 2: Labour and Working Conditions;
- PR 3: Pollution Prevention and Abatement;
- PR 4: Community Health, Safety and Security;
- PR 5: Land Acquisition, Involuntary Resettlement and Economic Displacement;
- PR 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources;
- PR 7: Indigenous Peoples;
- PR 8: Cultural Heritage;
- PR 9: Financial Intermediaries; and
- PR 10: Information Disclosure and Stakeholder Engagement.

The PRs should be read in conjunction with the EBRD's ES Policy. The EBRD is bound by its founding agreement to adhere to sound banking principles and "promote in the full range of its activities environmentally sound and sustainable development." The ways in which the EBRD promotes such development are described in the EBRD's Environmental Policy document. One specific step taken by the EBRD to address this mandate and the General Principles and Objectives set out in the Policy is to ensure that all of its investment and technical cooperation projects undergo environmental and socioeconomic appraisal along with the financial, economic, legal and technical due diligence, and to ensure that appropriate monitoring is undertaken following approval of projects by the Board of Directors.

In addition, the EBRD has developed a set of sub-sectoral environmental and social guidelines to assist credit/investment officers in local financial institutions and other non-environmental experts. They are designed to help in identifying major environmental and social activity risks, important management actions, and essential aspects of environmental and social due diligence. The guidelines are not part of the Bank's Environmental and Social Procedures and are used as guidance only. For the SD2 Project compliance was also assessed against the *Sub-sectoral Environmental and Social Guidelines: Petroleum and Coal Products*.

#### **1.3.4 ADB**

Approved by the ADB's Board of Directors in July 2009, the SPS replaces the ADB's previous separate policies on each of these areas: a Policy on Indigenous People (1998), an Involuntary Resettlement Policy (1995) and an Environment Policy (2002). The SPS builds upon the three previous safeguard policies on the environment, involuntary resettlement, and indigenous peoples, and brings them into a consolidated policy framework that enhances effectiveness and relevance and more comprehensively addresses environmental and social impacts and risks. The ADB works with borrowers to put policy principles and requirements into practice through project review and supervision, and capacity development support. The SPS also provides a platform for participation by affected people and other stakeholders in project design and implementation. The SPS relates to three areas: impacts on the environment, involuntary resettlement and impacts on Indigenous Peoples.

For the purposes of this Project, the ADB GAD Policy, the Policy on Incorporation of Social Dimensions into ADB Operations, and the ADB Public Communications Policy are also included in the compliance assessment. ADB's Policy on GAD is the guiding framework for gender and development activities. The Policy adopts gender mainstreaming as the key strategy for promoting gender equality and women's empowerment across the full range of ADB operations—from country partnership strategies to the design and implementation of gender-

inclusive projects and programs. Social dimensions such as participation, gender and development, social safeguards, and management of social risks are incorporated into ADB's strategic, sector, program, and project operations. To maximise these social development outcomes, ADB-assisted projects include social analysis as part of due diligence. The ADB's Policy on Incorporation of Social Dimensions into ADB Operations provides practical guidance to effectively integrate social dimensions into ADB-financed operations. The ADB's Public Communications Policy, 2011, promotes proactive external relations and improved access to information about ADB operations for better development effectiveness. The policy promotes greater transparency and accountability by enabling ADB's stakeholders—especially people affected by development activities—to better participate in the decisions that affect them.

## 1.4 SOURCES OF INFORMATION

The review and audit was based on 1) publicly available ESIA document, and 2) Information provided by BP, which is not available in the public domain. The main sources of information used to prepare this Report included, among others: (i) the ESIA and appendices (2013); MPs and supplementary slide packs prepared by the Operator. A full list of all documents used to prepare this Report is provided in Appendix A.

## 2. SUMMARY PROJECT DESCRIPTION

The basic requirements for a Project Description are defined in the IFC Guidance Notes<sup>2</sup> as follows:

*The risks and impacts identification process should be based on recent, up-to-date information, including detailed description of the project in its geographic, ecological, social, health and temporal context (the environmental and social baseline). For example, in the case of project finance (greenfield or existing), relevant information should include any related facilities that may be required (e.g., dedicated pipelines, access roads, captive power plants, water supply, housing, and raw material and product storage facilities). The description should encompass facilities and activities by third parties that are essential for the successful operation of the project.*

In addition, the IFC defines the Project Area of Influence and associated facilities as follows:

**PS1 – Para 8:** *Where the project involves specifically identified physical elements, aspects, and facilities that are likely to generate impacts, environmental and social risks and impacts will be identified in the context of the project's area of influence. This area of influence encompasses, as appropriate: The area likely to be affected by: (i) the project<sup>13</sup> and the client's activities and facilities that are directly owned, operated or managed (including by contractors) and that are a component of the project; <sup>14</sup> (ii) impacts from unplanned but predictable developments caused by the project that may occur later or at a different location; or (iii) indirect project impacts on biodiversity or on ecosystem services upon which Affected Communities' livelihoods are dependent.*

More simply stated, the Project description needs to present sufficient information for all proposed activities associated with the Project, such that potential environmental and social impacts can be assessed and mitigated. In addition to the primary Project facilities, related facilities, such as work camps, pipe yards, maintenance yards, access roads, Project-operated quarries and borrow pits, and disposal areas (including waste rock left over from pipeline excavation and dredging activities), that are part of the Project need to be described. As reported above, IFC requirements also designate a special category of "associated facility", these facilities are not funded as part of the Project but their viability and existence depend exclusively on the Project and their goods and services are essential for the successful operation of the Project.

The SD2 Project associated facilities include the gas export pipeline projects: SCPx; the TANAP and the TAP. Separate ESIA reports have been completed for these gas export pipeline Projects including three ESIA

<sup>2</sup> International Finance Corporation's Guidance Notes: Performance Standards on Environmental and Social Sustainability, January 1, 2012.

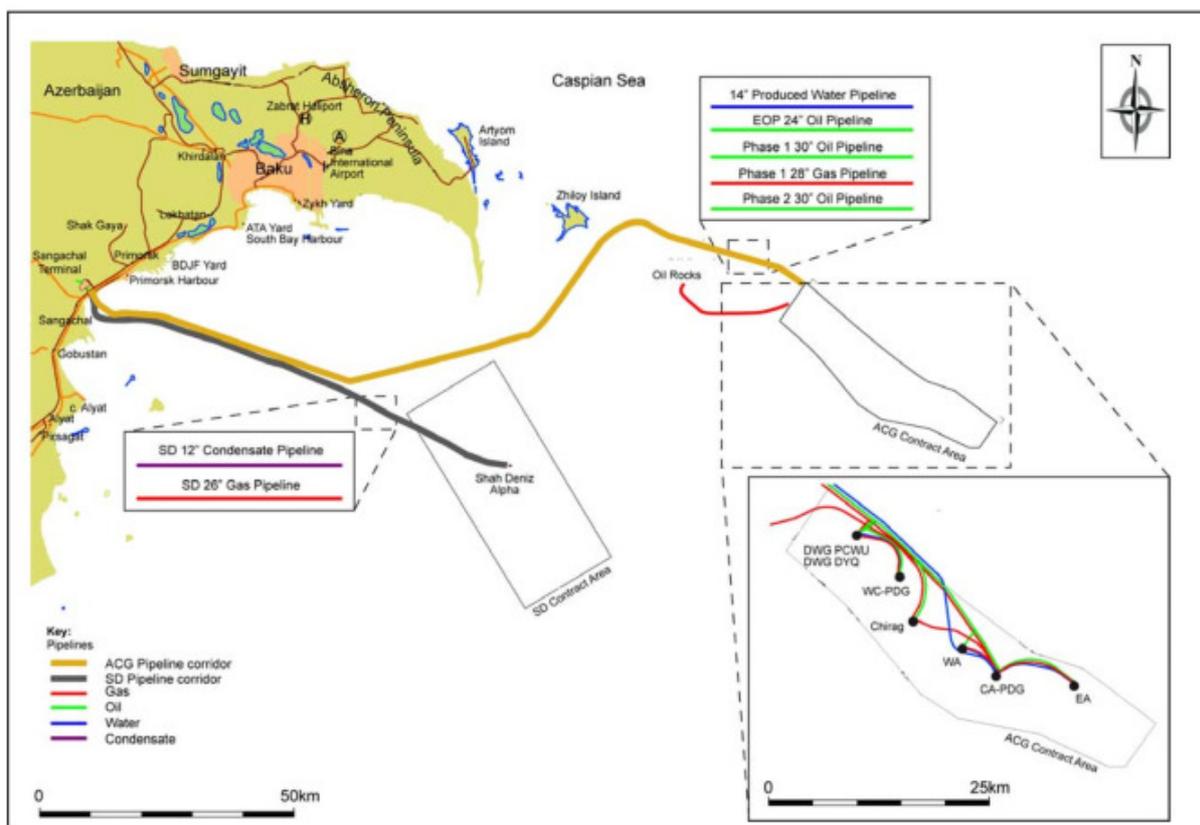
documents for the TAP Project: TAP Albania, TAP Greece and TAP Italy. These ESIA reports have been subject to a high level review by the IESC against applicable international standards, as described in Chapter 12 of this report.

In general, Chapter 5: Project Description of the ESIA provides the basic information to understand the main Project components and the activities associated with their development stages. However, some aspects of the Project with potentially significant environmental and social impact are not sufficiently defined within the SD2 ESIA to allow an understanding of the Project's social and environmental area of influence. Specifically, the onshore fabrication yards being used to construct the offshore production facilities and for pipe coating are only described as options within the ESIA with no clear definition of actual yard locations and potential area of influence. Although the fabrication yards are located within industrialised areas and have been used for past SD and ACG Project developments, the construction activities associated with fabrication and the workforce requirements have potential for social and environmental impacts to surrounding residents. Similarly, the Serenja Hazardous Waste Treatment Facility (HWTF) qualifies as an associated facility being operated by BP for the treatment and disposal of drilling wastes including organic phase fluid drill cuttings and other oil contaminated materials from BP's Azerbaijan offshore exploration and production facilities. The SD2 drilling program is a significant contributor to the waste that is treated at the Serenja HWTF via 4 Indirect Thermal Desorption Units with the capacity to treat 160 tonnes of drill cuttings per day. The Serenja HWTF is located in the Garadagh district approximately 30km west of Baku and with the nearest settlements located between two and five km to the south. An Environmental Impact Assessment (EIA) was completed for the Installation and Operation of new treatment technology at the HWTF in May 2014. The facility was initially assessed through an EIA in 1998 as an addendum to the SD1 EIA. There have been four subsequent EIA addenda for the installation, operation and decommissioning of the ITD units, the last of which was approved by the Ministry of Ecology and Natural Resources (MENR) in 2010.

The issues with respect to the ESIA Project Description are that "associated facilities", as defined in Paragraph 8 of PS1, are not specifically identified; and, for the two fabrication yards in use, the Project Area of Influence, from a social and environmental viewpoint, is not defined.

## **2.1 SD2 OVERVIEW AND LOCATION**

The SD Project aims to deliver 16Bcma of gas sales, with peak condensate rates of 85Mbd through the installation of additional wells within the high pressure gas-condensate SD Contract Area (see Figure 2.1).



**Figure 2.1 Location of the Shah Deniz Contract Area and Existing Shah Deniz and ACG Oil and Gas Offshore Facilities**

The SD Contract Area lies approximately 100km south east of Baku (refer to Figure 2.1). Full Field Development (FFD) of the Shah Deniz Contract Area is being pursued in stages. The SD Stage 1 development is located in the north eastern portion of the field and commenced production in 2006. The development included:

- A fixed platform (denoted SD Alpha) with drilling and processing facilities limited to primary separation of gas and liquids; and
- Two marine export pipelines to transport gas and condensate to onshore reception, gas-processing and condensate facilities located at ST, approximately 60km south west of Baku.

Oil and gas are currently exported from ST following stabilisation and dehydration respectively via three main export pipelines:

- The BTC Pipeline transports oil from ST through Azerbaijan, Georgia and Turkey to the Ceyhan Terminal located on the Turkish coast of the Mediterranean Sea. From Ceyhan the oil is distributed to international markets. The pipeline covers a distance of 1,768km and has eight pump stations along the route with the head pump station installed at ST.
- The Western Route Export pipeline is 829km in length and transports oil from ST to the Supsa Terminal located on Georgia's Black Sea coast.
- The SCP transports gas from ST to Azerbaijan, Georgia and Turkey. It became operational in late 2006 and on 30 September 2006 began transporting gas to Turkey from the SD Stage 1 project. The SCP is 691km in length and runs parallel to the BTC Pipeline to the Turkish border where it is linked with the Turkish gas distribution network.

The SD2 Project represents the second stage of SD field development and is planned to comprise:

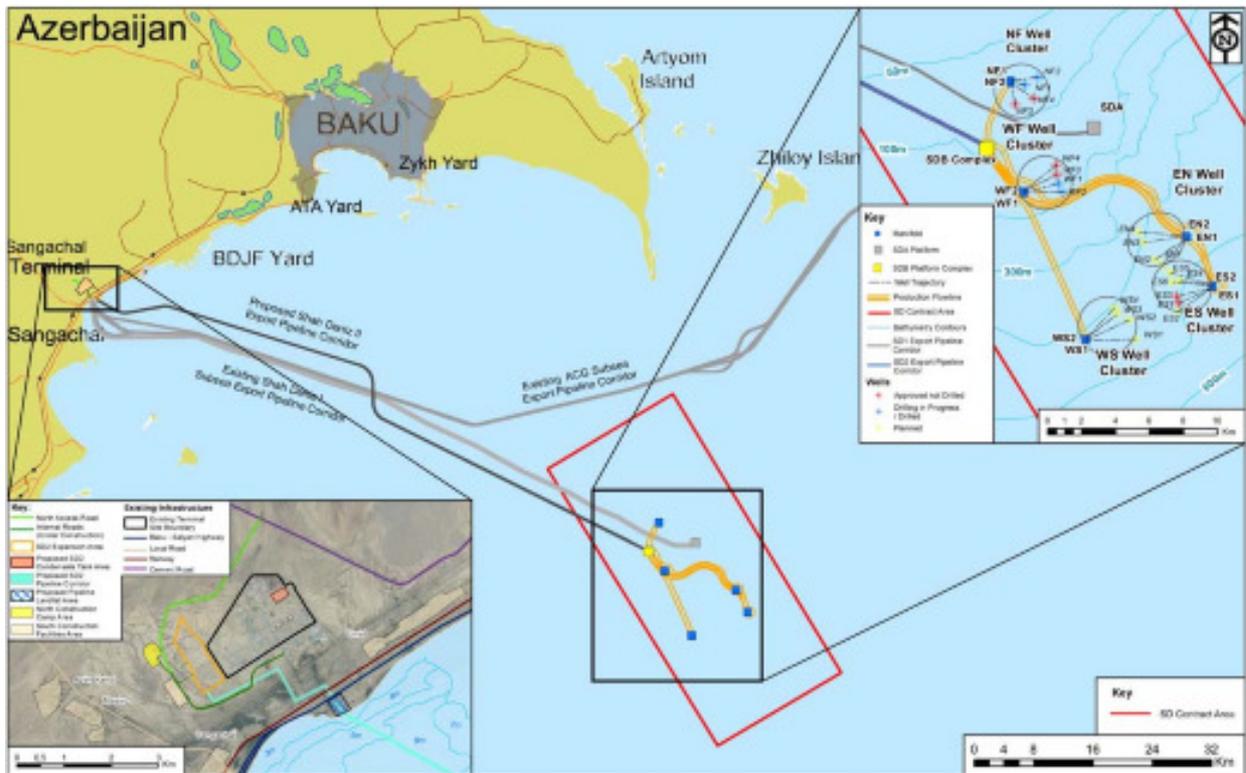
- A fixed SDB platform complex including a Production and Risers (SDB-PR) and a Quarters and Utilities (SDB-QU) platform, bridge linked to the SDB-PR;
- 10 subsea manifolds and 5 associated well clusters, tied back to the fixed SDB platform complex by twin 14" flowlines to each cluster;
- Subsea pipelines from the SDB-PR platform to the ST comprising:
  - Two 32" gas pipelines (for export to the ST);
  - One 16" condensate pipeline (for export to the ST); and
  - One 6" MEG pipeline (for supply to the SDB platform complex).
- Onshore SD2 facilities at the ST located within the SD2 Expansion Area; and
- Up to 26 producer wells.

The Early Infrastructure Works (EIW) (currently ongoing) to be completed at the ST prior to installation of the SD2 onshore facilities include:

- A new access road;
- Clearance and terracing of the SD2 Expansion Area; and
- Installation of storm water drainage and surface water/flood protection berms.

It is currently anticipated that a number of the EIW elements will be passed to and become the responsibility of the main SD2 Construction Works contractor.

Figure 2.2 shows the location of the offshore and onshore SD2 facilities, location of the Baku Deepwater Jacket Factory (BDJF) and ATA construction yards, the approximate well locations, subsea infrastructure layout and the routing of the subsea SD2 pipelines between the SDB platform complex and ST.



**Figure 2.2** Scope for the SD2 Project

### 3. INSTITUTIONAL AND LEGAL FRAMEWORK

The detailed legal regime for the joint development and production sharing of the Shah Deniz field is set out within the PSA signed by BP and its co-venturers and the State Oil Company of the Azerbaijan Republic (SOCAR) in June 1996 which was enacted into law in October 1996. The PSA prevails in the event of conflicts with any present or future national legislation, except for the Azerbaijani Constitution; the highest law in the Republic of Azerbaijan. The PSA sets out that petroleum operations shall be undertaken "in a diligent, safe and efficient manner in accordance with the Environmental Standards to minimise any potential disturbance to the general environment, including without limitation the surface, subsurface, sea, air, lakes, rivers, animal life, plant life, crops, other natural resources and property".

Azerbaijan is signatory to numerous international and regional conventions that oblige the government to prevent pollution and protect specified habitats, flora and fauna. Those of relevance to the SD2 Project include:

UNESCO Convention on Wetlands of International Importance especially as Waterfowl Habitat / RAMSAR Convention
Stockholm Convention on Persistent Organic Pollutants
International Convention for the Prevention of Pollution from Ships/ Vessels (MARPOL), 1973 as amended by the protocol, 1978
UN Convention on the Protection of the Ozone Layer (Vienna Convention)
Montreal Protocol on Substances that Deplete the Ozone Layer, 1987
United Nations Framework Convention on Climate Change, 1992
Kyoto Protocol, 1997
UN Convention on Biological Diversity, 1992
International Convention on Oil Pollution Preparedness, Response and Co-operation, 1990
FAO Plant Protection Convention
Convention to Combat Desertification
Convention on International Trade Endangered Species of Wild Fauna and Flora
Convention for the Protection of the Archaeological Heritage of Europe
Basel Convention on Control of Transboundary Movements of Hazardous Wastes and their Disposals
UNESCO Convention on the Protection and Promotion of the Diversity of Cultural Expressions
Aarhus Convention
Espoo Convention
Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Helsinki Convention)
UN Convention on Control of Transboundary Movements of Hazardous Wastes and their Disposals
Protocol on Water and Health
UNECE Geneva Convention on Long-range Transboundary Air Pollution
International Carriage of Dangerous Goods by Road
Convention on the Transboundary Effects of Industrial Accidents
Tehran-Caspian Framework Convention

The Azerbaijan Government has committed to a process to align national environmental legislation with the principles of internationally recognised legislation, based on EU environmental legislation. As this process is on-going, the SD2 Project has committed to comply with the intent of current national legal requirements where those requirements are consistent with the provisions of the PSA, and do not contradict, or are otherwise incompatible with, international petroleum industry standards and practice.

Key legislation regulating the development of the Project in Azerbaijan is the Law on the Protection of the Environment (1999), which includes:

- The rights and responsibilities of the State, the citizens, public associations and local authorities;
- The use of natural resources;
- Monitoring, standardisation and certification;
- Economic regulation of environmental protection;
- State Ecological Expertise (SEE);
- Ecological requirements for economic activities;
- Education, scientific research, statistics and information;
- Ecological emergencies and ecological disaster zones;
- Control of environmental protection;
- Ecological auditing;
- Responsibility for the violation of environmental legislation; and
- International cooperation.

According to Article 54.2 of the Law on Protection of the Environment, EIAs are subject to SEE, which means that the environmental authority is responsible for the review and approval of EIA reports submitted by developers. The Law establishes the basis for the SEE procedure, which can be seen as a “stand-alone” check of compliance of the proposed Project with the relevant environmental standards (e.g. for pollution levels, discharges and noise). In addition the law determines that projects cannot be implemented without a positive SEE resolution. The SEE approach requires state authorities to formally verify all submitted developments for their potential environmental impacts. Current internationally recognised practice emphasises a proportionate, consultative and publicly accountable approach to assessing impacts.

In addition to the above, the key national environmental, social and health and safety laws governing the Project are as follows:

Law of Azerbaijan Republic on Ecological Safety No. 677-IQ.	1999	One of two keystone laws of the country’s environmental legislation. Its purpose is to establish a legal basis for the protection of life and health, society, the environment, including atmospheric air, space, water bodies, mineral resources, natural landscapes, plants and animals from natural and anthropogenic dangers. The Law assigns the rights and responsibilities of the State, citizens and public associations in ecological safety, including information and liability. The Law also deals with the regulation of economic activity, territorial zoning and the alleviation of the consequences of environmental disasters.
Water Code of Azerbaijan Republic (approved by Law No. 418-IQ).	1997	Regulates the use of water bodies, sets property rights and covers issues of inventory and monitoring. The Code regulates the use of water bodies for drinking and service water and for medical treatment, spas, recreation and sports, agricultural needs, industrial needs and hydro energy, transport, fishing and hunting, discharge of waste water, fire protection and specially protected water bodies. It provides for zoning, maximum allowable concentrations of harmful substances and basic rules of industry conduct.
Law of the Azerbaijan Republic on Water Supply and Wastewater No. 723-1Q.	1999	Applicability limited to onshore operations. Restricts industrial waste releases into the sewage system; requires segregation of stormwater and industrial wastes from sewage, and requires legal entities to acquire permissions to operate sewage treatment plant.
Rules of Referral of	2000	The Caspian Sea is a specially protected water body. This resolution requires



<p>Specially Protected Water Objects to Individual Categories, Cabinet of Ministers Decree No. 77.</p>		<p>special permits for disposal if there are no other options for wastewater discharge. The resolution allows for restrictions to be placed on the use of specially protected water bodies, and for further development of regulations related to these water bodies. It requires consent from MENR for activities that modify the natural conditions of specially protected water bodies, and includes provisions for permitting of any discharges to water that cannot be avoided.</p>
<p>Law of Azerbaijan Republic on Air Protection No. 109-IIQ.</p>	2001	<p>Establishes the legal basis for the protection of air, thus implementing the constitutional right of the population to live in a healthy environment. It stipulates the rights and obligations of the authorities, legal and physical persons and Non-Governmental Organisations (NGOs) in this respect, sets general requirements for air protection during economic activities, establishes norms for mitigating physical and chemical impacts to the atmosphere, establishes rules for the State inventory of harmful emissions and their sources and introduces general categories of breaches of the Law that will trigger punitive measures.</p>
<p>Law of Azerbaijan Republic on Industrial and Domestic Waste No. 514-IQ.</p>	1998	<p>Describes State policy in environmental protection from industrial and household waste including harmful gases, waste water and radioactive waste. It defines the rights and responsibilities of the State and other entities, sets requirements for the design and construction of waste-treatment installations, licensing of waste generating activities, and for the storage and transport of waste (including transboundary transportation). The Law also encourages the introduction of technologies for the minimisation of waste generation by industrial enterprises.</p>
<p>Law of the Azerbaijan Republic on Subsurface Resources No. 439-IQ.</p>	1998	<p>Regulates the exploitation, rational use, safety and protection of subsurface resources and the Azerbaijani sector of the Caspian Sea. The Law lays down the principal property rights and responsibilities of users. It puts certain restrictions on the use of mineral resources, based on environmental protection considerations, public health and economic interests.</p>
<p>Law of the Azerbaijan Republic on Access to Environmental Information No. 270-IIQ.</p>	2002	<p>Establishes the classification of environmental information. If information is not explicitly classified "for restricted use" then it is available to the public. Procedures for the application of restrictions are described. Law aims to incorporate the provisions of the Aarhus Convention into Azeri Law.</p>
<p>Law on Sanitary-Epidemiological Services (authorised by Presidential Decree No. 371).</p>	1992	<p>Establishes sanitary and epidemiological requirements for industrial entities to be met at design, construction and operational stages, and for other economic activities. Aims to protect the health of the population. It addresses the rights of citizens to live in a safe environment and to receive full and free information on sanitary-epidemic conditions, the environment and public health.</p>
<p>Law of the Azerbaijan Republic on Protection of Public Health No. 360-IQ.</p>	1997	<p>Sets out the basic principles of public health protection and the health care system. The Law assigns liability for harmful impact on public health, stipulating that damage to health that results from a polluted environment shall be compensated by the entity or person that caused the damage.</p>
<p>Law on Mandatory Insurances.</p>	2011	<p>Identifies requirements for the mandatory insurance of civil liability for damage caused to life, health, property and the environment resulting from accidental environmental pollution.</p>
<p>Law on the Protection of Historical and Cultural Monuments.</p>	1998	<p>Specifies the responsibilities of state and local authorities, and lays down principles for the use, study, conservation, restoration, reconstruction, renovation and safety of monuments. The Law declares that cultural objects with national status, historical and cultural monuments, cultural goods stored in state museums, archives, libraries, as well as the territories where they are situated, are not subject to privatisation. Requires archaeological studies prior to construction works in areas with archaeological significance.</p>

## **4. ENVIRONMENT, SOCIAL, HEALTH & SAFETY REVIEW AND AUDIT**

This Section presents the review and audit of the SD2 Project and the activities proposed to be associated with its development. It is divided into sub-sections for each particular set of standards assessed against (e.g. IFC PSs, EBRD PRs, IFC EHS Guidelines, etc.). It should be noted (see Section 1.3) that the IFC PSs are used as the core standard for the assessment. Each additional<sup>3</sup> standard / policy / requirement is assessed to the extent that it differs in scope / specification to the IFC PSs. As such, assessment of the additional standards / policies / requirements cross reference to the IFC PSs assessment, and where materially different to the IFC PSs provide a detailed review of conformance.

Within each sub-section, an introductory paragraph is included to provide the most relevant observations and to facilitate the understanding of the compliance table that follows. Therefore, the narrative paragraphs preceding the compliance tables for each International Standard are aimed to provide the “rationale” for the identified gaps, and explanation of the IESC prescriptions. The most important identified gaps, which require action from the Project, have been formatted in bold within this text to facilitate identification.

The compliance tables included in the report compare Project activities with the requirements of specific Performance Standards and their compliance is identified with a color-coded scheme. Compliance categorisations are as follows:

**Non-compliance:** Project’s progress and/or information available to date are inadequate to fulfil applicable Local requirements/regulations and/or International Standard requirements; further work is needed to achieve compliance;

**Partial Compliance:** Project’s progress and/or information/data available to date are partially adequate to fulfil Local and/or International requirements/standards, further work is needed to achieve compliance;

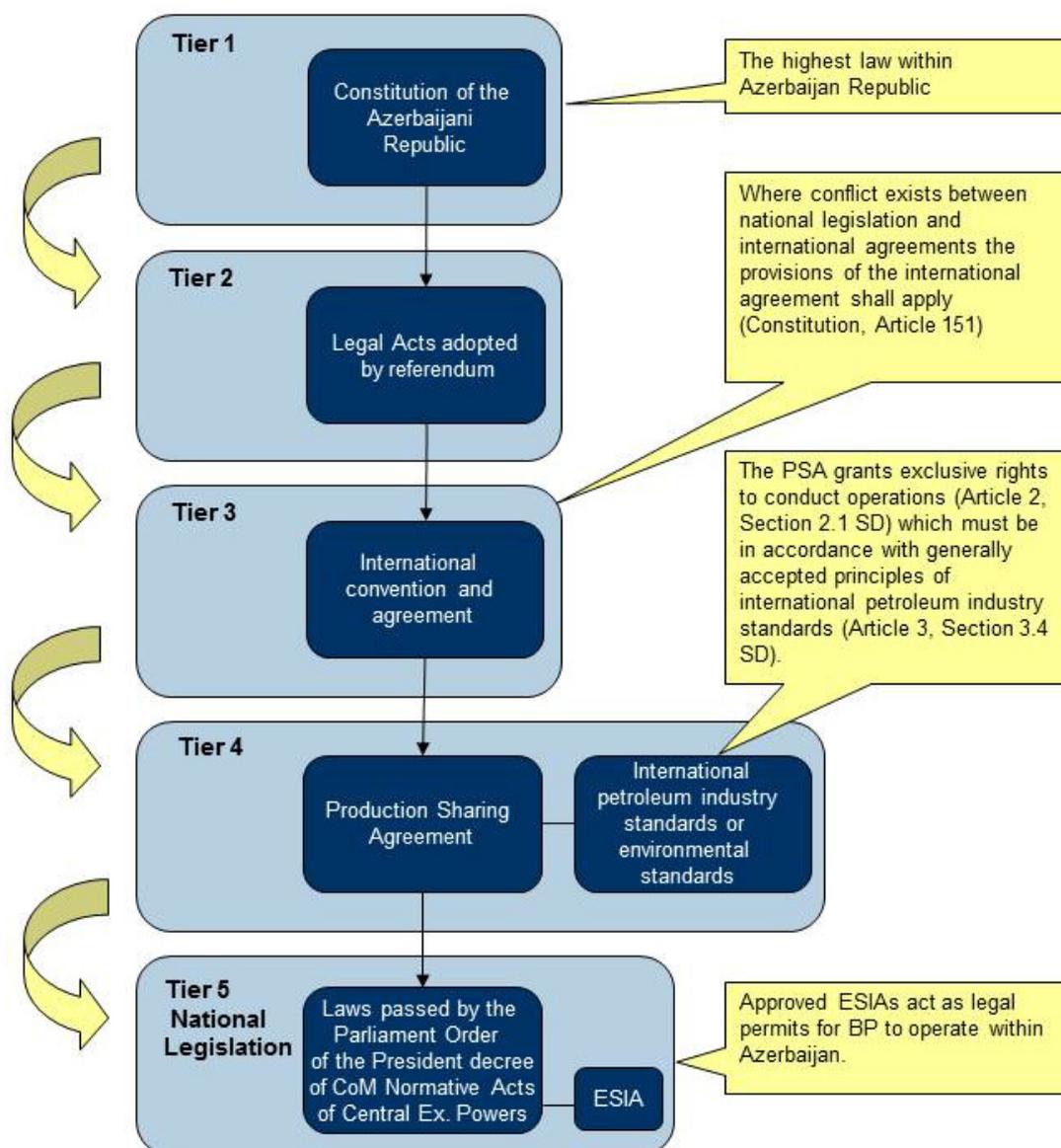
**Demonstrates Compliance:** Item is considered in compliance with, or not material to meeting intent of, Local and / or International requirements / standards, or not a material deviation from the requirements / standards.

## **5. COMPLIANCE AGAINST LOCAL LEGISLATION**

A key objective of the SD2 ESIA is to ensure that applicable legal, Operator and PSA requirements and expectations are addressed. Chapter 2 of the ESIA provides an overview of the agreements, legislation, standards and guidelines, which are applicable to the SD2 Project including the PSA, applicable national legislation, applicable requirements of international conventions ratified by the national government, international petroleum industry standards and BP’s Health Safety Security and Environment (HSSE) Policy. The legal hierarchy applicable to the SD2 Project is provided in Figure 5.1.

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<sup>3</sup> As per the Request for Proposal (RFP): National laws in Azerbaijan and Georgia; EBRD ES Policy and PRs; EBRD Sub-Sectoral Environmental and Social Guidelines: Petroleum and Coal Products; ADB Safeguard Policy Statement, ADB GAD Policy, and ADB’s Policy on Incorporation of Social Dimensions into ADB Operations; IFC General EHS Guidelines; Equator Principles.



**Figure 5.2 Legal Hierarchy for SD2 Project**

The PSA provides the overarching authority and approval for the SD2 development works and requires, in Article 26.4, the "Contractor" (BP Exploration (Azerbaijan) Limited) to:

*...comply with present and future Azerbaijani laws or regulations of general applicability with respect to public health, safety and the protection and restoration of the environment, to the extent that such laws and regulations are no more stringent than the Environmental Standards".*

Appendix 9 of the PSA describes the standards and practices common for international petroleum industry that were in existence when the PSA was signed (October 1996). These standards were supposed to be substituted by new safety and environmental protection standards devised which were agreed between BP, SOCAR and relevant government authorities and these new standards, once endorsed, would have the force of law as if set out in full in the PSA. A new set of Environmental Performance Standards were developed and agreed to by all parties in 2008, but these have not been formally endorsed. Therefore, the legally enforceable environmental and safety standards that apply to the Project include the requirements to comply with the present and future

national legislation relevant to health, safety and environmental protection to the extent that such laws are no more stringent than the environmental standards. Since the 2008 environmental standards have not been endorsed, then the standards and practices common to the international petroleum industry that applied in 1996 continue to apply for the PSA. Industry standards including those of the Oil Industry International Exploration and Production Forum, the International Association of Geophysical Contractors and the International Association of Drilling Contractors were specifically mentioned in the SD PSA. The Convention for the Protection of the Marine Environment of the North-East Atlantic (the OSPAR Convention) is of relevance to SD2 offshore activities and in particular to the regulation of chemicals.

The SD2 ESIA is developed in accordance with National EIA Guidance issued by the MENR. The approval of an EIA by the MENR establishes the compliance framework, including the environmental and social standards that an organisation should adhere to.

The management systems currently in place for the SD2 construction phase includes a comprehensive and systematic identification of health, safety, environmental and social management obligations from national legislation, PSA requirements, ESIA commitments and BP standards relevant to the various phases of development and as applied to discrete packages of work. The legal registers; commitments registers and the compliance and auditing framework that supports these are suitably implemented for the SD2 Project construction phase.

## **6. COMPLIANCE AGAINST IFC PERFORMANCE STANDARDS**

### **6.1 PERFORMANCE STANDARD 1 – ASSESSMENT AND MANAGEMENT OF ENVIRONMENTAL AND SOCIAL RISKS AND IMPACTS**

The basic Lenders requirements for an ESMS are defined in PS1. PS1 establishes the importance of: (i) integrated assessment to identify the social and environmental impacts, risks, and opportunities of projects; (ii) effective community engagement through disclosure of project-related information and consultation with local communities on matters that directly affect them; and (iii) the client's management of social and environmental performance throughout the life of the project. This section covers aspects relating to points (i) and (iii), while Section 6.2 of this report focuses on point (ii) and related issues.

In addition to the ESIA documentation, further documents, data and information have been received by the IESC (see Appendix A for Document List) in order to have a clear understanding of the ESMS supporting the ESIA documents and, as mentioned above, this report is based only on that information which has been received from LOSD or that which is in the public domain.

#### **6.1.1 Environmental and Social Assessment**

##### **6.1.1.1 [Environment](#)**

##### **Scope of the ESIA**

The environmental and social impacts have been assessed through a systematic process applied for all Project components as identified through the ESIA scoping and through engagement with key Government stakeholders in Azerbaijan. The Environmental and Social Assessments include: the SD2 Project ESIA, issued to the MENR in May 2014 and approved in October 2014, which incorporates an assessment of the expansion of offshore wells and production facilities within the Shah Deniz Contract Area production field, expansion of the onshore ST processing facilities, and the marine export pipelines that connect the offshore facilities with the onshore ST. The SD2 ESIA also includes the design and construction of the export compression, metering and associated utilities

for the SCPx Project at ST. The ESIA covers the construction, commissioning, offshore platform hook-up and commissioning (HUC), start-up and operation of all the SD2 facilities.

The ESIA for SD2 does not include assessment of works that were subject to previous statutory approvals from MENR including: NF1 Environmental Technical Note (ETN) – scope included drilling of the NF1 well; WF1 ETN – scope included drilling of the WF1 well within the western flank of SD Contract Area; SD2 Predrilling Project ETN – scope included drilling eight wells (denoted as WF2, WF3, WF4, NF2, NF3, NF4, ES2, and ES3) in the western, northern and eastern flanks. The ETN documents, therefore, provide the environmental and social assessment of 10 of the proposed 26 SD2 wells. The pre-drilling and drilling ETN documents were completed using a systematic environmental and social assessment process that is consistent with the SD2 ESIA and which includes: screening and scoping; Project alternatives and base case design; existing environmental and socio-economic conditions; impact significance assessments; mitigation and monitoring; residual impacts; and, disclosure and stakeholder engagement. However, the level of detail and extent of the ETN documents is somewhat limited and abbreviated to key issues only. For example, the ETN does not include broad stakeholder engagement or disclosure (engagement is limited to MENR, SD Monitoring Technical Advisory Group, industry representatives and Azerbaijani academic institutions).

Public meetings were not held as part of the ETN process for the pre-drilling and drilling, but were included within the broader SD2 ESIA. The drilling and pre-drilling ETN documents do not provide a detailed assessment of all impacts, but rather "its purpose is to focus the assessment on key issues and eliminate certain activities from the full impact assessment process based on their limited potential to result in discernible impacts". The targeted assessments within the drilling and pre-drilling SD2 ETNs were developed from key issues and lessons learned during the production and following the approval of the SD 1 ESIA and ETNs produced for other wells in the SD Contract Area.

A separate ESIA was conducted and approved by the MENR for early site works for the ST expansion - the SD2 Infrastructure ESIA (9 December 2011), which includes site access, construction facilities, earthworks and drainage works.

### **Environmental Policy and Objectives**

The overarching environmental performance objectives for the SD project are included in the Project specific Environmental Protection Standards (EPS) developed by a working group consisting of Azerbaijani Government departments, regulators and academic institutions. However, the EPS are yet to be endorsed by the MENR and therefore these standards do not yet have legal force. Until such time as the EPS are fully authorised, the Project must comply with the more generic environmental standards included in the PSA and which describe the standards and practices common for international petroleum industry that were in existence at the time the PSA was signed - 1996. The ESIA (Chapter 2/5) states that the SD2 Project will comply with the intent of current national legislation where those requirements are consistent with the provisions of the PSA, and do not contradict, or are otherwise incompatible with, international petroleum industry standards and practice.

Environmental risks and impacts are managed through various processes including the Project planning phase, through ESIA, Environmental Impacts Identification (ENVIID) and the statutory ETN (for drilling activities). Risk and impact identification is in accordance with GIIP for the SD2 Project with the use of supporting studies (e.g. atmospheric dispersion modelling and aqueous discharge modelling) and the lessons learned from the SD1 operations. The ESIA screening process has been systematically applied for the high level assessment of anticipated interactions between the Project activities and environmental receptors. The screening process for SD2 identifies key issues requiring assessment and eliminates those issues with non-discernible impacts. The "scoping out" process applied for the SD2 ESIA applies scientific judgement, past experience and numerical analysis where relevant (e.g. emissions modelling).

### **Cumulative and Transboundary Environmental Impacts**

Chapter 13 of the ESIA includes an assessment of cumulative and transboundary impacts and also assesses accidental events that could occur during the SD2 Project works and discusses the controls, mitigation and control measures for such accidental release event. Cumulative impacts are assessed in the context of interactions between separate Project-related residual impacts, and with impacts from other Projects. The Cumulative Impacts discussion considers that the SD2 Project comprises the next stage of development of the SD Contract Area and includes expansion of existing onshore facilities. The existing operations that utilise the onshore treatment facilities at Sangachal include the EOP, ACG Phase 1, 2 and 3 and the SD1 Projects. Other Projects assessed for cumulative impacts from interactions with SD2 impacts in the vicinity of ST include: Quizildas Cement Plant (4 km to the north); SD1 Flare Project (adjacent to SD2 construction); Garadagh District Umbaki Jailhouse; New Baku Port (25km south); SOCAR Petrochemical Complex (3-4km to the north); Baku Shipyard Company (23km from Sangachal); Navy and Military Camp (located near Sahil settlement. Terrestrial environment cumulative impacts assessed include traffic flow along the Baku-Salyan Highway; non-Greenhouse Gas (GHG) emissions to air (particularly NO<sub>2</sub>); noise; and, changes to hydrology. Marine environment cumulative impacts include physical disturbance, planned discharges and non-routine discharge events. GHG cumulative emissions are assessed. The majority (79.8%) of GHG is predicted to result from onshore and offshore activities during the SD2 Project operations phase. Only 13% of the total volume of GHG emissions is produced during the drilling and completion phase. The SD2 Project will contribute approximately 13% of the annual operational GHG emissions from BP's upstream activities in Azerbaijan, and are expected to contribute 0.36% of the national total emissions by 2020.

### **Accidental Events**

The SD2 ESIA, Chapter 13, includes assessment of offshore releases of condensate and diesel fuel taking into account aspects such as persistence of the spilled material and the prevailing environmental conditions. A range of events that could result in the release of hydrocarbons have been considered and modelled. These events include blowouts, flow line ruptures, condensate export pipeline ruptures and diesel spills from platforms and vessels. The various spill scenarios have been modelled under various conditions to identify the extent of possible impacts. Including impacts to ecological and social receptors and sensitive habitats. The potential impacts of these scenarios are discussed in addition to spill prevention and response planning for SD2.

#### **6.1.1.2 Social**

The SD2 ESIA examines a number of social impacts associated with the Project. Further, it commits by the Operator to develop a range of SMPs. These include:

- Community engagement and nuisance Management and Monitoring Plan (MMP); and
- Archaeology and Cultural Heritage MMP.

However the ESIA does not present a full Project description (i.e. the construction yards in use now are not fully described in the ESIA, nor in sufficient detail in other information received by IESC). As such, an evidence-based approach is not fully used to assess the social impacts of the Project; the full extent of impacts are not predicted because of a lack of data presented on all parts of the Project, including associated facilities.

Further, sufficient detail on local communities and conditions in the Project area of influence has not been made available for IESC review.

### **Project Area of Influence**

The ESIA focuses on the four villages adjacent to the ST as the area predominantly impacted by the Project, due to their close proximity to the major Project component (ST site expansion). However, the Project Area of Influence is not clearly defined within the received documentation, either described or mapped in detail. This includes 'associated facilities', and all construction camps, which are somewhat addressed (specifically, construction yard sites which are described as potential sites for use within the ESIA).

While during the site visit it was clear that those yards have now been selected and are in operation (the ATA and BDJF yards), the IESC notes that risk and impacts identification is not based on sufficient baseline environmental and social data for those facilities in conducting the risk assessment.

While the ESIA notes that all options are highly industrialised areas, the IESC notes that the ESIA refers to "Local, regional and national businesses and their staff (including the contractors and workers at construction yard operations)" as one of the most potentially impacted stakeholder groups by the Project, however how this is measured, mitigated and so, managed appropriately, is not evident. The clear link between identification of the site and activities thereon, definition of its social area of impact, assessment of those impacts based on social data, and resulting management activities documented in an appropriate SMP, is weak.

Further, the ATA yard in particular required additional land take beyond its original footprint, it is a site at which only BP work is being undertaken, and will also be used for waste management related activities. Full compliance with performance requirements are not achieved in absence of baseline data including details of those people who may be impacted by activities near the site and disclosure of information to these potentially affected groups.

No definition of the Project Area of Influence has been sighted by the IESC, including maps showing communities within the proximity of each of the Project facilities would help to make it clear which communities and Districts are within the Project Area of Influence and how will they be differentially impacted. This includes all associated facilities (construction yards, Sarinja waste facility), followed by an assessment of any social impacts associated with the Project Area of Influence. This also includes the economically displaced fishermen in Sangachal Bay, impacted by temporary nearshore works.

### **Cumulative Impacts**

Social aspects of Cumulative Impact Assessment are described including with other BP-led Project components as well as other projects in the area. Issues such as employment and economic flows are briefly addressed, and BPs contribution to community development initiatives noted, including government strengthening to improve coordination between projects and enhance positive impacts of economic flows (e.g. supply chain program). Nuisance issues are thoroughly assessed.

### **Risks from Third Party Involvement**

IFC PS1 definitions states that:

*Contractors retained by, or acting on behalf of the client(s), are considered to be under direct control of the client and not considered third parties for the purposes of this Performance Standard.*

Areas of third party involvement and ownership include the local fabrication yards, with the BDJF owned by SOCAR, the State Oil Company of Azerbaijan. The ESIA, as described above regarding Area of Influence, does not detail approaches where the Operator can reasonably exercise control over this facility. During the audit, the IESC notes that fabrication works carried out at the BDJF includes activities for other projects, not only for SD2, while the ATA yard is utilised wholly for SD2 Operator's activities. As such, relatively greater control could reasonably be exercised at the ATA site. The ESMMP suggests that BP is controlling potential environmental and social risks through contracts with third parties during construction (ATA, TKAZ, Bos Shelf and Saipem). The

Operator has specified in the ESMMP the requirements are for each of the construction contractors, however these were not verified by IESC. The Operator appears to have considered third party impacts through its established contract management, verification and audit system.

### **Vulnerable People**

The ESIA notes the four different villages in the immediate vicinity of the ST, each with differing socio-economic circumstances and demographics, echoed by interviews with the Operator during the audit (for example, the growth and so, potential for more employment at Azim Kend/Massiv 3; Umid's history of an Internally Displaced Persons (IDP) settlement and targeted for Sustainable Development Initiatives; Sahel village does not appear to be mentioned in the SIA, however is a site for Government projects and other employment opportunities). The impacts to villages – and other areas of social influence – are not differentiated to reflect these circumstances in the impact assessment. Further, while vulnerable groups have been identified at the wider level in the ESIA, the SEP does not confirm the mitigation and management activities to be undertaken to ensure these groups are not disproportionately affected by the Project.

## **6.1.2 Management Systems**

### **6.1.2.1 Environment**

BP's AGT Region manages BP's operation in Azerbaijan and implements environmental and social management programmes through the Local Operating Management System (LOMS). The environmental management component of the LOMS is certified to the ISO14001 standard for environmental management systems. The SD2 Construction Phase Environmental and Social Management System (ESMS) has been developed by BP and Includes: commitments register; legal register; Environmental and Social Management and Monitoring Plan (ESMMP); monitoring and inspection schedule; and, the implementation of an audit tracking and corrective action tracking system. Main design and construction contractors are required to conform fully to the BP SD2 Construction Phase ESMS and to develop their own construction phase ESMS that will integrate with the SD2 Construction phase ESMS. The construction phase ESMS provides a framework for implementation of the ESIA commitments and for the coordination and review of the environmental and social performance of the Project throughout construction.

The MODU facility, used for offshore well development drilling, is operated by third party contractors who are required to implement their own independent Environmental Management System (EMS) already in place. Alignment of the plans, procedures and reporting requirements of the rig and AGT Region EMS is achieved through the development of an EMS interface document which defines clearly how all activities will be managed to ensure a safe and environmentally acceptable working environment, including the roles and responsibilities relevant to environmental management. The EMS interface document is a live document and is reviewed annually at a minimum. Both the BP EMS and the Rig Operator EMS monitor the same targets and objectives that are separately audited as part of their internal review process. Communications lines are in place to ensure the effective sharing of the findings and action lists.

### **6.1.2.2 Social**

In addition to the above, the environmental and social management program appears in the ESMMP. The Construction Phase ESMS has been developed for implementation by the Operator and construction contractors, in line with the SD2 Construction Phase E&S Management framework. A number of SMPs have been provided for review. This includes the Employee Relations MP (refer PS2), the Archaeology and Cultural Heritage MP (refer PS8) and the Stakeholder Engagement Plan (SEP), (refer PS1/PR10). The mitigation hierarchy is promoted: for example, the Community Engagement and Nuisance MMP favours impact and risk avoidance, includes measurable targets and indicators and assign roles and responsibilities for timebound implementation. However, one key SMP has not been provided for review by the IESC: SSF MP (refer PS5). It is understood this MP is under

development, however baseline data has been verified and suggests an appropriate investigation and management process is underway for this issue, consistent with the intent of the PSs. The IESC notes that the Project appears to have been prioritising those areas at higher risk, such as the SSF MP.

### **6.1.3 Management Programs**

#### **6.1.3.1 Environmental**

The SD2 HSE Plan (13/5/2014) has been developed for the execute phase of the Project and describes how occupational health, industrial hygiene, safety, legal and regulatory compliance and environment and social responsibility impacts and risks will be managed in conformance with applicable BP requirements. The HSE Plan governs HSE requirements for the SD2 Project and specifies the HSE requirements for the SD2 Project to meet BP Operating Management System (OMS) requirements. It also specifies the HSE requirements for Project delivery teams during construction, including plans and procedures. The document is designed as part of the HSE Management System to promote an effective common process for the management of HSE.

The HSE Plan provides an overarching framework for the implementation of environmental management programs required for the construction Phase of the Project. The framework includes the HSE policies, Project HSE objectives, identification of roles and responsibilities, HSE resourcing requirements, the organisation of HSE personnel, reporting and performance management. The HSE Plan provides essential detail of how the Project delivery teams, including contractors, will implement risk management including details on the risk identification and management tools to be used and how records of risk management processes shall be maintained. HSE incident management is detailed in the plan with processes developed to ensure effective corrective and preventative actions are implemented. HSE competency and training processes are established in the HSE Plan, including requirements for HSE training needs to be identified for all Project delivery teams.

The SD2 Project and delivery teams are required to use the ES MMP (10/2/2015) as the framework to deliver the environmental and social requirements, as defined by applicable legal, contractual and other requirements, including ESIA commitments. The ES MMP includes specific requirements for various work packages to manage and monitor environmental performance against the Environmental Design verification register, the SD2 Environmental and Social Compliance Register that includes ESIA commitments.

The ESIA and the SD12 HSE Plan describe the Project Environmental and Social Management and Monitoring Program which includes MPs designed to implement the environmental and social requirements during construction and include:

- Restoration and Landscape Management Plan – landscape management; soil management during construction; site restoration; spoil management; training; monitoring and reporting (received and reviewed).
- Waste management and Minimisation Plan – waste hierarchy, procurement; classification; waste registers; handling; training; monitoring and reporting (received and reviewed).
- Ecological and Wildlife Management Plan – baseline surveys; inspections; protection during construction; training; monitoring and reporting (received and reviewed).
- Pollution Prevention management Plan- energy efficiency; emissions management; wastewater management; sewage treatment and disposal; chemical management; noise and vibration; contaminated soils; training; monitoring and reporting (received and reviewed).
- Community Engagement and Nuisance Management and Monitoring – nuisance management and monitoring (noise, light, odour, vermin) (received and reviewed).

- Archaeology and Cultural Heritage Management – protection of known tangible CH resources; chance find procedure; watching brief procedure; training; monitoring and reporting (received and reviewed).
- Spill Prevention, Response, Notification and Close-Out Actions – spill prevention; training; monitoring and reporting.
- Traffic and Transportation management Plan – driver training, onsite and offsite vehicle movements; risk assessments for transport of heavy loads; monitoring and reporting.
- Employee Relations Management Plan – training and skills development; grievance mechanism; de-manning; monitoring and reporting (received and reviewed).

**The SD2 Project design basis** has incorporated the knowledge and experience from the SD1 and ACG Phase 1, 2 and 3 in regards to avoidance of potential impacts. The AGT Regional Environmental Monitoring Programme has been implemented for over 10 years and provides a comprehensive data set to ensure avoidance of impacts to sensitive environmental receptors. The design base also incorporates refined environmental design and practices that have been demonstrated to avoid or minimise impacts of the Project. Examples include, the non-water based drill cuttings treatment and disposal onshore at Serenga; the preferential offshore disposal of treated process formation water (PFW) for SD2 applying the lessons learned during SD1 where PFW is stored onsite at Sangachal with significant odour risk; and, the selection of a Direct Electrical Heating (DEH) option to manage hydrate formation in subsea facilities whereby offshore chemical inventories are minimised and flaring emissions are reduced.

#### 6.1.3.2 [Social](#)

As mentioned above, based on lack of definition of the Area of Influence definition, an analysis of the risks and impacts may not be fully addressed, which results in a gap in SMPs.

It appears that unplanned but predictable developments are a gap. The EIW ESIA (s.10.2) scopes out influx as a potential issue, however the evidence of this is unclear. Flow on effects of influx in areas with major project development, such as impacts to local community public health and antisocial behaviour between local and new migrant populations, are well documented. In contrast, the SD2 ESIA notes the potential for in-migration, both from SD2 (s.12.4.3) and cumulatively for other projects (s.13.6.2.3) however an assessment of where in-migration may reasonably occur (and how this can be managed, see PS4) is not considered for inclusion in the Project Area of Influence. The potential for social conflict as a result of unplanned / unmanaged in-migration was additionally not picked up as a management action in the ESIA Commitments Register. As such, it is suggested that influx management actions are required to address broad / non-specific targets for minimising influx and any potential resultant social conflict in Affected Communities.

#### 6.1.4 **Organisational Capacity and Competency**

The IESC notes in the audit that the Operator has assembled a team of competent professionals to manage the environmental and social performance function from within the BP AGT Regions Team supported by external experts as required, such as in development and delivery of the ESIA's. An HSE Manager leads the SD2 HSE team and reports directly to the Project Vice President, but also has reporting links to the BP Global Projects Office (GPO) Director of HSSE. There are seven HSE/S&E Leads for each of the SD2 work packages, design team and the export gas pipelines. The SD2 offshore HSE team consists of 24 HSE professionals; the onshore facility has 31 HSE positions and the Marine and Subsea HSE team consists of 13 positions. These positions consist generally of health, safety and environmental advisors and technicians. The BP social management capability comprises a team of 14 community liaison, sustainable development initiative and community development initiative staff managed by the Social Performance (SP) and Sustainable Development Initiatives (SDI) Director, delivering social performance components of the ESMS under service level agreements to the BP GPO during the

construction phase. The team appears to be aligned with wider Project activities in some areas (e.g. using the Labour Management Committee and Labour Management Forum to ensure coordination between community relations delivery by the Operator and its contractors, and in order to meet labour management initiatives being undertaken through the Community Development Program), however the IESC notes that in others, linkages could be strengthened (e.g. between social performance and environment, on issues such as environmental monitoring on fishing, which clearly links to the upcoming compensation for economically displaced fishermen). Linkages, in both instances, could be made clearer by highlighting on the Organisation Chart provided how the SP and SDI team interfaces with HSE, as well as the cross-organisational forums in place during this construction phase.

## **6.1.5 Emergency Preparedness and Response**

### **6.1.5.1 Environmental**

Management of emergencies is managed for the SD2 Project through the BP' Crisis Management and Emergency Response framework which includes an established response mechanism, site response teams, country-based incident management team and regional business support team and an executive support team based in London. BP has a Baku emergency response team consisting of 120 personnel and mutual operating plan on management of emergency situations between the BP AGT Region and the Azerbaijani Ministry of Emergency Situations.

The SD2 Project has identified potential emergency scenarios that may impact on health, safety, the environment and communities. The ESIA includes identification, evaluation and mitigation/management of accident events. Emergency response plans are developed for significant scenarios and training drills are undertaken on a regular basis to ensure operational readiness and familiarity with emergency response requirements. The SD2 Project undertakes 20 emergency response exercise drill per year, of these 2 to 3 exercises involve external and government emergency response providers in addition to the BP-AGT emergency team. The offshore delivery units undertake 6-7 emergency response exercises annually. Each work site undertakes a weekly site muster and evacuation drill. Records of emergency response drills, exercise reports and debrief reports were reviewed by the IESC.

### **6.1.5.2 Social**

A Mutual Operations Plan is in place for defining how the Operator works with Government in responding to emergencies associated with the Project. The IESC notes that formal arrangements with local authorities are rigorous and tested, however the linkages to those Affected Communities most potentially impacted by an emergency or crisis event appear weak, with assistance to potentially affected communities appearing only somewhat addressed. The SEP for the AGT region documents engagement priority with external stakeholders during emergency cases, and documents the contacts of external stakeholders. This SEP provides a detailed matrix of external stakeholders indicating the priority order of whom to contact in case of emergency situations. The Operator interviews indicated that communications with communities is via Community Liaison Officers at the village level, through local media and local authorities, and that 2 to 3 exercises in emergency / crisis response are run with communities per year. However the details of roles and responsibilities in emergency preparedness and response were not available for IESC review, including disclosure of information on emergency preparedness to stakeholders, and recognising and preparing for different requirements of vulnerable people within communities.

## **6.1.6 Monitoring and Review**

### **6.1.6.1 Environmental**

BP's AGT Region has implemented an Environmental Monitoring Programme (EMP) designed to provide a consistent, long-term set of data, with the objective of ensuring an accurate picture of potential impacts on the

surrounding environment. The EMP follows a 10 year schedule and detailed monitoring plans are prepared for the next 3 years, with outline planning for the following 7 years. Offshore marine monitoring includes:

- Baseline surveys;
- Post-drill surveys – completed following drilling operations in order to assess the impact of drilling discharges on the surrounding environment;
- Routine environmental monitoring surveys – to provide an assessment of the impact of AGT Region operations, aiding responsible environmental management; and
- Regional surveys – completed to permit the identification and type of environmental changes and trends that occurs over time. Sampling is undertaken at locations remote from AGT Region activities, providing information on changes in the terrestrial and marine environment that have resulted from natural processes, or other third party activities. This helps to distinguish potential impacts resulting from AGT Region activities from natural background environmental changes and other anthropogenic sources.

Offshore marine monitoring has been conducted as part of the SD Contract Area development, with the primary focus being the benthic environment as sediments and their associated biological communities are widely considered to be the source of the most reliable indicators of ecological status and impact. Periodic water quality sampling is also undertaken.

In terms of onshore terrestrial operations, effort has focused on environmental monitoring in the vicinity of the ST in the form of terrestrial ecosystem monitoring, bird surveys, ambient air quality monitoring, and groundwater and surface water quality monitoring. In addition, nearshore fish monitoring and bio-monitoring has been conducted within Sangachal Bay and future surveys will be conducted in accordance with the 10 year schedule.

The ESIA describes the process of expansion of the environmental monitoring programme for the SD2 Project, to integrate operational monitoring of key discharges carried out by the AGT Region. This will allow a more complete understanding of the potential impacts of AGT Region operations. The aim of regular monitoring is to establish an understanding of trends over time, taking into account results of concurrent regional surveys and initial baseline data. Combined with operational discharge monitoring, this approach provides a robust basis for assessing the impact of SD2 Project operations, and for comparing the observed impact with that predicted in the ESIA.

#### 6.1.6.2 [Social](#)

The Construction phase ESMS is to include a schedule of monitoring, inspection and audit of performance, including confirmation that construction and installation contractors are meeting ESMMP expectations (s.14.2.1). The discipline-specific SMPs include monitoring requirements detailing what will be monitored, the method of monitoring, frequency, and measurable targets, to track progress and monitor against baseline conditions. Conformance is achieved through a three-stage process: Self-verification, Oversight, and Assurance.

Also noted is the level of Affected Community representation in the monitoring process. While participatory monitoring is not a compulsory requirement of IFC PS1, representatives from Affected Communities participate in working groups with BP to monitor and review the Project. Working groups are in place (as reported in interview with Operator, 20.11.14) with participation from the municipality, local authorities, the BP executive committee, land team, government department of pipelines, BP security and BP social performance teams. The working groups (located in districts and regions along the pipeline in the AGT region, plus at Sangachal) meet quarterly and annually. While Minutes, Terms of reference or other documentation regarding these groups has not been verified by the IESC to confirm the level of participation and representation of community members (e.g. whether vulnerable groups are represented), the intent appears consistent with Standards.

Inspections and audits are included to track ESIA commitment compliance in E&S Management: "Measurement, Evaluation and Corrective Action" and "management and review" phases and the ESMS effectiveness outcomes are reported to senior management via quarterly ESIA compliance dashboard reports, in accordance with IFC requirement to periodically relay the effectiveness of the ESMS to senior management for appropriate steps to ensure that the ESMS is being implemented and is effective.

**Table 6.1 Compliance Evaluation – Assessment and Management of Environmental and Social Risks and Impacts**

PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
<b>1. PS1: Assessment and Management of Environmental and Social Risks and Impacts</b>					
Environmental and social assessment and management system	5	<p>Conduct a process of environmental and social assessment and establish and maintain an Environmental and Social Management System (ESMS) incorporating the following elements:</p> <ul style="list-style-type: none"> <li>· policy;</li> <li>· identification of risks and impacts;</li> <li>· management programs;</li> <li>· organisational capacity and competency;</li> <li>· emergency preparedness and response;</li> <li>· stakeholder engagement; and</li> <li>· monitoring and review.</li> </ul>	<p>The environmental and social impacts have been assessed through a systematic process applied for all Project components as identified through the ESIA scoping and through engagement with key Government stakeholders in Azerbaijan. The ESIA's have been developed to meet national standards, BP policy and the PSA. The PSA does not have any specific social objectives.</p> <p>The ESIA reports that assessment of potential impacts takes into account existing and planned controls and monitoring and mitigation measures developed as part of earlier ACG and SD projects (s.1.4.1), however in some instances the baseline data and documentation of prior experience is not fully described, including the assessment of the onshore fabrication yards - ATA and BDJF ((see response the PS1 para7 below).</p>	<b>Partial Compliance</b>	SD2 ESIA; EIW ESIA
Policy	6	<p>Establish an overarching, stand-alone, project-specific policy, which defines E&amp;S objectives and principles that guide the project to achieve sound E&amp;S performance. The policy should:</p> <ul style="list-style-type: none"> <li>· specify that the project will comply with applicable host country and international laws and regulations;</li> <li>· be consistent with the principles of the Performance Standards;</li> <li>· include other internationally recognised</li> </ul>	<p>HSSE Policy (Azerbaijan Developments) adequately describes objectives and principles that guide the Project. The ESIA for SD2 has been developed in line with BPs own standards, national legislation and the PSA.</p>	<b>Demonstrates Compliance</b>	HSSE Policy

PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
		standards, certification, codes of practice subscribed to; · indicate who, within the client's organisation, will ensure conformance with the policy and be responsible for its execution (reference third parties as relevant). Communicate the policy to all levels of the organisation.			
Identification of risks and impacts	7	Establish and maintain a process for identifying project-related E&S risks and impacts, in accordance with good international industry practice (GIIP). Ensure that the risks and impacts identification process: · is based on recent E&S baseline data at an appropriate level of detail; · considers all relevant E&S risks and impacts of the project, including those from PS2 to PS8, and those who are likely to be affected by such risks and impacts (including individuals/groups that are considered disadvantaged or vulnerable) and complement this with a human rights due diligence in high risk circumstances; · considers the emissions of greenhouse gases, the risks associated with a changing climate (and adaptation opportunities), and potential transboundary effects.	The EIW ESIA reports that internal 'lessons learned' from BP environmental and community engagement teams inputting to the development of the ESIA itself and informing the scope of the ESIA (EIW ESIA, s.8.3.3, 8.3.4). However through this process it appears that determination of material issues has been made prior to all issues being subject to the impact assessment process (e.g. screening out of community health safety and security issues in EIW ESIA, table 10.1; SD2 ESIA s.12.2). The Project's social area of influence is not clearly defined, and 'associated facilities' not addressed. The construction yard sites are listed as options which may be used and so are not fully documented. ATA and BDJF yards have now been selected and are in operation, however the IESC notes that risk and impacts identification do not appear to be based on any baseline E&S data for those facilities. The received documentation about the social assessment at the ATA yard (ATA Yard Overview, March 2015) describes the nearest residential receptors at approximately 1km away and land to the west of the yard is used by a number of industrial businesses. To the north and west is the Bibi Heybet oil field which has been subject to a SOCAR led clean-up and decommissioning Project during the last 4 years and sites an increasing amount of non-industrial developments. At the time of the ESIA, noise and air quality baseline was measured. The land acquired by ATA to extend the yard was owned by SOCAR. There	<b>Partial Compliance</b>	SD2 ESIA (s.5.32, 7.11), EIW ESIA table 10.1. Operator interviews ATA Yard Overview slide pack, March 2015 SD2 ESMMP, Table 5



PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
			<p>were no buildings used for residential purposes or individuals using the area for informal income generation, as the land was part of the SOCAR operated oilfield. Further, the ESMMP describes that a Community Interaction and Social Impact MP is required of the ATA contractor, suggesting potential for community interaction with the ATA site.</p> <p>The IESC notes that risk and impacts identification are not based on any baseline E&amp;S data for those facilities. While all options are highly industrialised areas, the ESIA refers to "Local, regional and national businesses and their staff" as one of the most potentially impacted stakeholder groups, however how this is measured, mitigated and managed is not evident.</p> <p>The ATA yard required additional land take beyond its original footprint, it is a site at which only BP work is being undertaken, and will also be used for waste management related activities. While all site options are highly industrialised areas, the ESIA refers to "Local, regional and national businesses and their staff" as one of the most potentially impacted stakeholder groups. IESC notes that the level of detail provided for review is insufficient to fully assess potential risks and impacts of Project activities on Project affected people, including potentially vulnerable groups. The ATA SMP was not sighted by the IESC to verify detailed baseline and management of any material issues in line with the intent of the Performance Standards.</p>		
	8	<p>Analyse risks and impacts in the context of the project's area of influence encompassing:</p> <ul style="list-style-type: none"> <li>- the area likely to be affected by:               <ul style="list-style-type: none"> <li>- the Project and related facilities that the client and its contractors develops or controls;</li> <li>- unplanned but predictable developments caused by the project that may occur later or at a different</li> </ul> </li> </ul>	<p>Analysis of the risks and impacts may not be fully addressed, based on lack of definition of the area of influence. While the four neighbouring villages to the ST are described along with herder households to the north of the ST, the location of associated facilities are not defined. This means that the risks and impacts may not have been fully assessed.</p> <p>Unplanned but predictable developments appear to be a gap. The EIW ESIA (s.10.2) scopes out influx as a potential</p>	<b>Partial Compliance</b>	SD2 ESIA (s.1.3, s.12.4.3, s.13.6.2.3, s.13.6.2.5) Operator interview 20.11.14 Employee Relationship SD2



PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
		<ul style="list-style-type: none"> <li>location;</li> <li>- indirect project impacts on biodiversity or on ecosystem services.</li> <li>· associated facilities not funded as part of this project and whose viability and existence depend exclusively on the project and are essential for the successful operation of the project;</li> <li>· areas potentially impacted by cumulative impacts for further planned development of the project, any existing project or condition and other project-related developments.</li> </ul>	<p>issue, however the evidence of this is unclear. In contrast, the SD2 ESIA notes the potential for in-migration, both from SD2 (s.12.4.3) and cumulatively for other projects (s.13.6.2.3), however an assessment of where in-migration may reasonably occur is not considered for inclusion in the Project area of influence.</p> <p>The Employee Relationship information received describes contractor requirements for minimising influx (specific targets for recruitment of non-professional and professional positions from Sangachal, Umid, Serenja, Sahil, Azim Kend or Masiv 3 communities, and contractor verification of the applicants' location of residence via presentation of the government identification card). This requirement appears to be specific to the construction phase of the Project only.</p> <p>Cumulative Impacts is described. Issues such as employment and economic flows are briefly addressed while nuisance issues are described in detail, and BPs contribution to community development initiatives noted.</p>		Projects slide pack
	9	Consider risks and impacts resulting from third party involvement (where the client can reasonably exercise control).	<p>Areas of third party involvement and ownership include the local fabrication yards, with the Baku Deepwater Jacket Factory (BDJF) owned by SOCAR. The ESMMP suggests that BP is controlling potential environmental and social risks through contracts with third parties during construction (ATA, TKAZ, Bos Shelf and Saipem). The Operator has specified in the ESMMP the requirements are for each of the construction contractors, however these were not verified by IESC. The Operator appears to have considered third party impacts through its established contract management, verification and audit system.</p>	<b>Demonstrates Compliance</b>	ESIA Operator interviews ATA Yard Overview slide pack, March 2015 SD2 Environmental and Social Management and Monitoring Plan (ESMMP), Table 5
	10	Consider risk and impacts associated with primary supply chains (where the client can	Supply chain risks and impacts are considered through verification and auditing process of contractors, applying a	<b>Demonstrates Compliance</b>	Employee Relations MP s.4



PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
		reasonably exercise control) defined in PS2 and PS6.	code of conduct and requiring contractors to implement an Employee Relations MP. This requires a commitment to no child or forced labour, as well as compulsory reporting of any breaches. See also PS2.		Operator interviews
	11	Take cognisance of the findings and conclusions of related plans, studies or assessments that are directly related to the project and its area of influence and the outcome of engagement with Affected Communities.	The Operator has considered existing operations in the ESIA (s.12.2). However the history of engagement activities by the Operator are not referenced or summarised as provided to the IESC other than the Stakeholder and Socio-economic Survey (SSES). Staff include a team dedicated to engagement with local communities (CLOs), and the ESMMP notes that Service Level Agreements have been established with the AGT region for external engagement, but outcomes of this ongoing engagement has not been able to be verified through the audit process. The consideration of past issues in the ESIA suggests engagement has input to ESIA conclusions. See above comments regarding definition of Affected Communities.	<b>Demonstrates Compliance</b>	ESIA s.12.2 Organisation chart (SP & SDI Team) Operator interviews, s.4.4
	12	Identify individuals and groups directly and differentially or disproportionately affected by the project because of their disadvantaged or vulnerable status and implement differentiated measures to ensure they are not disproportionately impacted or disadvantaged in terms of benefits and opportunities.	The ESIA notes 4 different villages in the immediate vicinity of the ST, each with differing socio-economic circumstances and demographics as described in the Socio-Economic Survey (SSES). The impacts to villages are not differentiated to reflect these circumstances. Vulnerable groups have been identified at the wider level in the ESIA, but the Stakeholder Engagement Plan (SEP) does not reasonably confirm the specific mitigation and management activities to be undertaken to ensure these groups are not disproportionately affected by the Project.	<b>Partial Compliance</b>	ESIA s.7.5, s.7.7 Operator interviews SSES SEP
Management Programs	13	Establish management programmes that describe mitigation and performance improvement measures and actions that address the identified risks and impacts.	The environmental and social management program appears in the ESMMP. The IESC reviewed MPs in place and confirms the application of mitigation hierarchy, identification of improvements and offset measures for identified significant risks.	<b>Non Compliance</b>	ESIA s.14.3, Table 14.1 Operator interviews E&S Overview slide Fishing Livelihoods
	14	Favour impact and risk avoidance over minimisation, and where residual impacts remain, compensate or offset these, where technically and financially feasible.	A number of SMPs have been provided for review. This includes the Employee Relations MP (refer PS2), the		



PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
	15	Ensure mitigation and performance measures comply with applicable laws and regulations and meet PS1 to PS8.	<p>Archaeology and Cultural Heritage MP (refer PS8) and the Stakeholder Engagement Plan (SEP), (refer PS1/PR10). The mitigation hierarchy is promoted: for example, the Community Engagement and Nuisance MMP favours impact and risk avoidance, includes measurable targets and indicators and assign roles and responsibilities for timebound implementation. Construction phase ESMS documentation includes defined actions for compliance with legal obligations, environmental and social design criteria and the ESIA commitments. ESMPs include the identification of human and other resources required to meet defined performance requirements and delegate responsibilities for environmental and social performance to key positions within the organisational structure. The process for defining contractor ESMPs is clear and includes an audit and reporting process against SD2 performance requirements. The environmental and social management system includes established performance targets and indicators which are measurable and practicable. However, after taking into account the findings of the environmental and social appraisal and the result of consultation with affected stakeholders, there is no evidence that the Operator has developed and implemented a programme of mitigation and performance improvement measures and actions that address the identified social and environmental issues, impacts and opportunities in the form of an Environmental and Social Action Plan (ESAP).</p>		<p>Baseline Survey SD2 HSE Plan; Landscape and Restoration MP; Waste Management and Minimisation Plan; Community Engagement and Nuisance MMP; Cultural Heritage MP; ES MMP.</p>
	16	<p>Establish E&amp;S Action Plans defining desired outcomes as measurable events with performance indicators, targets and acceptable criteria that can be tracked over defined periods, with estimates of resources and responsibilities for implementation. Plans must recognise the role of third parties and must be responsive to changes in circumstances, unforeseen events and results of monitoring and review.</p>			
Organisational capacity and competency	17	<p>Establish, maintain and strengthen as appropriate an organisational structure that defines roles and responsibilities, authority to implement the ESMS. Specific personnel with clear lines of responsibility and authority should be designated. Key social and environmental responsibilities should be well defined and communicated to relevant</p>	<p>The Project has in place a competent team of professionals engaged to manage the health, safety, environment and social performance functions. External experts as required support the organisation. The BP HSE Social performance groups are sufficiently resourced to deliver HSE and social performance components of the ESMS. Alignment evident with wider Project activities (e.g. Labour Management Committee and Forum to ensure coordination</p>	<b>Demonstrates Compliance</b>	<p>Social Performance; HSE and SD initiatives; Team Organisation Chart; Operator</p>



PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
		personnel and the rest of the organisation. Sufficient management sponsorship and human and financial resources will be provided on an ongoing basis to achieve and continuous performance.	<p>between community relations delivery by the BP and its contractors, to meet labour management initiatives and commitments).</p> <p>Relevant team ESMS / SMPs have not been sighted, so the work program cannot be verified. Interviews demonstrate the necessary experience is in place as the SP and SDI team is an existing group having delivered earlier phases of the SD Project, and internal management support to deliver social performance program requirements. The ESIA was conducted by competent professionals (ESIA 1.4.2) with the assistance of external experts.</p>		<p>interviews; Employee Relations MP; ESMMP; SD2 HSE Plan</p>
	18	Personnel with direct responsibility for E&S performance must have the appropriate knowledge, skills, and experience necessary to perform their work, including implementation of the measures and actions in the ESMS and current knowledge of host country regulation and the requirements of PS1 to PS8.			
	19	E&S process must consist of an adequate, accurate, and objective evaluation and presentation, prepared by competent professionals. External experts must assist in the risks and impacts identification process for projects with significant adverse impacts or that are technically complex.			
Emergency preparedness and response	20	<p>Establish and maintain an emergency preparedness and response system identifying:</p> <ul style="list-style-type: none"> <li>· areas where incidents may occur;</li> <li>· communities and individuals that may be impacted;</li> <li>· response procedures;</li> <li>· provision of equipment and resources;</li> <li>· designation of responsibilities;</li> <li>· communication (including affected communities) and training to ensure effective response; and</li> <li>· Review and revise activities periodically.</li> </ul>	<p>Emergencies are managed for the SD-2 Project through BP' Crisis Management and Emergency Response framework which includes an established response mechanism, site response teams, country based incident management team and regional business support team and an executive support team based in London. BP has a Baku emergency response team consisting of 120 personnel and mutual operating plan on management of emergency situations between the BP AGT Region and the Azerbaijani Ministry of Emergency Situations. Assistance to potentially affected communities appears somewhat addressed. IESC received information on an emergency response summary which indicates that contractors operating the construction sites are primarily responsible for emergency response management, including that if community liaison is required at the SD2 terminal site or the beach pull then BP</p>	<b>Partial Compliance</b>	<p>Stakeholder Engagement Plan doc. No.: AZSPU-HSSE-DOC-00434-2 Operator interview 20.11.14 Emergency Response Summary Slides</p>
		21			

PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
		(if applicable). Where local government agencies have little or no capacity to respond effectively, the Client will play an active role in preparing for and responding to emergencies associated with the project. Document and disclose to Affected Communities and government agencies.	via the C&EA organisation will lead, at all other sites contractors will lead. The Operator has indicated that until the SD2 terminal site becomes hydrocarbon live and will be managed under the operations management system no emergency events at the SD2 site would have the potential to impact the communities. BP undertakes oversight and assurance of the contractors' emergency response capabilities. SEP for AGT region has been provided which documents engagement priority with external stakeholders during emergency cases, and documents the contacts of external stakeholders. This SEP provides detailed matrix of external stakeholders indicating the priority order whom to contact in case of emergency situations. The Operator interviews indicated that communications with communities is via Community Liaison Officers at the village level, through local media and local authorities however a gap appears to be disclosure of and regular engagement on emergency preparedness with Affected Communities.		
Monitoring and review	22	Establish procedures for monitoring and measuring effectiveness of the management programme and compliance with legal/contractual obligations and regulatory requirements. Include representatives from Affected Communities in the monitoring activities (where appropriate). Retain qualified external experts to verify monitoring information.	The Construction phase ESMMP describes how the Project will monitor and report environmental and social performance against legal obligations, the ESIA commitments and Operator requirements. The ESMMP provides an overview of the audit and assurance processes, which include self-verification, oversight and assurance. All delivery teams are required to include a schedule of monitoring, inspection and audit of performance, including confirmation that construction and installation contractors are meeting ESMMP expectations (s.14.2.1). However, inclusion of Affected Community representatives in this process appears somewhat weak, with sharing of monitoring data where these relate to grievances (interview). To support implementation of the construction contract clauses, there are a number of common interface processes between BP and the construction contractor.	<b>Demonstrates Compliance</b>	ESIA s.14.2.1 Operator interview 20.11.14 BP's SD2 Construction Stage E&S Management overview ESIA Compliance Dashboard 3Q/2014 SD2ESMMP. (SD2 HSE Plan)
	23	Use inspections and audits to verify compliance and progress toward desired outcomes. Document results and corrective and preventative actions implemented and followed up.			
	24	Relay the effectiveness of the ESMS to senior management on a periodic basis. Senior management should take appropriate steps			



**SUSTAINABILITY**  
FUTURE GROWTH

PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
		<p>to ensure that the intent of the client's policy is met, the ESMS is being implemented and is effective.</p>	<p>These interface processes are used by BP to enforce the core principle of the construction contractor managing site-based activities in line with a management system that is aligned to BP construction contract requirements. Conformance is achieved through a three-stage process: self-verification, Oversight, and Assurance. Additionally, the construction contractor is required to prepare ESMPs, which include a monitoring component. Inspections and audits are included to track ESIA commitment compliance in E&amp;S Management: "Measurement, Evaluation and Corrective Action" and "management and review" phases. ESMS effectiveness outcomes are reported to senior management via quarterly ESIA compliance dashboard reports. Representatives from Affected Communities participate in working groups with BP to monitor and review the Project. Working groups are in place (interview with Operator 20.11.14) with participation from the municipality, local authorities, the BP executive committee, land team, government department of pipelines, BP security and BP social performance teams. The working groups (located in districts and regions along the pipeline in the AGT region, plus at Sangachal) meet quarterly and annually. While Minutes, Terms of reference or other documentation regarding these groups has not been verified by IESC, the intent appears consistent with Standards.</p>		

## **6.2 PERFORMANCE STANDARD 1 – STAKEHOLDER ENGAGEMENT REQUIREMENTS**

This section provides comment on the Project's existing and proposed community consultation and disclosure activities. It also comments on some other potential social risks not addressed elsewhere in the report but that form part of the IFC PSs. Compliance was evaluated based on the relevant sections of IFC's PS1, *Social and Environmental Assessment and Management Systems*.

### **6.2.1 Stakeholder Engagement**

#### **6.2.1.1 Stakeholder Analysis and Engagement Planning**

PS1 provides for meaningful consultation with affected communities, with engagement based on the timely and effective dissemination of relevant project information and considering the range of stakeholders that may be interested in the project activities. The ESIA somewhat documents the stakeholder engagement and consultation processes undertaken from scoping up to ESIA disclosure, supplemented by Operator interviews. Analysis of stakeholders was reported to have been undertaken prior to scoping, and disclosure of ESIA documents was carried out in line with BP's requirements however ongoing engagement and participation at the local level is referenced but not documented for review by IESC for the construction phase. The IESC notes that ongoing engagement activity is the responsibility of the SP team and CLOs at the village level, however documentation to support these activities (ongoing stakeholder analysis and planning, ongoing disclosure, participatory processes, documentation of the grievance mechanism and ongoing reporting to Affected Communities) is only addressed partially. Given the nature and scale of the Project, and proximity to components of the Project, the frequency of engagement during a period of rapid change at construction (6 monthly with Affected Communities) does not appear sufficient.

Stakeholder identification and analysis was described as commencing in 2008, reported to build on existing knowledge of the Project stakeholders and lessons learned from past engagement. However, evidence of past lessons and detailed stakeholder analysis has not been sighted, including identification of vulnerable groups, affected communities, community representatives, presented at the (non-identifying) village level, rather than described in general terms for the region/country.

The ESIA presents the results of a Stakeholder and Socioeconomic Survey (SSES), which created a baseline from which to measure Project impacts and benefits. Given the described methodology, it is assumed that the SSES allows for more detailed analysis of stakeholder groups, villages and other affected communities. However, A Stakeholder Engagement Plan (SEP) has been provided but does not present engagement tailored to each of the affected communities including any vulnerable people within those communities. The SEP presents a strong focus of engagement with and reporting to Government rather than community and community representatives.

Lastly, there is no evidence of efforts to also engage with affected communities around third party sites, e.g. construction yards, waste facility, or arrangements/coordination efforts with the third party Operators of those sites (see also third party engagement, below).

#### **6.2.1.2 Disclosure of Information**

IFC PS 1 requires disclosure of information on the purpose, nature, scale of the project, duration of activities, risks and impacts on communities, the envisaged stakeholder engagement process and grievance mechanism. Disclosure of relevant project information helps Affected Communities and other stakeholders understand the risks, impacts and opportunities of the Project.

The SD2 ESIA reports that a Public Consultation and Disclosure Plan (PCDP) was prepared for the SD2 Project, detailing the process through which stakeholders were identified and consulted, roles and responsibilities of the ESIA consultants and BP, and the grievance process for ESIA disclosure. This document has not been verified by

the IESC, however the ESIA documents the disclosure steps that were taken (namely, scoping consultation workshops and draft ESIA report release for consultation), as well as the high level issues that were raised during the consultation process (s.8.3.4).

The PCDP would be expected to define the Project Area of Influence (as per above comments), consultation to meet local legal requirements, stakeholder analysis and mapping (including a summary of each stakeholder group/location), identification of vulnerable people, and mechanisms for communications with each stakeholder group, including identification and engagement methods and tools for engaging with local influencers and stakeholder group representatives according to their areas of interest. The PCDP would also include analysis and discussion on past engagement activities to demonstrate lessons from ongoing engagement as applied to the SD2 Project disclosure. Roles, responsibilities and timing would also be required, as well as a grievance mechanism description. The Draft ESIA report was submitted to the MENR as the responsible Government authority, and simultaneously released to public and stakeholder groups for comment. As part of the Draft ESIA consultation process, public meetings were held in Azim Kend, Sangachal Town and Umid during October 2011.

Comments received on the Draft ESIA report were collated, analysed and responses issued where relevant. The ESIA was subsequently revised and finalised for MENR approval, and the EIW commenced Q1/2012.

However, MPs (including the SEP) do not appear to have been disclosed with the ESIA, which is a critical non-compliance with the performance standards and the intent for disclosure to communities of the activities to be undertaken to mitigate and manage those potential impacts that will affect them.

#### 6.2.1.3 Consultation

Consultation is a two-way process that should provide affected communities with the opportunity to express their views on project risks, impacts and mitigation measures. BP having operated in the region since 2007 has extensive consultation experience at the STST and surrounds. However in the ESIA and provided additional documentation, the Operator has not clearly demonstrated that it has identified and analysed all primary stakeholders within the Project Area of Influence. The Company also needs to describe how the results from stakeholder analysis have been used to develop the ongoing community engagement program, i.e. the results should be used in the PCDP to justify the different approaches to engagement with different stakeholder groups. Although an expansion of an existing facility, the engagement should still reflect the nature and scale of the Project risks, including with those who will be most affected (as defined as 'Affected Communities' in close proximity to the site and associated facilities, with a stake in socio-environmental related impacts), as well as those with professional and regulatory interests.

The ESIA consultation process is described to include initial scoping with Government agencies (MENR), followed by consultation with other agencies (MoCT, IoAE). In the case of the EIW additionally with internal stakeholders (EIW ESIA s.8.3.4). For both SD2 and EIW ESIAs, two scoping phase workshops were held in Baku (scientific and academic institutions, public and civil society). This was then followed by the SSES in the villages in the ST area, undertaken by socioeconomic experts. Data was gathered using household surveys, Focus Group Discussions (FGDs) and interviews, and information on the Project was disclosed (posters, presentations and leaflets) at the village level.

Final consultation occurred with draft ESIA release, with 60 days of public disclosure at various sites in Baku, at the site, and in Sangachal and Umid villages. Additionally, consultation meetings targeted the scientific community in Baku, and the general public at consultation meetings in Baku and two villages near the ST.

The Operator indicated they may complete a close out survey/report back to affected communities following the SSES.

It is not evident that efforts were made to consult with those communities who may be impacted by associated facilities (construction yards, waste facility), or whether any consultation was carried out by third parties in cooperation with BP to achieve this purpose.

#### 6.2.1.4 Informed Consultation and Participation

Based on the evidence provided to the IESC, it is not considered that the Project overall will require an Informed Consultation and Participation (ICP) process as the trigger for significant adverse impacts is not met. The Project is an expansion of an existing project in an already highly industrialised environment. However, this may be triggered if an assessment of all affected communities (i.e. those potentially impacted by associated facilities) demonstrate any significant adverse impacts, or if evidence of on-going engagement gaps cannot be verified. Current data suggests an ICP process is not likely to be required.

#### 6.2.1.5 Indigenous Peoples

The IFC applies the term "Indigenous Peoples" in a generic sense to refer to a distinct social and cultural group possessing the following characteristics in varying degrees:

- Self-identification as members of a distinct indigenous cultural group and recognition of this identity by others;
- Collective attachment to geographically distinct habitats or ancestral territories in the Project area and to the natural resources in these habitats and territories;
- Customary cultural, economic, social, or political institutions that are separate from those of the mainstream society or culture; or
- A distinct language or dialect, often different from the official language or languages of the country or region in which they reside.

It is not considered that the IFC scope for 'Indigenous peoples' is triggered for this Project. Although the Operator has not provided evidence to exclude presence/absence of indigenous peoples in the ESIA process, based on the Project context, national data and other projects in the Project area, it is not considered that the IFC scope for 'Indigenous peoples' is triggered for this Project. See also PS7.

#### 6.2.1.6 Private Sector Responsibilities Under Government-Led Stakeholder Engagement

When consultation and engagement is the responsibility of the host government, Projects have a responsibility to collaborate with relevant agencies (supporting agencies if capacity is insufficient) and conduct a complementary process when the government-led process does not meet the relevant requirements of the PS.

The IESC has not seen documentation to demonstrate that the Operator has engaged with SOCAR / the municipality / other relevant agencies for the purposes of determining responsibilities for and implementing disclosure, consultation and stakeholder engagement activities with those potentially impacted communities near the construction yards (associated facilities). It is noted that a survey of existing ATA employees was conducted (ESIA s.7.11) however documentation on other stakeholders relevant to the facility was not reviewed.

It should be noted that Table 10.1 (ESIA SD2) indicates that construction yards and upgrade works were scoped out of the overall ESIA. However, contrary to the ESIA information, the ATA yard did extend beyond the existing footprint. Documentation on the actual results of yard upgrade works suggests that consultation with nearby communities is scoped out of contractor requirements.

## **6.2.2 External Communications and Grievance Mechanisms**

### **6.2.2.1 External Communications**

The Operator is required to implement and maintain a procedure for external communication, including registering public communications, screening and assessing issues raised, tracking and documenting responses, adjusting management actions accordingly, and periodically reporting on environmental and social sustainability. The ESIA describes the register of issues raised through the consultation process but does not specifically describe the screening and assessment process undertaken to address these, or demonstrate how issues raised are tracked and documented. However, it is understood that at the higher level, through quarterly dashboard review meetings with senior management, the feedback loop of information received is annual published in the BP regional Sustainability report.

### **6.2.2.2 Grievance Mechanism for Affected Communities**

The PS requires that a grievance mechanism to receive and facilitate resolution of Affected Communities' concerns about the Project's environmental and social performance is established. Grievances are to be responded to promptly, and action via the mechanism must not impede access to judicial or administrative resolution processes.

The ESIA (Table 14.1) refers to the Community Engagement and Nuisance MMP as the mechanism through which community grievances will be received and managed. A grievance mechanism is in place for the Operator; the grievance log was verified by the IESC but note that the procedure was not sighted. Further, monitoring data is shared with communities through Community Liaison Officers in particular when there are grievances relating to those issues.

Additionally with respect to ongoing stakeholder engagement processes, the IESC notes that the ST construction contractor TKAZ also has a stakeholder engagement and grievance process, which operates independent of the BP process. There are two interface meetings annually providing updates on the Project, noise and other monitoring and employment updates. The four nearby villages have their own meeting with TKAZ, the contractor undertakes self-verification of their stakeholder engagement and grievance process, with BP oversight and annual audit (planned for 2015). Documentation on this was not sighted by the IESC.

Documentation on implementation and resolution of grievances was not sighted or verified with any complainants by the IESC but it appears that the intent of the Performance Standard is being met.

## **6.2.3 Ongoing Reporting to Affected Communities**

The PS requires at least annual reporting back to Affected Communities, as well as communications on material changes to the Project, again, at least annually.

Mechanisms for reporting back to communities on implementation of Action Plans (ESMPs) are presented by topic. For example, nuisance monitoring data is reported back to communities every six months during the construction phase. Annual reports are not specific to the Affected Communities or the ongoing impacts and risk management in the Project Area of Influence but material changes to the Project overall are reported through this Annual reporting process. BP Group's recommended stakeholder engagement practice is described in the SEP, and this is broadly consistent with the intent of the PS'. However the appendix describing any non-conformance of the AGT region with the BP Group recommended practice was not available for IESC review. Further, without definition of Affected Communities, the Operator cannot be sure that all relevant stakeholders have been informed of any material changes to the Project.

The Operator has indicated that a report back/close survey may be undertaken following the SSES but this is not documented.

**Table 6.2 Compliance Evaluation – Stakeholder Engagement and Development**

PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
Stakeholder engagement	25	Stakeholder engagement is an ongoing process that may involve the following elements: <ul style="list-style-type: none"> <li>· stakeholder analysis and planning;</li> <li>· disclosure and dissemination of information;</li> <li>· consultation and participation;</li> <li>· grievance mechanism;</li> <li>· ongoing reporting to Affected Communities.</li> </ul>	The ESIA somewhat documents the stakeholder engagement and consultation processes. Analysis of stakeholders was undertaken prior to scoping, disclosure of ESIA documents was carried out in line with BP's requirements. The SEP documents objectives, legislative standards, ESIA engagement activities, stakeholder identification and management, social investment, roles and responsibilities and monitoring and evaluation. A grievance process is reference but was not provided for IESC review. Ongoing engagement activity was described by the Operator as the responsibility of the SP team and CLOs at the village level, however documentation on local level engagement to support these activities has not been provided for review or by verification interview with affected communities. Further, TKAZ is the only construction contractor required to develop a SEP; the other sites are identified as having a lack of potential community interaction and hence no SEP required which appears to be based on little baseline data (refer definition of Project area of influence, above). Given the nature and scale of the Project, and proximity to components of the Project, the frequency of engagement during a period of rapid change at construction (6 monthly with Affected Communities) does not appear sufficient.	<b>Partial Compliance</b>	Operator interview 20.11.14 ESIA s.8 SEP
Stakeholder analysis and engagement planning	26	Identify stakeholders, including Affected Communities, and consider external communications to facilitate a dialog with them.	Stakeholder identification and analysis (from 2008 onward) built on existing knowledge of the Project stakeholders and lessons learned from past engagement. Evidence of past lessons and detailed stakeholder analysis has not been sighted, including identification of vulnerable groups, affected communities, and community representatives, presented at the village level. The ESIA presents the results of a SSES, which created	<b>Partial Compliance</b>	Operator interview 20.11.14 ESIA s.8 SEP
	27	Develop and implement a SEP tailored to the characteristics and interests of the Affected Communities. Include differentiated measures to allow effective participation of those identified as disadvantaged or vulnerable. Where the process depends on community representatives, verify that			



PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
	28	<p>they represent the community views and can be relied on to communicate results to constituents.</p> <p>Where the project location is not known, prepare a stakeholder engagement framework including general principles and strategy to:</p> <ul style="list-style-type: none"> <li>· identify Affected Communities and other stakeholders; and</li> <li>· plan for an engagement process.</li> </ul>	<p>a baseline from which to measure Project impacts and benefits.</p> <p>A SEP has been provided but does not present engagement tailored to each of the affected communities including any vulnerable people within those communities. The SEP presents a strong focus of engagement with and reporting to Government rather than community and community representatives. Evidence was unavailable of efforts engage with affected communities around third party sites, including arrangements/coordination efforts with the third party operators of those sites.</p>		
Disclosure of information	29	Disclose information on the purpose, nature, scale of the project, duration of activities, risks and impacts on communities , the envisaged stakeholder engagement process and grievance mechanism.	<p>A Public Consultation and Disclosure Plan was prepared for the SD2 Project but is unverified by the IESC. It is reported to detail the process through which stakeholders were identified and consulted, roles and responsibilities of the ESIA consultants and BP, and the grievance process for ESIA disclosure. Additionally it is reported to document the disclosure steps that were taken and high level issues that were raised during the consultation process (s.8.3.4).</p> <p>The Draft ESIA report was submitted to authorities and released for public comment. Draft ESIA consultation included public meetings in 3 neighbouring villages during October 2011.</p> <p>Comments received on the Draft ESIA report were collated, analysed and responses issued where relevant. The ESIA was then finalised for MENR approval.</p> <p>However, MPs (including the SEP) do not appear to have been disclosed with the ESIA, which is a critical non-compliance with the performance standards and the intent for disclosure to communities of the activities to be undertaken to mitigate and manage those potential impacts that will affect them. Further, as the SEP is not disclosed it is not clear that affected</p>	<b>Non Compliance</b>	ESIA s.8.3.4 SEP

PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
			communities are aware of the Operator's expectations on ongoing engagement, monitoring and reporting (e.g. that technical meetings can be held by request, or how to access the grievance mechanism).		
Consultation	30	<p>Undertake a consultation process that provides Affected Communities with opportunities to express their views on project risks, impacts and mitigation measures. The client will consider and respond to these. Ensure the consultation is a two-way process that:</p> <ul style="list-style-type: none"> <li>· commences early in the assessment process and continues on an ongoing basis;</li> <li>· is based on prior disclosure and dissemination of relevant, transparent, objective, meaningful and easily accessible information which is in a culturally appropriate local language(s) and format and is understandable to Affected Communities;</li> <li>· is inclusive for those directly affected;</li> <li>· is free of external manipulation, interference or coercion and intimidation;</li> <li>· enables meaningful participation; and</li> <li>· is documented.</li> </ul>	<p>ESIA consultation included initial scoping with government agencies. EIW scoping also included internal stakeholders (EIW ESIA s.8.3.4). For both SD2 and EIW ESIA's, two scoping phase workshops were held in Baku then the SSES undertaken in the ST area by socioeconomic experts.</p> <p>Final consultation occurred with draft ESIA release (60 days of public disclosure in Baku, at site, and in Sangachal and Umid villages).</p> <p>BP reported that they may complete a close out survey/report back to affected communities following the SSES.</p> <p>It is not evident that efforts were made to consult with those communities who may be impacted by associated facilities (construction yards, waste facility), or whether third parties in cooperation with BP to achieve this purpose carried out any consultation or if any such consultation is documented.</p>	<b>Partial Compliance</b>	ESIA s.8 Operator interviews 20.11.14 SEP SSES
Informed consultation and participation (ICP)	31	<p>Conduct an Informed Consultation and Participation (ICP) process for projects that may have significant adverse impacts. ICP involves a more in-depth exchange of views and information, and an organised and iterative consultation, leading to the incorporation of Affected Communities views into the project decision-making process. The ICP process should:</p> <ul style="list-style-type: none"> <li>· capture both men's and women's views, separately if necessary;</li> <li>· reflect men's and women's differing concerns and priorities about impacts, mitigation</li> <li>· mechanisms, and benefits;</li> </ul>	<p>If affected communities experience no significant adverse impacts due to associated facilities, and evidence of ongoing engagement gaps can be verified, this expansion is not likely to trigger an ICP process.</p>	<b>Demonstrates Compliance</b>	ESIA s.1.2

PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
		<ul style="list-style-type: none"> <li>· be documented, particularly measures taken to avoid or minimise risks and impacts; and</li> <li>· inform those affected how their concerns have been considered.</li> </ul>			
Indigenous peoples	32	Conduct an ICP process for projects that may have adverse impacts to Indigenous Peoples. In certain circumstances the client may be required to obtain their free, prior and informed consent (FPIC) (refer PS 7).	IFC definition for 'Indigenous peoples' is not likely triggered for this Project.	<b>Demonstrates Compliance</b>	ESIA s.7.5
Private sector responsibilities under government-led stakeholder engagement	33	When stakeholder engagement is the responsibility of the host Government: <ul style="list-style-type: none"> <li>· collaborate with the responsible agencies (to the extent permitted) to achieve outcomes consistent with the objectives of this PS.</li> <li>· play an active role in engagement planning, implementation planning and monitoring (if Government capacity is limited).</li> <li>· conduct a complementary process when the Government-led process does not meet the relevant requirements of this PS.</li> </ul>	Documentation to demonstrate BP engagement with SOCAR for the purposes of determining responsibilities for and implementing disclosure, consultation and stakeholder engagement activities with those potentially impacted communities near the construction yards (associated facilities) was not sighted by IESC. Table 10.1 (ESIA SD2) shows construction yards and upgrade works were scoped out of the ESIA, although the ATA yard was extended beyond the existing footprint. ATA yard summary information and ES MMP demonstrated that this party was not required by BP to develop a SEP due to anticipated limited community contact at the site (rather than due to any capacity limitations). Refer to earlier comments regarding third party contract controls.	<b>Demonstrates Compliance</b>	ESIA s.7.11 ESIA Table 10.1 SEP
External communications	34	Implement and maintain a procedure for external communication including methods to: <ul style="list-style-type: none"> <li>· receive and register communications from the public;</li> <li>· screen and assess issue raised and how to address them;</li> <li>· provide, track and document responses;</li> <li>· adjust the management program;</li> <li>· Make public periodic reports on E&amp;S sustainability.</li> </ul>	The ESIA describes the register of issues raised through the consultation process but does not specifically describe the screening and assessment process undertaken to address these, or track and document these issues raised, and adjust the management program accordingly. However, reporting is described in the SEP as on Project completion, but annual sustainability reporting is undertaken at AGT regional level for external communication.	<b>Partial Compliance</b>	ESIA s.8.3.4 SEP
Grievance mechanisms	35	Establish a grievance mechanism to receive and facilitate resolution of Affected Communities concerns about the project's environmental and	The ESIA (Table 14.1) states the Community Engagement and Nuisance MMP includes community grievance process. A grievance mechanism is in place	<b>Partial Compliance</b>	ESIA Table 14.1 Operator

PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
		social performance. Concerns will be addressed promptly, using an understandable and transparent consultative process that is culturally appropriate and readily accessible at no cost and without retribution. It will not impede access to judicial or administrative remedies. Communities will be informed about the mechanism as part of the stakeholder engagement process.	and the grievance log (not procedure) was verified by the IESC. Environmental monitoring data is shared with communities through CLOs when related to grievances. Regarding ongoing stakeholder engagement processes, the ST construction contractor TKAZ also has a SE and grievance process (independent of the BP process). Coordination is through two interface meetings annually. The four nearby villages have their own meeting with TKAZ who also undertakes self-verification of their SE and grievance process, with BP oversight and annual audit. Documentation on implementation and resolution of grievances was not sighted or verified with any complainants by the IESC but it appears that the intent of the Performance Standard is being met.		interviews 20.11.14 SEP
Ongoing reporting to Affected Communities	36	Provide periodic reports (not less than annually) to Affected Communities that describe progress with implementation of project Action Plans on issues of ongoing risk or impact on Communities and on issues that are of concern to Affected Communities. Communicate material changes or additions to mitigation measures or actions described in the Action Plans to Affected Communities not less than annually.	Mechanisms for reporting back to communities on implementation of Action Plans (ESMPs) are presented by topic. For example, nuisance monitoring data is reported back to communities every six months during the construction phase. Annual reports are not specific to the Affected Communities or the ongoing impacts and risk management in the Project area of influence but material changes are reported through this process. BP Group's recommended stakeholder engagement practice is described in the SEP, and this is broadly consistent with the intent of the performance standards. However the appendix describing any non-conformance of the AGT region with the BP Group recommended practice was not available for IESC review.	<b>Partial Compliance</b>	BP in Azerbaijan - Sustainability Report 2013 Operator interviews 20.11.14 SEP

### **6.3 PERFORMANCE STANDARD 2 – LABOUR AND WORKING CONDITIONS**

This section provides comment on the Project's proposed labour management activities. Compliance was evaluated based on the relevant sections of IFC's PS2, *Labour and Working Conditions*.

#### **6.3.1 Working Conditions and Management of Worker Relationships**

The IESC received information specifying that the SD2 construction contract clauses have been developed to align with and exceed the SD2 ESIA commitments relating to Employee Relationship Management Plans (ERMP) and workforce welfare and training. The Operator provided information indicating that contractor requirements include provision for:

- PPE minimum requirements;
- Site amenities provision according to use ratios;
- Grievance mechanism in place by the contractor with BP oversight;
- Potable water and catering specifications;
- ERMP;
- Medical services and pre-employment screening;
- Self-verification requirements by the contractor;
- Human resource and employee relationship management metrics reporting; and
- De-manning communications requirements.

Contracts are required to include:

- PPE minimum requirements;
- Site amenities provision according to use ratios;
- Grievance mechanism in place by the contractor with BP oversight;
- Potable water and catering specifications;
- ERMP;
- Medical services and pre-employment screening;
- Self-verification requirements by the contractor;
- Human resource and employee relationship management metrics reporting; and
- De-manning communications requirements.

Additionally, contractors are required to develop a Training Plan, Nationalisation Plan, and individual Development Plans for staff.

Monthly metrics reporting to BP is required.

Conformance is achieved through a three-stage process: Self-verification, Oversight, and Assurance. A Code of Conduct is in place, and the Employee Relations MP outlines requirements for contractors.

Human Resource Policies and Procedures are reported to be in place and a Project Code of Conduct is in place (interviews with Operator, 20.11.14). Information on Employee Relationship management and an Employee Relationship MP were provided for IESC review. All human resources activities are carried out in accordance with national legislation. While the construction contracts themselves were not reviewed the content appears to be

consistent with the intent of the PS'. The Operator described that these requirements are the responsibility of contractors to communicate to their employees. The Employee Relations MP outlines requirements for contractors including (s.12.3.2):

- Project labour arrangements including the need to recruit new labour and potential sources of new workers;
- How the contractor will comply with the national requirements of Azerbaijan labour law;
- Details of a grievance mechanism that is available for use by the workforce;
- Training and development activities in the form of a Training Plan;
- Demobilisation and de-manning;
- A nationalisation programme;
- Cultural awareness and language familiarisation; and
- Statistical reporting and monitoring.

Further, BP has a Labour Management Committee, which monitors labour management performance of all Contractors and potential industrial relations / employee relations issues, develops plans to mitigate risks, provides guidance and direction to contractors' management, ensures alignment, reviews external trends / environment. Additionally BP uses a Labour Management Forum (LMF) to ensure policies and procedures are met. The LMF provides:

- A regular review of labour management performance and identify any trends;
- A review of work plans within the site for the next three to six months, discussing labour requirements and potential risks for labour management;
- Review the actions taken to mitigate the identified risks;
- Monitor the implementation of community development programme activities; and
- Discuss the results of statistical monitoring and the content of reports that have been submitted to BP.

Through the self-monitoring and verification process, BP ensures these requirements are met, although the IESC was not able to verify documentation that this is being achieved (i.e. on non-OHS verification). No ATA staff are members of a union (ESIA s.7.34), however all employees are free to join or form a union / workers' organisation (Operator interview 20.11.14). Additionally, contractors have a role to ensure that there are no barriers to legitimate freedom of association through trade union membership or collective bargaining (Employee Relations Management Plan, s.4.2).

Specific conditions in relation to migrant / foreign workers are not known, other than that a large portion of the current construction workforce (while BP aims for workforce nationalisation) is Turkish (Operator interview, 20.11.14).

Arrangement for worker accommodation is stated in the Project Description (5/25) that construction camp accommodation facilities will be built. Further, the Sangachal construction camp will be used for contractor expat workers (including accommodation and worker services), where camp habitation is planned for late 2Q/3Q 2015. The camp is isolated from local communities and is fenced to control access and exit to minimise interaction with nearby communities and so minimise potential impacts to communities.

However, the construction workforce for the ATA yard is not addressed. From the site visit it appears that accommodation is satisfactory (site visit 20.11.14).

Documentation does not provide sufficient evidence that specifically includes provision for non-discrimination and equal opportunity practices within the workforce. The Employee Relations MP requires that BP and its contractors comply with the rule of law but does not have provisions for implementation. While the ESIA does not make any provisions for gender equality issues - especially in relation to the Project workforce – all national legislation requirements must be met, including equal opportunity. Gender equality issues are discussed in the baseline study, however it is not clear how these issues are addressed from a management perspective with respect to non-discrimination in the workforce.

It is anticipated that retrenchment of large numbers of the construction workforce will occur (see s.12.3.3, 5.15). A de-manning plan is stipulated in the Employee Relations MP and BP has indicated that any demobilisation of the personnel will be conducted in strict compliance with applicable local legislation. Further, BP is to be satisfied that the contractor is undertaking planning/communication processes, with the contractor keeping BP informed on methods it has in place for carrying out each phase of demobilisation, and in line with historical management of project demobilisations through a consistent and fair approach to employees.

### **6.3.2 Protecting the Workforce**

#### **6.3.2.1 Child and Forced Labour**

The PS, through the ILO Convention on the Worst Forms of Child Labour, restricts the work of children under the age of 18 years, or only by subject to an appropriate risk assessment. Further, the Performance Standard prevents employment of forced labor, which consists of any work or service not voluntarily performed that is exacted from an individual under threat of force or penalty.

The ESIA does not specifically refer to employment of children / age of potential employees, or to the use of forced labour. However, the ERMP specifically requires that any breaches of employment policy (such as engagement of child or forced labour) are to be reported to BP and relevant authorities. The IESC notes that while Azerbaijani law enables employment of 16 year olds, BP policy is to employ only persons aged 18 years and over and non-forced labour. Contractors are also required through a certified Code of Conduct to employ only persons over the age of 18 years and only voluntary/non-compulsory labour.

### **6.3.3 Occupational Health and Safety**

The Project identified health and safety risks during the early select phase through the Inherently Safer Design (ISD) Workshop for Selected Offshore Concept (16/6/2010;BP-SMZXXX-SA-REP-0020RevD1). The document describes the process for elimination and mitigation of safety risks through design selection, and the implementation of the Project's Design Hazard Management Strategy. The intent of the ISD process is to eliminate hazards completely or reduce the magnitude sufficiently to eliminate the need for elaborate safety systems and procedures. The ISD workshop outcomes reviewed by the IESC included the SDB-PR Platform, the SDB-QU Platform and the Subsea facilities. The majority of safer design outcomes from the workshop were regarding platform configuration and equipment minimisation to reduce risk associated with fire and explosions and fires.

The SD2 Offshore Process Safety Plan for Select and Define (BP-SMZXXX-SA-PLN-0003REVD5; October 2010) details how the process safety strategy will be implemented for SD2; defines the timing of safety and loss prevention activities for each Project stage for integration with engineering schedule; details the Project safety engineering frameworks; and. defines key roles and interface management. The plan aims to ensure an integrated hazard management approach is implemented in facility design, construction/installation planning, and development of an operating strategy to achieve optimum protection of personnel.

SD2 Process Safety Strategy provides the basis for compliance with The PSA and Azeri legislation; BP AGT Region HSSE Policy; BP's management standards and procedures.

The Hazard management approach is defined as follows:

- Identify and evaluate major accident hazards;
- Establish an inherent safer design;
- Identify, evaluate and implement risk reduction measures;
- Identify safety critical design measures and specify the performance requirements; and
- Verify the performance requirements.

The SD2 HSE Plan (13/05/2014) describes the Project construction phase management of occupational health, industrial hygiene, safety, legal and regulatory compliance as well as environment and social responsibility. The document specifies the key occupational health and safety requirements for Project delivery teams, including contractors. The scope of the plan includes the establishment of minimum safety standards for all SD2 Project activities and specifies responsibilities of individuals to apply the relevant standards to the various work activities. The HSE Plan provides a framework for prescriptive procedures and work instructions to be developed to ensure occupational health and safety standards are complied with for the wide range of activities undertaken during the SD2 Project construction. Project SD2 Programme HSSE MP (BP-SFZZZ-HS-PLN-0004) (30/03/11) provides an overarching HSSE Strategy at an early planning phase for the Project and includes the key integration of HSSE goals and BP Group Standards on Control of Work, for safety at work, and Integrity Management which focuses on total lifecycle integrity of plant.

Identification of hazards to workers has occurred through a number of BP GPO defined mandatory processes which include Concept Selection for Inherently Safer Design (ETP-GP-24-03), HSSE Review of Projects (ETPGP-4801), Major Accident Risk Process (ETP-GP 48-02); Assessment Prioritisation and Management of Risk.

The Onshore Process Safety Plan (20/11/2010) BP-SMOAZZ-SA-PLN-0001-D3 Describes how the process strategy for the BP AGT Region is implemented for the SD2 onshore facilities. The safety design philosophy follows the design concepts applied on SD1, but incorporating lessons learned. The inputs to the Project Process Safety Plan include BP major project process safety technical integrity requirements, BP AGT processes and Project-specific processes (e.g. permit to work, site procedures, engineering documents register).

The SD2 Risk management process is described as a continuous, forward looking process that addresses issues that could impact critical Project execution objectives, and includes early risk identification through the collaboration and involvement of relevant stakeholders. Each delivery area is considered to be a major project in its own right within the SD2 Programme portfolio. In the risk management process, the delivery area Managers are accountable for identifying and managing both Safety and Operational Risk and Strategic & Commercial and Compliance & Control risks for the sub-project scope, and the SD2 Project Integration Manager is responsible for coordinating risk management activities. The Risk process follows a standard flow of: Identification - Assessment, Response, Monitoring, Learning and Closure. There is an overall risk lead and defined Role and Responsibilities both centrally (across the Project) and within the specific Delivery and Functional Teams. There is an issue Risk MP that is periodically updated and a management tool used (PMCS - Project Management Control System). This tool allows for risks to be tracked, ranked, reported and managed. It links the mitigating actions with the risks and clearly defines accountable person(s), target closure dates and how the risks are progressively mitigated. The level of governance and endorsement for different risk categories is also defined and is in line with the wider BP GPO organisation.

Outcomes of discussions with SD2 Project HSE management in Baku on 20 November 2014 provided evidence of the HSE management structure in place and the current HSE performance for the construction phase. The SD2 HSSE Policy has been developed and includes a commitment to safety and outlines the obligations of individual to stop any unsafe work. The Policy includes commitments for risk reduction, compliance with legislation, and

other standards including the ESIA commitments. Contractors are held accountable to the SD-2 Project HSSE Policy and all Project personnel have an obligation to report incidents, including near miss events. The SD2 Project currently has a Recordable Injury Frequency rate of 0.04 (per 200,000 hrs). For the 2014 period up to 30 September, the Project has recorded 2 lost time injuries, 2 recordable injuries, 21 first aid treatments and 42 safety near misses. This data excludes offshore drilling. The two lost time injuries refer to a single fabrication accident that occurred at the ATA shipyard in July 2014.

HSE Incident reporting and the management of corrective and preventative actions occurs within the SD2 operational management systems. The IESC observed evidence of incident reporting and initial investigations relating to a vessel anchor drop incident.

Safety competency standards and minimum HSE training requirements are established through the operational management system and include minimum requirements for contractors. Completion of training is a measured HSE performance requirement and is monitored by the Operator. Monitoring of contractor HSE performance occurs through the BP Monthly Self-verification process which requires the contractor to self-assess against an established checklist of required HSE outcomes. The BP Site Safety Leader provides oversight of the self-assessment through validation using checks and audits. Examples of self-assessment forms completed were reviewed by the IESC and include the use of protective equipment, completion of workplace inspections, hazard warnings, permit to work, safety training requirements, contractor safety controls and competency and qualifications of personnel (evidence included example HSSE self-verification checklists for M&S Vessel Upgrades and Saipem contractor). Examples of BP oversight of the self-verification process were also observed by the IESC. The use of internal audits also provides HSSE oversight of all SD2 activities, including contractors. A review of the internal audit report for an onshore contractor against the onshore transport management system was conducted to verify conformance to contract requirements and implementation of the contractor's transport plan. The internal audit included verification of competency, equipment and identification of corrective actions.

Management of emergencies which may impact worker health and safety is managed for the SD2 Project through BP' Crisis management and Emergency Response framework which includes an established response mechanism, site response teams, country based incident management team and regional business support team and an executive support team based in London. BP has a Baku emergency response team consisting of 120 personnel and mutual operating plan on management of emergency situations between the BP AGT Region and the Azerbaijani Ministry of Emergency Situations.

The SD2 Project has identified potential emergency scenarios that may impact on health, safety, the environment and communities. The ESIA includes identification, evaluation and mitigation / management of accident events. Emergency response plans are developed for significant scenarios and training drills are undertaken on a regular basis to ensure operational readiness and familiarity with emergency response requirements. The SD2 Project undertakes 20 emergency response exercise drill per year, of these 2 to 3 exercises involve external and government emergency response providers in addition to the BP-AGT emergency team. The offshore delivery units undertake 6-7 emergency response exercises annually. Each work site undertakes a weekly site muster and evacuation drill. Records of emergency response drills, exercise reports and debrief reports were reviewed by the IESC.

#### **6.3.4 Workers Engaged by Third Parties**

The PS requires projects to take commercially reasonable efforts to ensure third party employers are reputable and legitimate and have an appropriate ESMS to enable them to operate in accordance with the Performance Standards.

A contractor self-verification and BP audit process is in place by BP to ensure third parties have an ESMS that complies with BP's requirements. BP's Global Operations Office (GOO) is responsible for: subcontractor

management; audits and inspections. At this Project phase, the GPO is responsible for oversight of the self-verification process of construction contractors, while the AGT Federal team looks at overall assurance processes.

The Operator reported that an auditing arrangement is in place by BP of its contractors, which is then reported up through the company's management system.

The Employee Relations MP requires a self-verification system in place for monitoring the performance of its contractors (as evidenced by the IESC in interviews and the Employee Relations MP), a review by BP after 30 days of mobilisation, and periodic (6 monthly) audits by the Operator. Labour Management Forums and the Labour Management Committee are the regular, group forum through which the Operator manages and monitors contractor performance.

The Employee Relations MP provides for the establishment of grievance processes by contractors / subcontractors, including procedures required by the Operator, circumstances under which the Operator is required to be notified about grievances and industrial disputes, and stop work meetings. The MP provides for Labour Management Committees as the forum for ensuring consistency in application across the Project, including in grievance management/process.

### **6.3.5 Supply Chain**

Where there is a high risk of child or forced labour in the primary supply chain, as identified through the impact identification and assessment process, the project is required to take appropriate steps to remedy them.

While BP applies its code of conduct to contractors, the Operator described in interviews that suppliers in the contracting process are screened to ensure no child or forced labour is engaged, however documentation was not sighted to verify this. While Azerbaijan allows for 16 year old employment, the risk is considered low as BP is taking additional steps to secure its supply chain. The Operator reported on the program for supplier development, which included BP policy and code of conduct awareness for companies in the supply chain. The ESIA (s.13.6.2.5) describes BP's efforts to develop the supply chain. BP also supports the development of local suppliers through training and financing programmes, building skills and sharing BP's internal standards and practices as appropriate. Such activities enable a greater number of local businesses to participate in their supply chain and in a manner that is compliant with child/forced labour requirements.

**Table 6.3 Compliance Evaluation – Labour and Working Conditions**

PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
<b>PS 2: Labour and Working Conditions</b>					
<b>Working Conditions and Management of Worker Relationships</b>					
Human Resource Policies and Procedures	8	Adopt and implement appropriate human resource policies and procedures that set out the approach to managing workers in line with national law and PS2.	Information on Employee Relationship management and an Employee Relationship MP were provided for IESC review. All human resources activities are carried out in accordance with national legislation. While the construction contracts themselves were not reviewed the content appears to be consistent with the intent of the performance standards. The Operator described that these requirements are the responsibility of contractors to communicate to their employees. Contracts are required to include: <ul style="list-style-type: none"> <li>· PPE minimum requirements;</li> <li>· Site amenities provision according to use ratios;</li> <li>· Grievance mechanism in place by the contractor with BP oversight;</li> <li>· Potable water and catering specifications;</li> <li>· ERMP;</li> <li>· Medical services and pre-employment screening;</li> <li>· Self-verification requirements by the contractor;</li> <li>· Human resource and employee relationship management metrics reporting; and,</li> <li>· De-manning communications requirements.</li> </ul> Additionally, contractors are required to develop a Training Plan, and Nationalisation Plan, and individual Development Plans for staff. Monthly metrics reporting is required to BP. Conformance is achieved through a three-stage process: Self-verification, Oversight, and Assurance. A Code of Conduct is in place -The Employee Relations MP outlines requirements for contractors.	<b>Demonstrates Compliance</b>	Employee Relations MP; ESIA; Interviews Employee Relationship management slide pack.
	9	Provide workers with clear and understandable, documented information regarding their rights under national labour and employment law and any applicable collective agreements including rights related to: hours of work, wages, overtime, compensation, benefits upon beginning the working relationship, and when any material changes occur.			
Working conditions and terms of employment	10	Respect collective bargaining agreements with workers' organisations. Provide reasonable working conditions and terms of employment where collective bargaining agreements do not exist, or do no	No ATA staff are members of a union (ESIA s.7.34) but all Employees are free to join or form a union / workers' organisation (Operator interview 20.11.14). Additionally, contractors have a role to ensure that there are no barriers to legitimate freedom of association through	<b>Demonstrates Compliance</b>	Employee Relations MP; ESIA; Interviews.

PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
		address working conditions and terms of employment.	trade union membership or collective bargaining (ERMP, s.4.2).		
	11	Ensure migrant workers are identified and engaged on substantially equivalent terms and conditions to non-migrant workers carrying out similar work.	Specific conditions with migrant workers are not known to IESC, other than that a large portion of the current construction workforce (while BP aims for workforce nationalisation) is Turkish (Operator interview, 20.11.14). However, the Operator has provided details of the contractor requirements (see above) which includes ERMP by each contractor on working conditions and employment terms.		
	12	Where accommodation services are provided to workers: Implement policies on quality and management of accommodation and provision of basic services. Provide services consistent with principles of non-discrimination and equal opportunity. Allow workers' freedom of movement or association.	<p>Arrangements for worker accommodation are specified in the ESIA; the Project Description (5/25) that construction camp accommodation facilities will be built. Further,</p> <ul style="list-style-type: none"> <li>· The Sangachal construction camp will be used for contractor expat workers.</li> <li>· The camp construction is not completed – camp habitation is planned for late 2Q/3Q 2015.</li> <li>· The camp is isolated from local communities, it is situated within a secure fenced site with control of access/exit.</li> <li>· The access road to the camp and site does not travel through any of the nearby communities.</li> <li>· Residents of the camp will be reliant on contractor provide vehicles for ingress/egress which will control opportunities for interaction with the nearby communities.</li> <li>· TKAZ are aligned with BP's expectation that camp residents will not interact with the nearby communities.</li> <li>· The TKAZ's procedures relating to camp management are being further updated to support completion and habitation of the camp.</li> </ul> <p>All accommodation is provided within the Project fence line for TKAZ construction workforce, in accordance with the provisions listed on site amenities, services, etc. However, construction workforce for the ATA yard is not addressed.</p> <p>From the site visit it appears that accommodation is satisfactory on site (site visit 20.11.14). Workers freedom of movement is restricted to site during</p>	<b>Demonstrates Compliance</b>	Employee Relations MP; ESIA; Interviews; Camp Management summary slide pack.

PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
			shifts (see also PS4 on community safety).		
Workers' organisations	13	Allow workers to develop alternative mechanisms to express their grievances and protect their rights regarding working conditions and terms of employment.	Employees are free to join or form a union / workers' organisation (Operator interview 20.11.14) and BP's code of conduct specifies: 'We will seek to work in good faith with trades unions and other bodies that our employees collectively choose to represent them within the appropriate legal framework.	<b>Demonstrates Compliance</b>	Employee Relations MP; ESIA; Interviews.
	14	Do not discourage, discriminate or retaliate against workers from electing worker representatives, forming or joining workers organisations, and from collective bargaining. Engage with workers' representatives and workers' organisations and provide information needed for negotiation in a timely manner.			
Non-discrimination and Equal Opportunities	15	Adopt the principles of equal opportunity and fair treatment with respect to employment relationship. Take measures to prevent harassment, intimidation and exploitation especially against women. Apply principles of non-discrimination to migrant workers.	The Employee Relations MP requires that BP and its contractors comply with the rule of law, which includes that on non-discrimination. The ESIA does not make any specific provisions for gender equality issues - especially in relation to the Project workforce or measures to implement the national legal requirements. Gender equality issues are discussed in the baseline study, however it is not clear how these issues are addressed from a management perspective with respect to non-discrimination in the workforce.	<b>Demonstrates Compliance</b>	Employee Relations MP; ESIA; Interviews.
	16	Comply with national law that requires non-discrimination or if law silent then comply with PS2.			
	17	Measures to remedy past discrimination or selection are not be deemed as discrimination, if consistent with national law.			
Retrenchment	18	Analyse alternatives to retrenchment, prior to implementing collective dismissals. Where retrenchment is unavoidable, develop and implement a retrenchment plan to reduce the impacts of retrenchment on workers. Base the retrenchment plan on the principle of non-discrimination, consultation undertaken with affected parties (workers,	It is anticipated that retrenchment of large numbers of the construction workforce will occur. A de-manning plan is stipulated in the Employee Relations MP. BP has indicated that any demobilisation of the personnel will be conducted in strict compliance with applicable local legislation. Further, BP is to be satisfied that the Contractor is undertaking planning/communication processes, with the Contractor keeping BP informed on methods it has in place for carrying	<b>Partial Compliance</b>	Employee Relations MP; ESIA; Interviews Employee Relationship management slide pack.

PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
	19	organisations and government) and legal, contractual and collective bargaining requirements. Provide workers with notice of dismissal and severance payments in a timely manner. Pay outstanding pay, benefits and contributions on or before termination, for the benefit of the worker or in accordance with a collective agreement. Provide evidence of such payments to the workers.	out each phase of demobilisation. The construction contractors and BP have historically managed project demobilisations through consistent and fair approach to employees. Demobilisation under SD2 Projects is not expected to start before late 2016.		
Grievance Mechanism	20	Provide a grievance mechanism for workers to raise workplace concerns. Inform workers of the grievance mechanism when recruited and make it easily accessible. Address concerns promptly using a transparent process that provides timely feedback, without retribution. It will not impede access to judicial or administrative remedies.	The ESIA describes grievance handling and the site audit confirmed it is in place and being implemented. The Employee Relations MP also requires that a grievance process be implemented for contractors. The Employee Relationship MP required of each contractor also includes a grievance mechanism.	<b>Demonstrates Compliance</b>	Employee Relations MP; ESIA; Interviews.
<b>Protecting the work force</b>					
Child labour	21	Children will not be employed in a manner that is economically exploitative, hazardous, interferes with their education, or harmful to health or their physical, mental, spiritual, moral or social development. Comply with national laws. Under 18s will not be employed in hazardous work. Identify persons under the age of 18 and undertake an appropriate risk assessment and regular monitoring of health, working conditions and hours of work.	The ESIA does not specifically refer to employment of children / age of potential employees, or to the use of forced labour. However, the ERMP specifically requires that any breaches of employment policy such as child or forced labour are to be reported to BP and relevant authorities. The IESC notes that while Azerbaijani law enables employment of 16 year olds, BP policy is to employ only persons aged 18 years and over and non-forced labour. Contractors are also required through a certified Code of Conduct to employ only persons over the age of 18 years and only voluntary/non-compulsory labour.	<b>Demonstrates Compliance</b>	Operator interview 20/11/14 (Community Development team) Employee Relations MP
Forced labour	22	Forced labour will not be employed, whether involuntary or compulsory. Do not employ trafficked persons.			
<b>Occupational Health and Safety</b>					
	23	Provide a safe and healthy work environment that takes account of inherent risks and	Project Safety Design process is in place for elimination and mitigation of safety risks through design selection, and the	<b>Demonstrates Compliance</b>	ISD Workshop for



PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
		<p>hazards and threats to women. Minimise the cause of hazards (as far as practicable) to prevent accidents, injury and disease. In line with GIIP, including WBG EHS Guidelines, address areas including:</p> <ul style="list-style-type: none"> <li>· identification of potential hazards to workers (especially life threatening);</li> <li>· provision of protective and preventive measures (modification; substitution/elimination of hazardous conditions or substances);</li> <li>· training of workers;</li> <li>· documentation and reporting of accidents, diseases and incidents; and</li> <li>· emergency prevention, preparedness and response arrangements.</li> </ul>	<p>implementation of the Project's Design Hazard Management Strategy. The process is aimed to eliminate hazards completely or reduce the magnitude sufficiently to eliminate the need for elaborate safety systems and procedures. The Project Process Safety Strategy for SD2 defines the timing of safety and loss prevention activities for each Project stage for integration with engineering schedule; details the Project safety engineering frameworks; defines key roles and interface management. The plan aims to ensure an integrated hazard management approach is implemented in facility design, construction/installation planning, and development of an operating strategy to achieve optimum protection of personnel.</p> <p>SD2 Process Safety Strategy provides the basis for compliance with The PSA and Azeri legislation; BP AGT Region HSSE Policy; BP's management standards and procedures which are generally aligned with the WBG EHS Guidelines. The SD2 HSSE Policy has been developed and includes a commitment to safety and outlines the obligations of individual to stop any unsafe work. The Policy includes commitments for risk reduction, compliance with legislation, and other standards including the ESIA commitments. Contractors are held accountable to the SD2 Project HSSE Policy and all Project personnel have an obligation to report incidents, including near miss events.</p> <p>HSE incident reporting and the management of corrective and preventative actions occurs within the SD2 operational management systems. The IESC observed evidence of incident reporting and initial investigations relating to a vessel anchor drop incident.</p> <p>Safety competency standards and minimum HSE training requirements are established through the operational management system and include minimum requirements for contractors. Completion of training is a measured HSE performance requirement and is monitored by the Operator. Monitoring of contractor HSE performance occurs through</p>		<p>Selected Offshore Concept (16/6/2010); SD2 Offshore Process Safety Plan for Select and Define; Shah Deniz Stage 2 Project SD2 Programme HSSE MP. SD2 Program HSE Plan – Delivery Stage. Interviews with HSE personnel and review of safety performance data and incident reports.</p>

PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
			the BP Monthly Self-verification process which requires the contractor to self-assess against an established checklist of required HSE outcomes.		
<b>Workers Engaged by Third Parties</b>					
	24	Take commercially reasonable efforts to ensure third party employers are reputable and legitimate and have an appropriate ESMS to allow them to operate in accordance with the requirements of this PS (except paragraphs 18-19 and 27-29).	Self-verification process in place by BP to ensure third parties have an ESMS that complies with BP's requirements. GOO is responsible for: subcontractor management; audits and inspections. At this Project phase, GPO is responsible for oversight of the self-verification process of construction contractors, while the AGT Federal team looks at overall assurance processes.	<b>Demonstrates Compliance</b>	Interview: Mr Amrita De Soyza (GOO)
	25	Establish policies for managing and monitoring the performance of third party employers in accordance with PS2 and where commercially reasonable, incorporate these in contractual agreements.	The Operator reported that an auditing arrangement is in place by BP of its contractors, which is then reported up through the company's management system.	<b>Demonstrates Compliance</b>	Employee relations MP
	26	Ensure that contracted workers have access to a grievance mechanism, either provided by the third party or by the company.	The Employee Relations MP requires a self-verification system in place for monitoring the performance of its contractors (interviews, Employee Relations MP), a review by BP after 30 days of mobilisation, and periodic (6 monthly) audits by the Operator. Labour Management Forums and Labour Management Committee are the forum through which the Operator manages and monitors contractor performance. The Employee Relations MP provides for the establishment of grievance processes by contractors / subcontractors, including procedures required by the Operator, circumstances under which the Operator is required to be notified about grievances and industrial disputes, and stop work meetings. The MP provides for Labour Management Committees as the forum for ensuring consistency in application across the Project, including in grievance management/process.	<b>Demonstrates Compliance</b>	Employee relations MP
<b>Supply Chain</b>					
	27	Monitor the primary supply chain to identify risks and incidents of child and forced labour and take steps to remedy them.	The Operator described in interviews that suppliers in the contracting process are screened to ensure no child or forced labour is used however documentation was not sighted to verify this.	<b>Demonstrates Compliance</b>	BP Azerbaijan Sustainability report 2013
	28	Introduce procedures and measures to			



# SUSTAINABILITY

FUTURE GROWTH

PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
	29	ensure primary suppliers are taking steps to prevent or correct life-threatening situations. Where child/forced labour and significant safety risks cannot be remedied, shift the primary chain to suppliers that can demonstrate compliance with this PS.	Further the Operator reported on the program for supplier development, which included BP policy and code of conduct awareness for companies in the supply chain. ESIA (s.13.6.2.5) describes BP's efforts to develop the supply chain. BP also supports the development of local suppliers through training and financing programmes, building skills and sharing BP's internal standards and practices as appropriate. Such activities enable a greater number of local businesses to participate in their supply chain and in a manner that is compliant with child/forced labour requirements.		Sustainable Development initiatives ESIA s.13.6.2.5

## **6.4 PERFORMANCE STANDARD 3 – RESOURCE EFFICIENCY AND POLLUTION PREVENTION**

This section provides comments on the baseline characterisation and the impact analysis with respect to pollution prevention and abatement measures expected for all Project-related facilities during both construction and operations. The analysis focuses on the adequacy of mitigation measures and pertinent MPs reviewed. In this Section, the attention is focused on the topics included in PS3, Resource Efficiency and Pollution Prevention, while the specific discussion on the Project compliance with IFC EHS General Guidelines is presented in Section 7. The Project's performance against PS3 was assessed against the ESIA commitments and the MPs contained in the following construction specific plans and regional operations manuals and procedures:

- SD2 ESMMP (10/2/2015);
- SD2 Pollution Prevention MPs (17/2/2014);
- SD2 Community Engagement and Nuisance MMP (18/3/2014);
- SD2 Waste Management and Minimisation Plan (10/1/14);
- BP AGT Region Waste Manual (20/10/2013); and
- BP AGT Region; Offshore Operations and Wells Waste Management Procedure (5/09/2014).

### **6.4.1 Resource Efficiency**

The SD2 ESMMP (10/2/2015) provides the overarching Project principles for the application of resource efficiency and pollution prevention principles. These Principles are defined as: identify and understand impacts; consult with others; design and avoid adverse impacts and minimise use of natural resources. The ESMMP includes environmental control strategies designed to reduce waste and conserve natural resources through engineering and procurement environmental design controls and construction and installation controls. The Project has considered technical and financial feasibility of resource efficiency and pollution prevention measures through the design selection phase, as described in the ESIA Chapter 4, based on the applied experience with SD1. The SD2 Project Environmental Basis of Design defines the environmental parameters that form the basis of design for the SD2 Project, and inform the Project engineering specifications and datasheets. Key environmental requirements include: SD2 PSA, Draft SD EPS (not endorsed by MENR) and BP Group Defined Practice. The SD2 Basis of Design for ambient air quality, noise, water quality is consistent with WBG EHS Guidelines, WHO ambient air quality guidelines. Stack heights have applied GIIP as specified in WBG EHS Guidance.

During the SD2 Project select phase, resource efficiency and waste reduction considerations helped to define a subsea field development concept over a multiple platform option whereby the subsea option provides for a reduction in materials required for jacket and topside construction and associated reduction in construction waste, emissions and discharges; and increased opportunity for optimisation of production facilities and utilities resulting in lower waste production.

Resource efficiency measures adopted for flaring for onshore and offshore facilities is consistent with the Global Gas Flaring and Venting Reduction Voluntary Standard (part of the WBG's Global Gas Flaring Reduction Public Private Partnership program) and the WBG sector-specific EHS Guidelines. Onshore Flare Gas Recovery (FGR) will be used on both the high pressure and low-pressure flare systems to minimise hydrocarbon flows to flare stacks under normal operations. There will be no continuous flaring or venting under normal operations. Flare combustion efficiency will be optimised to achieve 98% efficiency, in line with GIIP. FGR was not chosen for offshore facilities due to safe design constraints on the SDB platform.

The Project will preferentially use fuel gas for routine power generation for SDB offshore platform operations and onshore operations where possible. Where fuel gas is not available, the Project will buy back gas from the SD2 32" gas pipeline and will only use diesel fuel for power generation when both these sources are not available.

The use of DEH for management of hydrate formation in the SD2 subsea facilities was chosen as the preferred option over the MEG injection option used for SD1 as this option removes the need for a large onshore MEG plant, minimises offshore chemical inventory and minimises flaring and associated emissions due to faster recovery from shutdowns.

#### 6.4.1.1 [Greenhouse Gases](#)

Key GHG emission reduction considerations during design include the flare reduction measures described above. Further SD2 energy efficient design options include offshore gas compression preferred above onshore compression; offshore flaring chosen over offshore venting; direct drive gas turbines onshore selected in preference to electric drives; and, waste heat recovery for onshore compression gas turbines. The ESIA (Chapter 13) estimates that these efficiency measures have resulted in approximately 103,700 kilo tonnes of CO<sub>2</sub> emissions across the SD PSA period.

The SD2 Project is required to report GHG emissions annually during construction and operations in line with current reporting for the SD and AGC project reports and in accordance with the BP AGT Region HSSE Policies. The SD2 Project has committed to the implementation of GHG monitoring, management and reporting consistent with the procedures already in use on existing ACG Platforms. The publicly available annual report, BP Azerbaijan Sustainability Report 2013, includes the GHG emission data for BP's Caspian offshore operations and the ST.

### 6.4.2 **Pollution Prevention**

The SD2 construction phase Pollution Prevention MP is applicable to the SD2 delivery teams and associated sites and contractors and includes:

- Transport and Installation: Shore base support work, all marine pipeline activities and usage of the dive support vessel, pipelay barge, crane barge, beach pull site construction and demobilisation (Saipem);
- Offshore facilities:
  - Topside fabrication, HUC and start-up (ATA); and
  - Jacket and subsea fabrication (BOS Shelf).
- Onshore facilities: Construction, commissioning and start-up of the SD2 ST facilities and onshore section of the pipeline (TKAZ).

This MP sets out the ESIA compliance requirements and relevant responsibilities associated with pollution prevention and spill prevention and response. It provides a list of the relevant ESIA commitments and who has responsibility for the task(s) required for compliance with the commitment, in line with the tasks and responsibilities assigned within the SD2 Environmental and Social Compliance Registers. Contractor responsibilities are clearly defined and include the requirement to develop a specific Pollution Prevention, Spill Response and Control Plan for BP approval for each delivery package.

**Drilling and completion** activities have been assessed in the SD2 ESIA with impact avoidance and mitigation measures identified based on the drilling experience of earlier SD and ACG field developments. The drilling and completion activities from the MODU and support vessels will include air emissions from generation of power and flaring associated with well tests and clean up flaring; underwater noise and vibration with potential acoustic impacts to marine species (mammals and fish); sub surface and sea floor discharges of water based mud (WBM) and drill cuttings; onshore disposal and re-use of Low Toxicity Mineral Oil Based Muds (LTMOMB); cement discharge to the sea during the cementing of geotechnical holes; Release of control fluids to sea during Blow

Out Preventer (BOP) testing of wells; MODU cooling water uptake and discharge; and, the discharges to the sea of ballast water, treated black water, grey water and deck drainage from the MODUs and support vessels. The waste avoidance and minimisation strategies for drilling and completion are detailed in Section 6.4.2.1 below.

### **NO<sub>x</sub> Emission**

The onshore and offshore components of the Project will generate NO<sub>x</sub> emissions (which comprises nitrous oxide (NO) and nitrogen dioxide (NO<sub>2</sub>)) as the main atmospheric pollutant of concern. The ESIA presents the results of atmospheric modelling of short term (1 hour maximum) and long term (annual average) NO<sub>2</sub> concentrations to assess the contribution of emissions from SD2 in the context of relevant standards (WHO and WBG EHS Guidance) for NO<sub>2</sub> of 40µg/m<sup>3</sup> (annual average) and 200µg/m<sup>3</sup> (1 hour maximum). The emissions from onshore facilities are of greatest concern due to proximity to human settlements. Under routine operating conditions, emissions will arise at the SD2 ST mainly from the main SD2 power generator and the two direct drive export compressors fitted with waste heat recovery units (WHRU), with minor contributions from the pilot flaring. During routine operation, off-gas from the majority of the production vessels and tanks will be sent to the FGR system. Fugitive emissions from fittings and the SD2 condensate tank, which cannot be sent to the FGR system for practical and safety reasons, will be released to the atmosphere. Under non-routine conditions when the WHRU are not available (e.g. during start up and maintenance), the heating requirement for the onshore facilities will be provided by a direct-fired oil heater. In addition to pilot and purge flaring, it is intended to route hydrocarbon gases from the processing facilities to the flare under emergency or non-routine conditions i.e. due to equipment malfunctions, repairs or maintenance.

The highest increase in NO<sub>2</sub> concentrations due to expected Project emissions under routine operations was predicted at the Sangachal township receptor, which is directly downwind of the ST, where NO<sub>2</sub> long term concentrations are expected to increase by 1.8µg/m<sup>3</sup>. This represents an increase of 30% above background concentrations. However the predicted NO<sub>2</sub> concentration including background concentrations (7.8µg/m<sup>3</sup>) remain well below the air quality standard of 40 µg/m<sup>3</sup>.

No breach of the onshore short term NO<sub>2</sub> air quality standards were predicted at the onshore locations in the ST vicinity under non-routine operating conditions. The highest increase in NO<sub>2</sub> concentrations was again predicted at the Sangachal receptor, where NO<sub>2</sub> short-term concentrations are expected to increase by 11µg/m<sup>3</sup> for the fired heater scenario. This represents an increase of 92% above background concentrations however the predicted NO<sub>2</sub> concentration including background concentrations (23µg/m<sup>3</sup>) remain significantly below the air quality standard of 200µg/m<sup>3</sup>.

The ESIA assessed the impacts from air emissions as being moderate negative impacts under routine and non-routine operations due to the predicted decrease in air quality on neighbouring communities. The impacts associated with air emission for onshore operations are considered to have been minimised as far as practicable and necessary.

### **Noise**

The operation of plant and equipment onsite at ST during the SD2 peak construction period, second quarter of 2016, is predicted to result in a (<1dB(A)) increase above the day-time 70dB LA<sub>eq</sub> limit value at the Sangachal settlement. Additional mitigation is proposed by the Operator and will include:

- Completion of contractor work plans which specify how noisy activities will be managed and, through implementation of procedures set out in the relevant Community Engagement and Nuisance MMP, liaise with affected communities advising of noisy activities and the duration of these activities.

Monitoring in potentially construction noise affected communities of Azim Kend, Masiv 3, Umid and Sangachal to identify when noise at these sensitive receptors exceed established limits and implement actions when limits are exceeded, including additional controls such as equipment maintenance, use of alternative equipment or

screening of equipment. The noise modelling undertaken for the planned expansion at ST for SD2 facilities demonstrates that noise limits would be met at all nearby community receptors under routine conditions. Based on the expected frequency and duration of the non-routine flaring scenarios it was predicted that, as a worst case, the noise 45dB(A) limit would be met for at least 99.3% of the year at Azim Kend/Masiv 3 and Sangachal and at least 99.77% of the year at Umid for all years modelled. These predicted noise levels are within the standard applied as the noise limits are achieved for greater than 95% of the modelled period. The ESIA assessed the noise impacts on nearby settlements as moderate negative impacts. The mitigation measures in place to reduce noise emissions are considered to be sufficient and include:

- The SD2 onshore facilities design incorporates basic pipework attenuation to achieve a 10 dB(A) reduction in pipework noise e.g. basic pipework cladding scheme of 50 mm mineral wool plus lightweight cladding;
- Cladding will be provided to onshore pipework associated with inlet and outlet compressors, recycle pipework, turbo expander pipework and pipework associated with major process control valves;
- Where cladding is not practical, inline silencers will be included in the onshore pipework where practical;
- Noise source levels for the onshore inlet and export compressors will be specified as no more than 85dB(A) at 1m from the skid;
- There will be no continuous flaring or venting during routine onshore operations (with the exception of purge/pilot flaring and purging of off gas from the production vessels); and
- Planned or unplanned onshore flaring or venting of hydrocarbons will be minimised where practical without compromising the safety of personnel or the integrity of plant.

The SD2 Community Engagement and Nuisance MMP (18/03/14) has been developed and implemented for the construction phase of the Project to ensure ESIA commitments regarding nuisance impacts to nearby communities, including noise impacts, are complied with and performance is reported against. The Plan includes noise monitoring requirements and the action triggers that are established for the noise monitoring programme. Noise triggers are included in the programme and incorporate measures that require actions to modify construction activities if measured noise trigger levels are exceeded for defined periods. The monitoring programme includes locations at nearby communities, traffic noise, construction plant and the capacity to undertake monitoring in response to noise complaints.

### **Oil Spills**

The minimisation of emissions and discharges discussed above include both routine and non-routine operations for onshore and off-shore facilities. Accidental emissions have been assessed and include events relating to well blow out and condensate release, flow line ruptures, condensate export pipeline rupture and platform diesel spills. The potential impacts of these accidental releases have been modelled to identify environmental and social values that are potential affected. The regional and transboundary impacts of oils spills have been assessed and spill prevention and response actions developed which are commensurate with the identified impacts.

The potential for impacts associated with condensate spills from the SD2 Project considers the physical and chemical characteristics of the condensate. The waxy residue of condensate that would remain at sea for a relatively long time following a spill event would have been depleted in the most potentially toxic chemical compounds that could cause negative effects by chronic exposure. The condensate does not contain significant levels of Polycyclic Aromatic Hydrocarbons (PAHs) that can cause negative effects by chronic exposure. Unlike most crude oils, the condensate does not form stable water-in-oil emulsions that could smother small coastal animals and contaminate the plumage of seabirds. The waxy residue that comes ashore after condensate

releases will be in the form of wax particles, or granules, widely scattered along the shoreline, although there may be localised concentrations. The ecological effects of waxy condensate residue coming ashore are therefore likely to be minimal, certainly much less severe than would be the case for emulsified crude oil coming ashore.

An Oil Spill Response Plan (OSRP) has been developed, which provides guidance and actions to be taken during a hydrocarbon spill incident associated with all SD offshore operations, which include mobile offshore drilling units, platforms, subsea pipelines and marine vessels. It is valid for spills that may occur during the commissioning, operation, and decommissioning of the systems.

BP has contracted an independent oil spill response contractor in Azerbaijan to provide a response to a Tier 2 oil spill incident originating from BP's offshore operations and these resources may be accessed for larger spills in Azerbaijan. BP will also coordinate with local emergency services and government agencies in Azerbaijan, both prior to, and during oil spill incidents, and additional resources are available from the Ministry of Emergency Situations. The OSRP describes how BP will utilise these resources to protect the environment in which it resides.

Onshore and offshore construction spill prevention and management is facilitated through each delivery team preparing a Spill Prevention, Response, Notification and Close-Out Actions Plan that reduces risk of spills and ensures appropriate response resources and capability is in place during the construction period.

Low level historic hydrocarbon soil contamination has been identified within the area of the ST expansion. The source of contamination has not been confirmed but responsibility for management and monitoring is with the Operator. The SD2 Contaminated Land Risk Assessment for the SD2 Onshore Project Construction Phase (25/09/2014) provides an assessment of risk posed by ground contamination during the onshore construction phase of the SD2 Project at ST. The assessment considers risk posed by ground contamination to the construction activities and that to the wider environment from potential remobilisation of existing contamination by the construction works, subject to the adoption of good practice in the design and execution of the works. Risks posed by contamination to off-site human health receptors during the construction phase are assessed as very low. Risks to construction workers are assessed as low to moderate overall, with the principal exposure pathways being dermal contact with hydrocarbon contamination in the wetlands area and inhalation of soil-derived dust. Mitigation measures are recommended that will reduce the risk. Risk to surface water bodies from overland flow of free-phase liquid hydrocarbon or grossly contaminated surface water present in the wetland areas is assessed as moderate. Mitigation measures are recommended that will reduce this risk. Other potential risks to surface water and groundwater bodies from contaminant migration are assessed as low. Overall risks to ecosystems are assessed as low but rises to moderate for grazing livestock, which can readily be mitigated by good site practice to prevent entry. Risks posed by potentially hazardous ground gases are assessed as negligible. Recommendations for monitoring, mitigation and close-out measures relating to land contamination are provided.

### **Strategies for avoidance and reduction of negative effects**

The ESIA Methodology applied for the SD2 Project is provided in Chapter 4. Project alternatives were defined during the early conceptual design of the SD2 Project and were compared on financial, technical design, safety, and environmental and socio-economic criteria. The alternative that represented the best balance with regard to the criteria was taken forward to the subsequent detailed design stage.

In order to identify potential impacts to receptors, an understanding of the existing conditions was established prior to execution of Project activities. A number of environmental and socio-economic surveys were undertaken within the SD Contract Area, along the proposed SD2 pipeline corridor, within Sangachal Bay and in vicinity of the ST to support the preparation of the previous ACG and SD ESIA's. Monitoring has also been undertaken from 2004 as part of the Environmental Monitoring Programme (EMP). Onshore environmental surveys completed in the vicinity of the ST include noise, odour, visual context and light surveys, dust, a contamination survey,

wetland characterisation survey, geotechnical, hydrological and cultural heritage baseline surveys. Meteorological and hydrological data was provided by the Baku State University National Hydro-meteorological Department, and the Institute of Geography at the National Academy of Sciences of the Azerbaijan Republic, respectively.

Data on national and regional socio-economic conditions was obtained from a review of secondary data provided by the State Statistical Committee and Garadagh District Executive Power. Data on local socio-economic conditions was taken from a Stakeholder and Socio- Economic Survey (SSES) completed in 2011 within communities located in the vicinity of the ST (Sangachal Town, Azim Kend, Masiv 3 and Umid). The results of the environmental and socio-economic surveys were used to prepare Chapter 6 Environmental Description and Chapter 7: Socio-Economic Description presented in this ESIA.

The cumulative assessment presented in Chapter 13: Cumulative and Transboundary Impacts and Accidental Events, initially considers the potential for impact interaction and accumulation in terms of the temporal overlap and spatial overlap. The ESIA considered new projects which were proposed or are under construction in the vicinity of the ST. In addition the ESIA considers the potential cumulative impacts (traffic and noise) associated with the planned expansion of the Baku-Salyan Highway along its length to 4 lanes in each direction. Where there is potential for impact interaction, the Project is sufficiently defined and sufficient data is available, a quantitative assessment is undertaken. Where insufficient data is available a qualitative assessment is presented (Chapter 13).

#### 6.4.2.1 Wastes

The SD2 ESIA described the key waste mitigation associated with offshore drilling activities includes the selection of drilling methodologies and drill chemicals to ensure that discharges to the sea and sea floor are minimised. WBM are separated from cuttings as far as practicable and re-used; WBM additives used during MODU drilling activities are low toxicity (UK HOCNS "Gold" and "E" category or equivalent toxicity). No LTMOBM are discharged to the sea during drilling. As with previous SD and AGT field drilling all LTMOBM and associated cuttings used for lower hole drilling are returned to the MODU and separated. Separated LTMOBM are reused where practicable, and the remainder returned to shore for disposal. LTMOBM associated drill cuttings are contained in dedicated cuttings skips on the rig deck for subsequent transfer to shore for treatment and final disposal at the Serenja HWTF site is operated by BP. The SD2 drilling program is a significant contributor to the waste that is treated at the Serenja HWTF via 4 Indirect Thermal Desorption Units with the capacity to treat 160 Tonnes of drill cuttings per day. The site currently stores 150 000 Tonnes of drill cuttings. The ITD units are proposed to be replaced with up to 6 Thermo-mechanical Cutting Cleaner Units at the facility. The TCC units allow for recovery of mineral oil from the drill cuttings and reduced disposal of treated waste to landfill.

Batches of barite supplied for use in WBM formulations meet applicable heavy metals concentration standards i.e. Mercury <1 mg/kg and cadmium <3 mg/kg dry weight (total); There are no planned discharge of WBM or associated drilling cuttings from the MODU with chloride concentration greater than four (4) times the ambient concentration of the receiving water; a PSA standard. Cementing chemicals used during MODU drilling activities are of low toxicity (UK HOCNS "Gold" and "E" category or equivalent toxicity).

Produced water is separated from the condensate at the ST. Produced water from the SD1 operations is stored onsite at ST in ponds and has potential odour emissions, from VOC's, which are likely to impact neighbouring communities and have been assessed as a major negative impact for SD-2. A number of options were considered for the disposal of produced water during the initial stages of SD2 planning. The uncertainty associated with high pressure injection of the produced water within the SD formation has ruled out this option. The disposal offshore at the SDB platform of the produced water was also dismissed due to the technical difficulties associated with the treatment required prior to discharge from the offshore facility. In order to mitigate risks associated with disposal of produced water the SD2 Project has adopted the following produced water handling hierarchy:

1. First Option: Utilise ACG produced water treatment and disposal options when available.
2. Second Option: SD2 produced water will be sent off site for treatment and disposal at a third party treatment contractor site (potential 3rd party sites have not been identified or assessed in the ESIA).
3. Third Option: During emergency situations, when option 1 and 2 are not available and there is no produced water tank storage capacity at Sangachal including the new SD2 produced water storage tank, SD2 produced water will be sent to a new storage pond.

The construction phase Waste Management and Minimisation Plan (10/1/14) has been developed and implemented by BP for all Project delivery packages and specifies how BP and its contractors will comply with Project waste management commitments as specified in the ESIA. The plan aligns with BP's AGT Region Waste Manual and establishes waste management requirements under the framework of the SD2ESMMP. The Plan includes key responsibilities and accountability; waste forecasting requirements; segregation; application of the waste management hierarchy; organisational structure; training; monitoring and reporting. Waste records include the requirement to use BP's waste transfer tracking system for all Project activities.

#### 6.4.2.2 Hazardous Materials Management

Hazardous materials are potentially released via offshore drilling and completions. The SD2 Basis of Design requires that chemicals with HOCNS taint (as defined by OSPAR) and expired chemicals will be avoided. The use of chemicals containing any of the following will be avoided wherever possible: Heavy metals; Poly-Chlorinated Biphenyls (PCB); Alkyl phenols; Phthalates; Firefighting containing perfluorooctane sulphonate or products that degrade to for perfluorooctane sulphonate; Toxic chemicals with bioaccumulation, or endocrine disruption properties, mutagenic effect or impact on reproduction. Project Standards on Chemical Selection and Management requires that chemicals used need to be supported by environmental risk assessments or covered in the SD2 Project Environmental and Social Impact Assessment documentation.

BP has adopted OSPAR principles as the basis for chemical selection and discharge evaluation in its Caspian operations. The principles have been embedded in Project environment protection standards, routine assessment of chemicals and discharges and procedures for chemical selection and environmental risk assessment. The selection of chemicals is restricted to those that have passed the OSPAR screening process. Chemical selection process for SD2 includes toxicity tests which are conducted using Caspian species and Caspian seawater where possible.

The results of hazard assessments form the basis on which the national regulatory authorities are informed and consulted, and the basis on which many discharge approvals have been granted. Potential for loss of control fluids during testing of well BOPs has been assessed. The components of the control fluid and propylene glycol are all readily degradable, and the product has passed US EPA standards and has been assigned a UK Offshore Chemical Notification Scheme (OCNS) category D (rated A-E where E is the least environmental harmful). The area of potential impact has been very conservatively assessed on the basis of information on toxicity tests which are of much longer duration (2 - 7 days) than the duration of the discharges (up to 17 minutes per BOP). Consequently, and taking into account both the limited area of potential impact and the very short duration of the operations, BOP fluid flushing is considered to be a low intensity activity.

WBM cuttings will be discharged below the sea surface from the Istiglal and Heydar Aliyev in accordance with applicable PSA requirements. WBM cuttings from the MODU can alternatively, be discharged directly to the sea bed using a hose fitted to the MODU cuttings chute. WBM additives used during MODU drilling activities are low toxicity (UK HOCNS "Gold" and "E" category or equivalent toxicity). Toxicity tests were conducted on the proposed water-based mud formulations in 2007 using Caspian zooplankton, phytoplankton and sediment-dwelling species. Toxicity was assessed in the water column and sediment. The estimated acute toxicity levels would require dilution of WBM, discharged from the MODU in accordance with PSA chloride concentration

requirements, by a factor of between 31- and 62-fold (depending on the mud composition). The relevant dilution factor would be reached very rapidly following the WBM discharge and the plume of the discharge would be very small, quickly dispersing.

LTMOBM and associated cuttings used for lower hole drilling will be returned to the MODU and separated. Separated LTMOBM will be reused where practicable, and the remainder returned to shore for disposal.

Cementing chemicals used during MODU drilling activities will be of low toxicity (UK HOCNS "Gold" and "E" category or equivalent toxicity).

Operational hazardous materials of significance include well control fluids which may be discharged during routine and non-routine operations. The Project will use Castrol Transqua HC10 water based control fluid, which has been selected based on its suitability, environmental performance and low toxicity. Discharges of control fluid are likely to occur during the operation of the subsea controls system. The control fluid discharge may occur during well testing, flowline pigging, full and partial field shutdown and High Integrity Pressure Production System (HIPPS) testing. The ESIA assessed the discharge of control fluids under the various scenarios and in consideration of the dilution rates, receptor sensitivity and potential magnitude of release. The assessment result was low negative for the control fluid discharge.

A full inventory of the hazardous materials and wastes used and generated by the Project during the construction and operational phases for onshore and offshore activities are included in the ESIA Chapter 5 Project Description. Predicted volumes and waste streams for hazardous materials are provided. All hazardous waste streams have been identified for the Project based on existing BP AGT region operations expect for waste lamps where the Operator is still seeking a suitable disposal option.

The SD2 Project Environmental Basis of Design and the SD EPS: Standards for Environmental Quality (Ref. 9) state that the use of Ozone Depleting Substances is not acceptable. BP has set mandatory requirements that are applicable to the SD2 Project: Projects shall not design for the use of halon-based fixed and portable fire suppression systems; Projects shall not design and install new refrigeration systems that utilise hydrochlorofluorocarbon (HCFC) and chlorofluorocarbon (CFC); Projects shall not sell redundant halocarbon stock to third parties.

The construction phase SD2 Pollution Prevention MP (17/2/14) has been developed for all Project delivery teams and includes requirements for hazardous material management and chemical selection to ensure that ESIA commitments are complied with. The Plan is implemented within the framework of theism.

**Table 6.4 Compliance Evaluation – Resource Efficiency and Pollution prevention**

PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
General	4	During project life-cycle: consider ambient conditions, apply technically and financially feasible resource efficiency and pollution prevention principles, tailor principles and techniques to hazards and risks associated with project's nature and consistent with GIIP including WBG EHS Guidelines.	<p>The SD2 Programme HSSE MP provides the overarching Project principles for the application of resource efficiency and pollution prevention principles. These Principles are defined as: identify and understand impacts; consult with others; design and avoid adverse impacts and minimise use of natural resources. The Project has considered technical and financially feasibility of resource efficiency and pollution prevention measures through the design selection phase based on the applied experience with SD1.</p> <p>Key environmental requirements include: SD2 PSA, Draft SD EPS (not endorsed by MENR) and BP Group Defined Practice. The overarching environmental performance objectives for the SD Project are included in the Project Specific Environmental Protection Standards developed by a working group consisting of Azerbaijani Government departments, regulators and academic institutions. However, the EPS are yet to be endorsed by the MENR and therefore these standards do not yet have legal force. Until such time as the EPS are fully authorised, the Project must comply with the more generic environmental standards included in the Product Sharing Agreement and which describe the standards and practices common for international petroleum industry that were in existence at the time the PSA was signed. The ESIA (Chapter 2/5) states that the SD2 Project will comply with the intent of current national legislation where those requirements are consistent with the provisions of the PSA, and no not contradict, or are otherwise incompatible with, international petroleum industry standards and practice. The PSA is stated as being higher in the legislative hierarchy in Azerbaijan and over-riding the National Legislation.</p> <p>The SD2 Basis of Design for ambient air quality, noise, water quality and is consistent with WBG EHS Guidelines, WHO ambient air quality guidelines. Stack heights have applied GIIP as specified in WBG EHS Guidance.</p>	<b>Demonstrates Compliance</b>	SD2 ESIA, SD2 Project Basis of Design; SD2 Programme HSSE MP; PSA
	5	Refer to the EHS Guidelines or other internationally recognised sources when evaluating and selecting resource efficiency and pollution prevention and control techniques. Achieve whichever levels and measures is the more stringent of host country regulations and the EHS Guidelines. When less stringent levels are appropriate, provide justification for performance levels through the ESIA process indicating that the choice is consistent with the objectives of PS3. When less stringent levels are appropriate, provide justification for performance levels through the ESIA process indicating that the choice is consistent with the objectives of PS3.			

PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
<b>Resource Efficiency</b>					
	6	Implement technically and financially feasible and cost effective measures for improving efficiency in consumption (energy, water, and other resources and material inputs). If available, make comparison to establish relative level of efficiency.	Resource efficiency measures have been incorporated into design through flare gas recovery, flare minimisation and efficiency measures; waste heat recovery, use of DEH, layout of the offshore infrastructure; use of fuel gas.	<b>Demonstrates Compliance</b>	SD2 ESIA, SD2 Project Basis of Design; SD2 Programme HSSE MP; PSA
Greenhouse Gases	7	Consider alternatives and implement feasible options to reduce project-related GHG emissions during design and operation (including project locations, renewable or low carbon energy sources, agricultural, forestry and livestock management practices, reduction of fugitive emissions and gas flaring).	Key GHG emission reduction considerations in design include the flare reduction measures ;offshore gas compression preferred above onshore compression; offshore flaring chosen over offshore venting; direct drive gas turbines onshore selected in preference to electric drives; and, waste heat recovery on onshore compression gas turbines. The ESIA (Chapter 13) estimates that these efficiency measures have resulted in a reduction of approximately 103,700 tonnes of CO <sub>2</sub> emissions across the SD PSA period.	<b>Demonstrates Compliance</b>	ESIA; Class 3 reference Case VIP Report, (BP-SMZZZZ-EV-REP-0009 RevD1)
	8	If expected to produce more than 25,000 t CO <sub>2</sub> -equivalent annually, quantify direct emissions from facilities owned or controlled within physical project boundary and indirect emissions associated with off-site production of energy used. Conduct emissions' quantification annually in accordance with internationally recognised methodologies and good practice.	The SD2 Project is required to report GHG emissions annually during construction and operations in line with current reporting for the SD and AGC project reports and in accordance with the BP AGT Region HSSE Policies. The SD2 Project has committed to the implementation of GHG monitoring, management and reporting consistent with the procedures already in use on existing ACG Platforms. The publicly available annual report, BP Azerbaijan Sustainability Report 2013, includes the GHG emission data for BP's Caspian offshore operations and the ST.	<b>Demonstrates Compliance</b>	BP Azerbaijan Sustainability Report 2013
Water Consumption	9	When a potential significant water consumer, adopt measures that avoid or reduce water usage to do not have significant adverse impacts on others (including use of additional technically feasible water conservation measures, alternative water supplies, consumption offsets to reduce total demand and alternative project locations).	The Project is not a significant water consumer. N/A	<b>Demonstrates Compliance</b>	ESIA

PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
<b>Pollution Prevention</b>					
Pollution Prevention	10	Avoid release of pollutants or, when not feasible, minimise and/or control intensity and mass flow of release. Applies to air, water and land due to routine, non-routine, accidental circumstances within local, regional and transboundary impacts.	Avoidance and minimisation of emissions is demonstrated in the ESIA with the incorporation of NOx reduction measures for onshore and offshore facilities, including flare reductions. Non-routine loss of condensate poses a significant pollution risk for the SD2 Project, which is effectively, mitigated through documented spill prevention and response strategies. The avoidance and mitigation of pollution for SD2 applies the lessons learned from SD1 and ACG operations.	<b>Demonstrates Compliance</b>	SD2 ESIA, SD2 Project Basis of Design; SD2 Programme HSSE MP
	11	Consider relevant factors to address potential adverse project impacts on existing ambient conditions: existing ambient conditions; finite assimilative capacity of the environment; project's proximity to areas of importance to biodiversity; potential for cumulative impacts with uncertain and/or irreversible consequences. Consider additional strategies and adopt measures that avoid or reduce negative effects (including evaluation of project location alternatives and emissions offsets) when project is a significant source of emissions in an already degraded area.	Project alternatives were defined during the early conceptual design of the SD2 Project with options assessed using a range of criteria including the reduction of negative impacts. In order to identify potential impacts to receptors, an understanding of the existing conditions was established prior to execution of Project activities. A number of environmental and socio-economic surveys were undertaken within the SD Contract Area, along the proposed SD2 pipeline corridor, within Sangachal Bay and in vicinity of the ST to support the preparation of the previous ACG and SD ESIA's. Monitoring has also been undertaken from 2004 as part of the Environmental Monitoring Programme. Onshore environmental surveys completed in the vicinity of the ST include noise, odour, visual context and light surveys, dust, a contamination survey, wetland characterisation survey, geotechnical, hydrological and cultural heritage baseline surveys.	<b>Demonstrates Compliance</b>	SD2 ESIA, SD2 Project Basis of Design; SD2 Programme HSSE MP; PSA
Wastes	12	Avoid generation of hazardous and non-hazardous waste materials. Where generation cannot be avoided, reduce, and recover and reuse in a manner safe for human health and environment. Where waste cannot be recovered and reused, treat, destroy or dispose thereof in an environmentally sound manner (including appropriate resulting emissions' control and residues). When hazardous waste disposal	Drilling and completion activities have been assessed in the SD2 ESIA with impact avoidance and mitigation measures identified based on the drilling experience of earlier SD and ACG field developments. The drilling and completion activities from the MODU will include sub surface and sea floor discharges of WBM and drill cuttings; onshore disposal and re-use of LTMOBM; cement discharge to the sea during the cementing of geotechnical holes; release of control fluids to sea during BOP testing of wells; MODU cooling water uptake and discharge; and, the	<b>Demonstrates Compliance</b>	SD2 ESIA, SD2 Project Basis of Design; SD2 Programme HSSE MP;



PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
		is conducted by third parties conduct disposal, use reputable, legitimate contractors that are licensed by relevant government agencies and obtain chain of custody documentation to the final destination. When hazardous waste disposal is conducted by third parties conduct disposal, use reputable, legitimate contractors that are licensed by relevant government agencies and obtain chain of custody documentation to the final destination.	discharges to the sea of ballast water, treated black water, grey water and deck drainage from the MODUs and support vessels. The Project has described the selection of drilling methodologies and drill chemicals to ensure that discharges to the sea and sea floor are minimised. WBM are separated from cuttings as far as practicable and re-used; No LTMOBM are discharged to the sea during drilling. Batches of barite supplied for use in WBM formulations meet applicable heavy metals concentration standards. A number of options were considered for the disposal of produced water during the initial stages of SD2 planning and a hierarchy of produces water management has been developed to minimise the potential major negative effects of pond storage odour as experienced during SD1 operations.		
Hazardous Materials Management	13	Avoid or, when avoidance is not possible, minimise and control the release of hazardous materials; <ul style="list-style-type: none"> <li>· Assess production, transportation, handling, storage and use of hazardous materials;</li> <li>· Consider using less hazardous substitutes in manufacturing processes or other operations;</li> <li>· Avoid manufacture, trade and use of chemicals and hazardous materials subject to international bans or phase-outs due to high toxicity to living organisms, environmental persistence, potential for bioaccumulation or depletion of ozone layer.</li> </ul>	The SD2 Project has adopted chemical selection criteria based on PSA requirements, international obligations, national legislation and Operator standards to ensure that chemicals that may be released to the environment, specifically marine waters, do not result in adverse environmental impacts. The chemical selection and hazardous materials management approach reflects GIIP and the WBG EHS Guidance. The Project has specified chemicals that will not be used on the Project due to international, national, and industry imposed bans.	<b>Demonstrates Compliance</b>	SD2 ESIA; SD2 Project Basis of Design; SD2 Programme HSSE MP
Pesticide Use and Management	14 - 17	N/A		<b>Demonstrates Compliance</b>	

## **6.5 PERFORMANCE STANDARD 4 - COMMUNITY HEALTH, SAFETY, AND SECURITY**

PS4 recognises that project activities, equipment, and infrastructure often bring benefits to communities including employment, services, and opportunities for economic development. However, projects can also increase the potential for community exposure to risks and impacts arising from equipment accidents, structural failures, and releases of hazardous materials. Communities may also be affected by impacts on their natural resources, exposure to diseases, and the use of security personnel.

While acknowledging the public authorities' role in promoting the health, safety and security of the public, this PS addresses the client's responsibility to avoid or minimise the risks and impacts to community health, safety and security that may arise from project activities. Community safety and health onshore is predominantly associated with exposure to traffic, exposure to air and waste water streams and exposure to low frequency high consequence events such as explosions or catastrophic failures.

### **6.5.1 Community Health, Safety, and Security**

PS4 requires projects to evaluate risks and impacts to health and safety of affected communities during project life cycle. Compliance was evaluated based on IFC's Performance Standard 4 (PS4), *Community Health, Safety and Security*.

- The SD2 ESIA provides a general indication of affected communities (refer PS1 above). Specific information about how the four neighbouring villages (Azim Kend, Masiv 3, Umid and Sangachal town) as well as those neighbouring the construction yards and other associated facilities, may be impacted by Project with respect to CHSS issues are not assessed in great detail (for example, antisocial behaviour and social conflict), or are scoped out (for example, road/rail disruption, health and safety risks and impacts as a result of onshore pipeline works). The range of potential health and safety impacts on local communities from the Project are not fully described. This is in part because existing health and safety baseline conditions are only generally addressed;
- The specific baseline conditions do not appear to have been used to carry out an evidence-based social impact assessment (e.g. what is the current level of communicable disease in each village and thus what level of impact may occur as a result of the Project). Further, the detailed baseline is also important to allow for monitoring of future changes.

However, the Operator has described HSE leadership, planning and management, legal and regulatory framework, health and safety, security, environmental and social responsibility, contractor management and self-verification in the Programme HSE MP, demonstrating an established system in place for addressing emergencies. As with other SMPs, this however does not appear to have been disclosed, which is inconsistent with the requirement of the PS.

#### **6.5.1.1 Infrastructure and Equipment Design and Safety**

PS4 requires that equipment and infrastructure consider design, construct, operate, and decommission the structural elements or components of the project in accordance with GIIP, taking into consideration safety risks to third parties or Affected Communities.

The EIW and SD2 ESIA describe design and construction under guidance of appropriate expertise of the early works and facilities including protection of third parties and communities. At the design phase this includes the 'Intent/Planning and Controls' phases (including ENVIID) undertaken in the SD2 Environmental Design Verification process. Key actions to be taken to design out risks are described, as well as key procedures and controls to be implemented during construction (EIA ESIA s.13.4). The SD2 ESIA additionally describes infrastructure and equipment design and safety with respect to minimising nuisance issues (noise, light

pollution), as well as safe operations and risk prevention to affected communities through security facilities, site entry and egress systems and site boundary fencing (SD2 ESIA s.5.5.2). Again however, Affected Communities are not defined; it is not clear if Associated Facilities are included within this process of infrastructure and equipment design and safety. Terminal-Community distances were described by the Operator to demonstrate safety of Affected Communities in the event of a most extreme hypothetical accident; the Operator reports that should such an extreme event occur, local communities would not be impacted. It is not clear if this blast/protection zone map has not been provided to affected communities or if something similar, in the interests of transparency, has been provided.

To minimise potential impacts to local communities associated with offsite traffic movements, it has been recognised it will be necessary to communicate the potential hazards associated with offsite traffic movements, as part of ongoing community liaison and management through a Traffic MP and Community Interaction and Social Impact MP during EIW (Table 12.1).

#### 6.5.1.2 Hazardous Materials Management and Safety

The PS requires that the project avoid or minimise potential for public (workers and their families) exposure to hazardous materials and substances that may be released by the project.

The process and tools used to manage and monitor implementation of the environmental and social compliance requirements relevant to construction during the Execute Phase of the SD2 Project are described within the SD2 ESMMP. The ESMMP requires the development and implementation of a Pollution Prevention MP (17/2/14), which includes the management of hazardous materials and selection of chemicals required during the Project construction to ensure compliance with ESIA commitments. These plans interface with the Stakeholder Engagement Plan and the Community Engagement and Nuisance MMP.

The key tools relevant to construction phase compliance management and monitoring are the Environmental and Social Compliance Registers prepared for each of the four contractors' scope of work.

The SD2 ESIA does not identify specific risks to community health and safety from hazardous materials management and chemical use. The ESMMP and the various MPs provide construction phase management controls to prevent impacts from Project related activities resulting in harmful exposures or degradation of environmental values that are important in maintaining community health. The construction phase plans include interface with stakeholder engagement plans and recognise the need to communicate with local communities in regards to environmental performance and to respond to external stakeholder concerns. The Pollution Prevention MP describes the control measures to be implemented by all Project delivery teams to prevent contamination of soil and water, minimise spills risks, prevent impacts to livestock and protect near shore water quality. The ESMMP requires the Pollution Prevention MPs developed by contractors and BP for various construction sites/activities to include a Hazardous Materials Inventory and waste management processes. Waste Management procedures are required to include Waste Passports/Materials Safety Data Sheets (as appropriate) for hazardous materials prior to transport, use of dedicated waste facilities and minimisation of onsite waste storage.

#### 6.5.1.3 Ecosystem Services

The PS requires that where appropriate and feasible, projects identify risks and potential impacts on priority ecosystem services that may be exacerbated by climate change, and that mitigation measures with respect to use of and loss of access to provisioning services should be implemented.

Ecosystem services have not been specifically addressed through the ESIA process. However, provisioning services with respect to flooding have been investigated due to the footprint of the ST Project changing the stormwater flow regime. The cumulative impact assessment additionally assessed the construction of the cement plant and the petrochemical complex, with the expectation that these will alter local hydrological conditions and

increase the potential for flood risk at receptors. However, the SD2 ST expansion is not, in itself, expected to have a significant impact on flood levels at any receptor location assessed. However, the ESIA has also identified and assessed the interactions between the social and ecological values within the Project's potentially affected areas with specific relevance to the supporting services provided by coastal marine ecology and water quality for the maintenance of commercial fish stocks. The assessment includes direct and indirect impacts to fish stocks of commercial value through changes to water quality, seabed disturbance, changes to marine and coastal ecology, contamination of sediments and impacts of underwater noise resulting in temporary avoidance of the Project area. However, full compliance with this requirement would require specific ecosystem service assessment to be reviewed.

#### 6.5.1.4 Community Exposure to Disease

The PS requires avoidance or minimisation of the potential for community exposure to disease (water-borne, water-based, water-related, vector-borne diseases and communicable diseases) that could result from project activities, taking into consideration differentiated exposure to and higher sensitivity of vulnerable groups, as well as avoiding and minimising transmission of communicable diseases that may be associated with the influx of temporary or permanent project labour.

The EIW ESIA includes HSSE requirements on contractors to develop a Community Interaction and Social Impact MP to detail how construction work will be managed so as to avoid and mitigate potential social impacts between construction workers and neighbouring communities. This is to include a grievance mechanism. Additionally, a Community Health Plan is required to address community health risks associated with the EIW. BP reports that all contractor required plans are developed and approved in accordance with all contractor self-verification and BP audit processes. The Sangachal construction camp will be used for contractor expat workers and camp construction is not completed – camp habitation is planned for late 2Q/3Q 2015. The EIW ESIA scope includes the construction camp, which is constructed within the site boundary (an offsite location was scoped out due to security issues, thereby avoiding potential impacts). It is isolated from local communities, and TKAZ's procedures relating to camp management are being further updated to support completion and habitation of the camp.

Construction is the responsibility of the SD2 Construction contractor, and has capacity for 600 people. A largely international (Turkish) construction workforce was reported by the Operator in interviews to have been assembled to deliver the EIW with a nationalisation process in place (i.e. which intends to increase the localisation of the workforce, from camp-based to home-based, and as far as practicable, from the Affected Communities nearest the ST location). While nationalisation in itself does not decrease disease transmissibility, it can discourage influx populations through promotion of local employment, with subsequent health benefits. The Key Performance Indicators (KPIs) are under currently development for camp management, as reported by the Operator in audit interviews.

As construction-community interactions were scoped out of the ESIA process (i.e. these are not included in ESIA commitments register and so, are not tracked and monitored), these MPs become critical in ensuring ongoing avoidance and mitigation of potential community exposure to Project-induced impacts.

#### 6.5.1.5 Emergency Preparedness and Response

In addition to PS1 emergency preparedness and response requirements, PS4 requires that the project assist Affected Communities, local government agencies and other relevant parties in preparation to respond effectively to emergency situations especially when their participation and collaboration are necessary to respond to such emergency situations, including support to Government agencies where required, appropriate documentation and disclosure.

In addition to response on PS1, the Operator reported that services to construction and operations to the Azerbaijan region is provided through: site response teams at each facility; country based team support; and

regional business support. Any major incidents also receive support from London, and global response teams where required. Crisis plans are in place for high-risk locations including availability of 120 people in Baku, as well as condensate and oil spill response teams (onshore and offshore). BP reports that the local government capacity to respond to emergency situations is satisfactory (including Project shareholder, SOCAR). Capacity and arrangements are documented through a Mutual Operations Plan (MOP) to direct how the Operator and government work together on emergency response.

Exercises are reported to be run 2 to 3 times per year with communities to be aware of risks and threats at the local level. Communications are via external affairs to manage external media, with notification processes to government agencies prescribed.

The MOP describes mass media communications and procedures, BP identifies that contractors operating the construction sites are primarily responsible for emergency response management. This includes development and testing of site specific emergency response plans; maintaining adequate response resources; and notes that if community liaison is required at the SD2 ST site or the beach pull then BP via the C&EA organisation will lead, at all other sites contractors will lead. The Operator notes that until the SD2 ST site becomes hydrocarbon live and will be managed under the operations management system. Audit is in place; BP undertake oversight and assurance of the contractors' emergency response capability.

However, while the principle of external engagement is described (Programme HSE MP: 'the Project shall promote open and constructive relationship between the SD2 Project and external stakeholders'), the documentation describing specific communications, information disclosure and response activities, including local Affected Community involvement in preparedness and response requirements, by either BP or the contractor, has not been sighted for verification by the IESC. (See also PS1 on stakeholder engagement and information disclosure).

### **6.5.2 Security Personnel**

This PS is triggered when direct or contracted workers are retained to provide security to safeguard personnel and property, assess risks posed by security arrangements to those within and outside the project site.

The Security arrangements for BP in Azerbaijan follow BP group security guidelines. Security risks associated with the operations in Azerbaijan are routinely assessed; investigations are carried out following incidents when they occur; and training is provided to promote security awareness and an understanding of human rights among the private and public security professionals who are involved in protecting BP's operations.

Inter-Agency Security Committee meetings have been in place since 2006 (involving community liaison officers, local government and municipal authorities and public security officials), as a forum for exchange between local communities and private security.

The Operator has been promoting *Voluntary Principles on Security and Human Rights* training in Azerbaijan to ensure all security forces and private guards involved in the protection of the operations understand the possible human rights-related implications of their work. This has included the Export Pipeline Protection Department and BP's own private security contractor in Azerbaijan.

**Table 6.5 Compliance Evaluation – Community Health, Safety, and Security**

PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
<b>Community health and safety</b>					
	5	<ul style="list-style-type: none"> <li>Evaluate risks and impacts to health and safety of affected communities during project life cycle;</li> <li>Establish preventive measures consistent with GIIP, such as the WBG EHS Guidelines;</li> <li>Identify risks and impacts and propose mitigation measures; and</li> <li>Measures will favour the avoidance of risks and impacts over minimisation.</li> </ul>	<p>The SD2 ESIA provides a general indication of affected communities. Specific information about how the four neighbouring villages as well as those neighbouring the construction yards and other associated facilities, may be impacted by Project with respect to CHSS is not assessed in great detail or are scoped out. The range of potential health and safety impacts on local communities from the Project are not fully described. This is in part because existing health and safety baseline conditions are only generally addressed; the specific baseline conditions do not appear to have been used to carry out an evidence-based social impact assessment. Further, the detailed baseline is also important to allow for monitoring of future changes.</p> <p>However, the Operator has described the capability of the BP Incident Management Team; the relationship at the SD2 Onshore (terminal) site regarding emergency response, between the TKAZ and BP; the key documents and capabilities of the SD2 Onshore (terminal) TKAZ and BP teams; and the incident requirements for pollution Prevention management guide approach to support incident response scenarios. The Operator has described HSE leadership, planning and plans and waste management, legal and regulatory framework, health and safety, security, environmental and social responsibility, contractor such as hazardous materials management and self-verification in the Programme HSE MP. This demonstrates the system in place for addressing emergencies.</p>	<b>Demonstrates Compliance</b>	Operator interviews 20.11.14 Mutual Operating Plan 6.2.2012 ESIA ESMMP Emergency Response summary slides Programme Pollution Prevention MP SD2 HSE MP SD2 Waste Management and Minimisation Plan
Infrastructure and equipment design and safety	6	<ul style="list-style-type: none"> <li>Design, construct, operate, and decommission the structural elements or components of the project in accordance with GIIP, taking into consideration safety risks to third parties or Affected Communities.</li> <li>Consider incremental risks of the public's</li> </ul>	<p>The EIW and SD2 ESIA describe design and construction under guidance of appropriate expertise of the early works and facilities. At the design phase this includes the 'Intent/Planning and Controls' phases (including ENVIID) undertaken in the SD2 Environmental Design Verification process. Key actions to be taken to designed out risks are described as well as key procedures and controls to be implemented during</p>	<b>Demonstrates Compliance</b>	EIW ESIA s.13.3 SD2 Environmental Design Verification process

PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
		<p>potential exposure to operational accidents and/or natural hazards.</p> <ul style="list-style-type: none"> <li>Structural elements will be designed and constructed by competent professionals.</li> <li>When structural elements or components are located in high risk locations, external experts with relevant and recognised experience must be engaged.</li> <li>For projects that operate moving equipment on public roads avoid the occurrence of incidents and injuries to members of the public.</li> </ul>	<p>construction (EIA ESIA s.13.4). The SD2 ESIA describes infrastructure and equipment design and safety with respect to minimising nuisance issues and safe operations and risk prevention to affected communities (SD2 ESIA s.5.5.2). Terminal-Community distances were described by the Operator in the event of a most extreme hypothetical accident, none of which would reach local communities. Commitment is made to communicate the potential hazards associated with offsite traffic movements, as part of ongoing community liaison and management through a Traffic MP and Community Interaction and Social Impact MP during EIW (Table 12.1)).</p>		SD2 ESIA Blast distances
Hazardous materials management and safety	7	<ul style="list-style-type: none"> <li>Avoid or minimise potential for public (workers and their families) exposure to hazardous materials and substances that may be released by the project</li> <li>Where hazardous materials are part of existing project infrastructure or components, the client will exercise special care when conducting decommissioning activities in order to avoid exposure to the community.</li> <li>Exercise commercially reasonable efforts to control the safety of deliveries, transportation and disposal of hazardous materials and wastes.</li> <li>Implement measures to avoid or control exposure to pesticides in accordance with PS3.</li> </ul>	<p>The ESMMP is developed for implementation during the construction phase of the Project and includes the requirements for Pollution Prevention MPs and Waste MPs for all Project delivery packages such that the ESIA commitments are complied with. These commitments include those for the protection of community health and safety such as hazardous materials management; prevention of spills, protection of water quality and protection of air quality.</p>	<b>Demonstrates Compliance</b>	EIW ESIA table 12.1 SD2 ESIA Pollution Prevention MP SD2 HSE Plan SD2 Waste Management and Minimisation Plan
Ecosystem services	8	<ul style="list-style-type: none"> <li>Where appropriate and feasible, identify risks and potential impacts on priority ecosystem services that may be exacerbated by climate change.</li> </ul>	<p>Ecosystem services have not been specifically addressed through the ESIA process. Provisioning services with respect to flooding have been investigated due to the footprint of the ST Project changing stormwater flow regime. The cumulative impact assessment concluded the cumulative projects will alter local hydrological conditions, with a potential increase in flood</p>	<b>Partial Compliance</b>	SD2 ESIA s.13.4.2ESMMP Pollution Prevention MP SD2 HSE Plan SD2 Waste

PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
		<ul style="list-style-type: none"> <li>Avoid adverse impacts, and if these impacts are unavoidable, implement mitigation measures in accordance with PS6, paragraphs 24 and 25.</li> <li>Implement mitigation measures with respect to use of and loss of access to provisioning services in accordance with PS5, paragraphs 25–29.</li> </ul>	<p>risk at receptors. SD2 ST expansion is not, in itself, expected to have a significant impact on flood levels at any receptor location assessed.</p> <p>The ESIA has also identified and assessed the interactions between the social and ecological values within the Project's potentially affected areas with specific relevance to the supporting services provided by coastal marine ecology and water quality for the maintenance of commercial fish stocks. The assessment includes direct and indirect impacts to fish stocks of commercial value through changes to water quality, seabed disturbance, changes to marine and coastal ecology, contamination of sediments and impacts of underwater noise resulting in temporary avoidance of the Project area. However, full compliance with this requirement would require specific ecosystem service assessment to be reviewed. The SD2 ESMMP provides a framework for the Project to implement ESIA commitments relevant to protection of ecosystems and environmental values that are significant for nearby communities and stakeholders. These values being soil, water, marine, pasture and air quality. The Pollution Prevention MP, Waste Management and Minimisation Plan and the Restoration and Landscape MPs meet the intent of the ecosystem services performance requirements.</p>		<p>Management and Minimisation Plan Restoration and Landscape MP</p>
Community exposure to disease	9 - 10	<ul style="list-style-type: none"> <li>Avoid or minimise potential for community exposure to water-borne, water-based, water-related, vector-borne diseases and communicable diseases that could result from project activities, taking into consideration differentiated exposure to and higher sensitivity of vulnerable groups.</li> <li>Where specific diseases are endemic in communities in the project area of influence, explore opportunities during the project life cycle to improve environmental conditions that could help minimise their incidence.</li> </ul>	<p>The EIW ESIA includes HSE requirements on contractors to develop a Community Interaction and Social Impact MP to detail how construction work will be managed so as to avoid and mitigate potential social impacts between construction workers and neighbouring communities (including a grievance mechanism). A Community Health Plan is required to address community health risks associated with the EIW. BP reports that all contractor required plans are developed and approved in accordance with all contractor self-verification and BP audit processes. However, specific sensitivities of vulnerable groups cannot be considered as the baseline does not specifically identify who, where and what the vulnerabilities are. The Sangachal construction camp will be used for contractor expat workers and camp construction is not completed – camp</p>	<b>Partial Compliance</b>	<p>EIW ESIA s.4.1.3, s.4.9, s.5.5.6 Camp management summary slides SD2 ERMP summary slides</p>

PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
		<ul style="list-style-type: none"> <li>Avoid or minimise transmission of communicable diseases that may be associated with the influx of temporary or permanent project labour.</li> </ul>	<p>habitation is planned for late 2Q/3Q 2015. It is isolated from local communities:</p> <ul style="list-style-type: none"> <li>it is situated within a secure fenced site with control of access/exit</li> <li>The access road to the camp and site does not travel through any of the nearby communities</li> <li>Residents of the camp will be reliant on contractor provide vehicles for ingress/egress which will control opportunities for interaction with the nearby communities</li> </ul> <p>TKAZ are aligned with BP's expectation that camp residents will not interact with the nearby communities</p> <p>The TKAZ's procedures relating to camp management are being further updated to support completion and habitation of the camp.</p> <p>A largely international construction workforce was reported to have been assembled to deliver the EIW; a nationalisation process in place which intends to increase the localisation of the workforce, from camp-based to home-based. The KPIs are under currently development for camp management, as reported by the Operator in audit interviews.</p> <p>As construction-community interactions were scoped out of the ESIA process, these MPs become critical in ensuring ongoing avoidance and mitigation of potential community exposure to Project-induced impacts.</p>		
Emergency Preparedness and Response	11	<ul style="list-style-type: none"> <li>In addition to PS1 emergency preparedness and response requirements, assist Affected Communities, local government agencies and other relevant parties in preparation to respond effectively to emergency situations especially when their participation and collaboration are necessary to respond to such emergency situations</li> <li>If local government agencies have little or no capacity to respond effectively, play an active role in preparing and responding to emergencies associated with the project.</li> </ul>	<p>In addition to response on PS1, the Operator reported that services to construction and operations to the Azerbaijan region is provided through: site response teams at each facility; country based team support; and regional business support. Any major incidents also receive support from London, and global response teams where required. Crisis plans are in place for high-risk locations, as well as condensate and oil spill response teams. Local government capacity to respond to emergency situations is satisfactory. A Mutual Operations Plan is in place to direct how the Operator and government work together on emergency response. Exercises are run periodically with communities to be aware of risks and threats at the local level. Communications are via</p>	<b>Partial Compliance</b>	Operator interviews 20.11.14 Mutual Operating Plan 6.2.2012

PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
		<ul style="list-style-type: none"> <li>Document emergency preparedness, response activities, resources and responsibilities.</li> <li>Disclose appropriate information to affected communities, government agencies and relevant parties</li> </ul>	<p>external affairs to manage external media, with notification processes to government agencies prescribed. The MOP describes mass media communications and procedures. BP identifies that Contractors operating the construction sites are primarily responsible for emergency response management. This includes development and testing of site specific emergency response plans; maintaining adequate response resources; and notes that if community liaison is required at the SD2 ST site or the beach pull then BP via the C&amp;EA organisation will lead, at all other sites contractors will lead. The Operator notes that until the SD2 ST site becomes hydrocarbon live and will be managed under the operations management system. Audit is in place; BP undertake oversight and assurance of the contractors emergency response capability.</p> <p>However, while the principle of external engagement is described (Programme HSE MP: 'the Project shall promote open and constructive relationship between the SD2 Project and external stakeholders'), the documentation describing specific communications, information disclosure and response activities, including local Affected Community involvement in preparedness and response requirements, by either BP or the contractor, has not been sighted for verification by the IESC. (See also PS1 on stakeholder engagement and information disclosure).</p>		
<b>Security Personnel</b>					
	12	<ul style="list-style-type: none"> <li>When direct or contracted workers are retained to provide security to safeguard personnel and property, assess risks posed by security arrangements to those within and outside the project site.</li> <li>Security arrangements should be guided by principles of proportionality and GIIP.</li> <li>Make reasonable inquiries to ensure those providing security are not implicated in past abuses.</li> </ul>	<p>The Security arrangements for BP in Azerbaijan follow BP group security guidelines. Security risks in Azerbaijan are routinely assessed; investigated as required; and training provided to promote security awareness. Inter-Agency Security Committee meetings have been in place since 2006 as a forum for exchange between local communities and private security.</p> <p>The Operator has been promoting <i>Voluntary Principles on Security and Human Rights</i> training in Azerbaijan. This has included the Export Pipeline Protection Department and BP's</p>	<b>Demonstrates Compliance</b>	Operator interviews BP Security arrangements in Azerbaijan.



PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
		<ul style="list-style-type: none"><li>· Train security personnel in the use of force.</li><li>· Sanction use of force only when used for preventive and defensive purposes.</li><li>· Provide a grievance mechanism.</li></ul>	own private security contractor in Azerbaijan.		
	13	<ul style="list-style-type: none"><li>· Assess and document risks arising from use of government security personnel deployed to provide security services.</li><li>· Encourage public authorities to disclose security arrangements.</li></ul>			
	14	<ul style="list-style-type: none"><li>· Investigate allegations of unlawful or abusive acts of security personnel.</li><li>· Take action to prevent recurrence.</li></ul>			

## **6.6 PERFORMANCE STANDARD 5 – LAND ACQUISITION AND INVOLUNTARY RESETTLEMENT**

### **6.6.1 General**

This section provides comment on the Project arrangements for land acquisition and involuntary resettlement. Compliance was evaluated based on IFC's PS5, *Land Acquisition and Involuntary Resettlement*<sup>4,5</sup>.

The SD1 project has in the past already been subject to resettlement and land acquisition, at the time of commencement of the project in 2003. Four separate stakeholder groups were involved at that time. Herder families in the area of the S T were resettled as documented in the following:

- Social and Resettlement Action Plan Monitoring Implementation Terms of Reference (covers pipelines: BTC, South Caucasus and ACG phase 1) (Sept 2003)
- ACG Phase 1 RAP includes SD1 – ST Extension and Offshore Works (Planning and Resettlement Solutions, April 2003).

Resettlement at the Zykx shipyard was undertaken as part of SD1, documented in the following:

- Zykx shipyard Resettlement Planning Overview (SOCAR, Nov 2003); and
- RAP, Zykx Shipyard, Final Report (Pooley, HAYAT, Feb 2004).

In addition to the above, café/garage owners were subject to a completed resettlement process as described in the following:

- NGO verification of café/garage RAP completion audit (Dec 09).

Lastly, four fishermen were subject to livelihood restoration as a result of the SD1 project, completion of which was documented as follows:

- SD1 RAP completion audit – café/garage and fishermen (Dec 2009); and
- NGO verification of fisherman RAP completion audit (Dec 09).

For the SD2 Project, IESC reviewed the new elements of the Project and land acquisition was assessed for their potential to trigger the requirements of PS5 based on available documentation from BP. The SD2 Project triggers PS5 due to restriction of access to marine resources, and potentially, loss of land use rights in the area of the associated facilities, discussed further below.

The SD2 ESIA identifies that the Stakeholder and Socio-economic Survey (SSES)(2011) objectives included identifying the potential for and extent of physical resettlement and economic displacement associated with the EIW and SD2 Project, comprising the following areas which may be subject to physical/economic displacement:

- Access Road;
- SD2 expansion area;

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<sup>4</sup> IFC PS5 defines 'land acquisition' as including outright purchase of property and purchase of access rights such as rights-of-way. For the purposes of IFC PS5, land acquisition is commonly understood to refer to purchase of both temporary and permanent rights to land.

<sup>5</sup> IFC PS5 defines 'involuntary resettlement' as referring to both physical displacement (relocation or loss of shelter) and to economic displacement (loss of assets or access to assets that leads to loss of income sources or means of livelihood) as a result of project land acquisition. Resettlement is considered involuntary when affected individuals or communities do not have the right to refuse land acquisition that results in displacement. This occurs in cases of (i) lawful expropriation or restrictions on land use based on eminent domain and, (ii) negotiated settlements in which the buyer can resort to expropriation or impose legal restrictions on land if negotiations with the seller fail.

- Pipeline landfall area;
- Construction camp areas; and
- Marine area.

IESC notes that the associated facilities (including construction yards, waste treatment facility) are not included within the scope of this ESIA (as referenced in PS1 above) and so, have not been assessed in the document to determine whether resettlement may be required. While resettlement is unlikely due to the industrialised nature of the site, baseline data has not been gathered to sufficiently understand any possible uses prior to expansion.

Components of the SD2 Project are considered for their potential for resettlement here:

*Transport route (permanent displacement)*

EIW ESIA assessed alternative route options (EIW ESIA Table 4.3), including an assessment of potential resettlement and socio-economic impacts. The selected route was selected on the basis of minimal socio-economic and environmental impacts, as well as technical, regulatory, safety and other criteria.

*SD2 expansion area (permanent displacement)*

IESC notes that seasonal herding at the ST (to the north-east of the ST) was considered during the SD1/ACG project considered resettlement processes in April 2003. Herding in the ST area has been closed out, along with resettlement and livelihood restoration that were only relevant to the SD1 project: fishing livelihood restoration, Zyksh shipyard and a café/garage owner were addressed (SD1/ACG), as described above. The NGO verification of fisherman RAP completion and NGO verification of café/garage RAP completion audits were undertaken satisfactorily in December 2009, and a herder resettlement RAP completion report was undertaken by the Social and Resettlement Action Plan Expert Panel in October 2010, who concluded that BP made sufficient effort to meet the RAP commitments. SD2 expansion area is not subject to additional resettlement requirements.

*Associated facilities (permanent displacement)*

Associated facilities for the SD2 Project, namely, construction yards and the Serenja HTWF (a pre-existing facility constructed for SD1), have not been included in the documentation for review against PS5. As such, it is not clear to the IESC whether PS5 requirements are satisfied. It is recognised that ATA and BDJF yards are existing industrial areas. The BDJF footprint was not expanded for the SD2 Project, however ATA yard included additional land take, for which no documentation has been available for review. The ESIA stated that construction yards had not been selected and were options, and that if ATA, BDJF or pipe coating and storage yards were used (ESIA s.5.6.1), footprints may be expanded (s.5.6.2). As such, the remainder of this performance standard cannot be addressed until confirmation whether PS5 is triggered at that site.

*Nearshore pipeline work/Marine area (temporary displacement)*

At the landfall site, under the terms of the SD PSA land required for Petroleum Operations should be acquired by SOCAR and made available to the Operator. The SD2 Beachpull site land and pipeline right of way belonged to the state, and as part of the SD2 Project access and control of the land was required. Part of the Beachpull site was used by five individuals. BP entered into a settlement agreement with all five individual land users, following which agreed compensation was paid to the land users. The land has now been allocated to SOCAR and SOCAR has issued the land to BP as Operator under the terms of the SD PSA. BP will lead construction activities to support SD2. Restriction on access to use of other resources (Marine resources) is triggered by the SD2 Project. Impact assessment on enforcement of the marine exclusion zone (ESIA s.12.3.1) recognises the potential impact to small scale fishermen, and so commits the Operator to undertake a fishing livelihood baseline survey to gather additional information on small-scale fishing activities within Sangachal Bay and the nearshore environment prior to installation works. The survey has been undertaken (SD2 Livelihood baseline survey of small scale fishing

activities, Nov 2014) to identify the location, status and ownership of any fishing gear that may be directly or indirectly impacted from construction works.

The remainder of this performance standard considers the fishing community displaced by the pipeline/nearshore marine works.

#### 6.6.1.1 [Project Design](#)

PS5 considers whether feasible alternative project designs to avoid or minimise physical/ economic displacement. SD2 Project Design considered alternative options in both the EIW and SD2 ESIA documents. Additionally, a 'no Project' option was considered and rejected (SD2 ESIA s.4.1).

A range of options were considered to optimise land take and so design out environmental and social impacts in the Project design, including:

- The EIW ESIA considers alternative road alignments against criteria including consideration of, among other criteria, environmental and social impact minimisation (EIW ESIA s.4.1.2).
- The footprint of the ST expansion site was assessed in EIW ESIA, after considering constraints around existing and future infrastructure (including road access routes), topography, security and minimisation of impact to neighbouring communities (EIW ESIA s.4.1.1).
- Construction camp location was selected following expansion site and access road locations, including to minimise land take and maintain security (EIW ESIA s.4.1.3).

#### 6.6.1.2 [Compensation Benefits for Displaced Persons](#)

PR5 addresses loss of access to land or natural resources at full replacement cost, and that related assets will take place only after compensation has been made available and where applicable resettlement sites and moving allowances have been provided in addition to compensation. The small-scale Fishing Livelihoods Baseline Survey identifies next steps including the identification of appropriate livelihood restoration measures (financial and non-financial) (Livelihoods baseline s.1.6).

During audit interviews the Operator confirmed that determination of restoration measures will be based on factors including: past compensation payments and the informal nature of the work. While work has commenced to progress livelihoods restoration, it is not confirmed whether final agreements will be in place with fishermen prior to the impact occurring. There has been development of the Fishing Livelihoods MP Entitlements Matrix, however the supporting MP describing the methodology applied to develop the compensation package has not been available to the IESC for review. The MP is anticipated to describe the methodology and procedure applied to development and agreement of the entitlements matrix, including any grievance process applied.

#### 6.6.1.3 [Community Engagement](#)

Community engagement is addressed in PS5, and includes that decision making processes should include options and alternatives to resettlement and livelihood restoration. Community engagement with respect to fishing communities commenced with the Stakeholder and Socio-economic Survey (2011) identified 48 affected households.

The exclusion zone is being established now (2,500m for 8km and a period of 9 months) and as such to comply with PS5, consultation is required to continue: Disclosure of relevant information and participation with communities will continue during planning, implementation, monitoring and evaluation of compensation payments, livelihood restoration and resettlement.

Concurrently with establishment of the exclusion zone, expert researchers carried out the livelihoods restoration works, including: confirming the 48 affected households, 45 of whom were interviewed representing the 45 households directly reliant on fishing. The IESC notes the presence of vulnerable households (75% of those interviewed are considered vulnerable, according to the Fishing Baseline s.1.3) and the sensitivity of livelihood

restoration due to its informal nature and the high level of dependency on fishing (including dependents who are not listed as licence holders). As such, a number of options are being considered for compensation including employment vs. compensation payments which may also overcome some disparities on household income data (Operator interview, 20.11.14).

A detailed engagement plan for this purpose has not been sighted/yet to be developed; the Operator has committed to developing a SSF MP that will include the mechanisms to be used to engage with Project-affected fishing households to validate information underpinning the impact assessment and to ascertain their preferences and priorities in relation to mitigation measures. Further, it will identify specific measures to address the needs of vulnerable households (Livelihoods baseline s.1.4).

#### 6.6.1.4 Grievance Mechanism

A grievance mechanism is required under PS5, specific for displaced persons, and consistent with PS1. The Livelihoods Baseline Study acknowledges the need to establish a grievance mechanism for small-scale fishermen, in line with the existing grievance procedures of the SD2 Project, identified in the next steps (Livelihoods s.1.6). A timeframe for its development has not yet been identified but this should be in place prior to loss of access to natural resources, including training to ensure stakeholders know how to use it. This is anticipated to be addressed through the Fishing Livelihoods MP.

#### 6.6.1.5 Resettlement and Livelihood Restoration Planning and Implementation

Resettlement and livelihood restoration planning and implementation requires conduct of a census to collect appropriate socio-economic baseline data to identify persons who will be displaced and determine who will be eligible for compensation where involuntary resettlement is unavoidable, as well as publication of a cut-off date to prevent opportunistic settlement. Independent expert consultants (as at 20.11.14) were yet to undertake validation of the Livelihoods Baseline Survey.

The IESC is not aware of whether a cut-off date has been established publicly at this stage however this could be reasonably set and communicated at the time of data validation on impacted households.

The livelihood restoration framework is yet to be established. The Operator has committed to doing so through a SSF MP (Livelihoods Baseline Survey s.1.4). This will include:

- The mechanisms to be used to engage with Project-affected fishing households to validate information underpinning the impact assessment and to ascertain their preferences and priorities in relation to mitigation measures;
- Identification of appropriate livelihood restoration measures (financial and non-financial);
- Identification of specific measures to address the needs of vulnerable households;
- The grievance procedure for small-scale fishermen, in line with the existing grievance procedures of the SD2 Project;
- The methods that will be used to implement the livelihood restoration measures identified including schedule, organisational responsibilities, and the mechanisms that will be used to agree the measures with stakeholders including the local government, MENR and the fishermen;
- The methods used to monitor and evaluate implementation of the livelihood restoration measures; and
- Estimated budget for implementation (Livelihoods Survey s.1.4).

External experts have been engaged by the Operator to develop the Small-Scale Fishing MP and (as at 20.11.14) were reported by the Operator to have validated the baseline information prior to preparation of the entitlements matrix.

It is not yet clear whether the Operator intends to completion audit after access to the exclusion zone is reinstated (at the conclusion of construction) but this is anticipated to be addressed in the Fishing Livelihoods MP.

## **6.6.2 Displacement**

The displaced persons have been established through the Livelihoods Baseline Survey (Nov 2014), which is building from data obtained during the SSES (2011), and is to be validated during another field input (estimated to be conducted end 2014/start 2015). Physical displacement for the SD2 Project is not yet confirmed but is not likely (see below), while economic displacement will occur to those fishing communities engaging in small scale fishing activities in the Sangachal Bay (see below).

### 6.6.2.1 Physical Displacement

Physical displacement for the SD2 Project is not likely to occur unless the Associated Facilities for the SD2 Project trigger this criteria. This may include either the ATA Yard or Sarinja waste facility (refer PS1). It is assumed, based on 2011 information (ESIA s.7 and ATA Yard Summary) that there were no households in the vicinity of the ATA yard that there would not be a requirement for physical displacement because of the industrialisation of the site. However, baseline data has not been sufficiently detailed to ensure no physical displacement (refer PS1).

### 6.6.2.2 Economic Displacement

Economic displacement includes loss of access to fishing grounds which is triggered through the temporary (9 month) loss of access to an exclusion zone in the Sangachal Bay (2,500m x 8km) and the nearshore environment prior to installation works.

The survey has been undertaken (SD2 Livelihood baseline survey of small scale fishing activities, Nov 2014) to identify the location, status and ownership of any fishing gear that may be directly or indirectly impacted from construction works.

During interviews, the Operator indicated that entitlements:

- investigate 48 households identified thus far, focusing on the 45 households reliant on fishing for incomes;
- consider how to address instances where households have more than one individual named on the licence and householders (not on the licence) are also supported by the licence holder(s);
- will preferentially promote compensation payments to account for disparities in reported household incomes;
- will be informed by past compensation payments;
- may be informed by an inventory of fishing equipment; and
- will consider a mix agreed as appropriate between stakeholders (see above), described in Operator Interviews 20.11.14.

The entitlements matrix that was reviewed by IESC details:

- income compensation;
- asset compensation; and
- payment instalments.

However, the methodology and procedure was not provided so an assessment against the intent of the performance standard is not possible at this time. The Operator indicated that the methodology is anticipated to be included in a Fishing Livelihoods MP.

### **6.6.3 Private Sector Responsibilities Under Government-Managed Resettlement**

IESC considers that this criteria would only be triggered should the associated facility (ATA Yard) require a supplemental resettlement plan due to footprint expansion into municipality-owned land and displacement of individuals / groups from that site. The ESIA specifies that the construction contractor has responsibility for completion of any land acquisition processes (s.12.2.4), PS1 specifies "Contractors retained by, or acting on behalf of the client(s), are considered to be under direct control of the client and not considered third parties for the purposes of this Performance Standard" (PS1 para2). The ATA yard information suggests that due to SOCAR ownership there was no other land use, and so, no displacement. While contractually the ATA Yard is not required to develop any consultation MP (see PS1), the exact nature of the arrangements between the ATA Yard and BP are not clear with respect to any resettlement, and so lines of responsibility in documentation of yard activities and on the communities potentially displaced by it, are also not clear. A detailed baseline study for the site was not available for IESC review.

The expert advisors were to undertake data validation following the audit period. As such, ongoing engagement is continuing and in order to determine appropriate compensation packages, implement, monitor, evaluate and close out livelihood restoration. The Operator has a dedicated fishing liaison staff member with the team to facilitate this activity (as specified during Operator interviews).

**Table 6.6 Compliance Evaluation – Land Acquisition and Involuntary Resettlement**

PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
<b>5. PS5: Land Acquisition and Involuntary Resettlement</b>					
Scope of application	5	<p>PS5 applies to physical and/or economic displacement resulting from the following types of land-related transactions:</p> <ul style="list-style-type: none"> <li>· Land rights or land use rights acquired through expropriation or other compulsory procedures in accordance with the legal system of the host country;</li> <li>· Land rights or land use rights acquired through negotiated settlements with property owners or those with legal rights to the land if failure to reach settlement would have resulted in expropriation or other compulsory procedures;</li> <li>· Project situations where involuntary restrictions on land use and access to natural resources cause a community or groups within a community to lose access to resource usage where they have traditional or recognisable usage rights;</li> <li>· Certain project situations requiring evictions of people occupying land without formal, traditional, or recognisable usage rights ; or</li> <li>· Restriction on access to land or use of other resources including communal property and natural resources such as marine and aquatic resources, timber and non-timber forest products, freshwater, medicinal plants, hunting and gathering grounds and grazing and cropping areas.</li> </ul>	<p>The SD2 Project triggers PS5 due to restriction of access to marine resources, and potentially, loss of land use rights in the area of the associated facilities.</p> <p>The following areas which may be subject to physical/economic displacement:</p> <ul style="list-style-type: none"> <li>· access road;</li> <li>· SD2 expansion area;</li> <li>· pipeline landfall area;</li> <li>· construction camp areas; and</li> <li>· marine area.</li> </ul> <p>IESC notes that the associated facilities (including construction yards, waste treatment facility) are not included within the scope of this ESIA and so, have not been assessed to determine whether resettlement may be required.</p> <p><b>Transport route (permanent displacement)</b> The selected route was selected on the basis of minimal socio-economic and environmental impacts, as well as technical, regulatory, safety and other criteria.</p> <p><b>SD2 expansion area (permanent displacement)</b> IESC notes that seasonal herding at the ST was considered during the SD1/ACG project considered resettlement processes in April 2003. Completion audit verification has been completed.</p> <p><b>Associated facilities (permanent displacement)</b> Associated facilities for the SD2 Project have not been included in the documentation for review against PS5. ATA and BDJF yards are existing industrial areas. The BDJF footprint was not expanded for the SD2 Project, however ATA yard was. However, documentation of this site describes SOCAR ownership but does not adequately confirm any baseline information on other economic uses of the land.</p> <p><b>Nearshore pipeline work/Marine area (temporary displacement)</b> At the landfall site, under the terms of the SD PSA land</p>	<b>Partial Compliance</b>	<p>SD2 Livelihood baseline survey of small-scale fishing activities (BP-SFZZZ-EV-REP-0072-000-C02) SD2 ESIA s.7.9, s.1.3, EIW ESIA Table 4.3 SRAEP Completion audit, Oct 2010 NGO Verification audits, Dec 2009</p>
	6	<p>PS5 does not apply to resettlement resulting from voluntary land transactions (i.e., market transactions in which the seller is not obliged to sell and the buyer cannot resort to expropriation or other compulsory</p>			

		procedures sanctioned by the legal system of the host country if negotiations fail). It also does not apply to impacts on livelihoods where the project is not changing the land use of the affected groups or communities.	required for petroleum operations should be acquired by SOCAR and made available to the Operator. The SD2 Beachpull site land and pipeline right of way belonged to the state, and as part of the SD2 Project access and control of the land was required. Part of the Beachpull site was used by five individuals. BP entered into a settlement agreement with all five individual land users, pursuant to which agreed compensation was paid to the land users. The land has now been allocated to SOCAR and SOCAR has issued the land to BP as Operator under the terms of the SD PSA, and BP will lead construction activities to support SD2. Restriction on access to use of other resources (Marine resources) is triggered by the SD2 Project. Impact assessment on enforcement of the marine exclusion zone (ESIA s.12.3.1) recognises the potential impact to small scale fishermen; a fishing livelihood baseline survey has been developed prior to installation works. The survey has been undertaken (SD2 Livelihood Baseline Survey of Small scale Fishing activities, Nov 2014) to identify the location, status and ownership of any fishing gear that may be directly or indirectly impacted from construction works. A MP is now required and is understood to be in development.		
	7	Where project impacts on land, assets, or access to assets become significantly adverse at any stage of the project, the client should consider applying requirements of PS5, even where no land acquisition or land use restriction is involved.			
<b>General</b>					
Project design	8	Consider feasible alternative project designs to avoid or minimise physical/ economic displacement while balancing environmental, social and financial costs and benefits paying attention to impacts on the poor and vulnerable.	Alternative designs were considered in both the EIW and SD2 ESIA documents, including 'no Project' option was considered and rejected (SD2 ESIA s.4.1). The EIW ESIA considers alternative road alignments (EIW ESIA s.4.1.2). The footprint of the ST expansion site was assessed in EIW ESIA (EIW ESIA s.4.1.1). Construction camp location was selected following expansion site and access road locations (EIW ESIA s.4.1.3).	<b>Demonstrates Compliance</b>	SD2 ESIA s.4.1 EIW ESIA s.4.1.1, 4.1.2, 4.1.3
Compensation and benefits for displaced persons	9	<ul style="list-style-type: none"> <li>When displacement cannot be avoided, offer displaced communities and person's compensation for loss of assets at full replacement cost and other assistance.</li> <li>Transparent and consistent compensation standards to be offered to all communities</li> </ul>	The Small-scale Fishing Livelihoods Baseline Survey identifies next steps (Livelihoods baseline s.1.6). During audit interviews the Operator confirmed that determination of restoration measures will be based on factors including: past compensation payments and the informal nature of the work.	<b>Partial Compliance</b>	SD2 Livelihood baseline survey of small-scale fishing activities (BP-SFZZZ-EV-

		<ul style="list-style-type: none"> <li>and persons affected by the displacement.</li> <li>Where feasible offer those whose livelihoods are land based and are displaced from land, land-based compensation.</li> <li>Possession of acquired land and related assets will take place only after compensation has been made available and where applicable resettlement sites and moving allowances have been provided in addition to compensation.</li> <li>Provide opportunities to displaced communities and persons to derive appropriate development benefits from the project.</li> </ul>	<p>While work has commenced to progress livelihoods restoration, it is not confirmed whether final agreements will be in place with fishermen prior to the impact occurring. There has been development of the Fishing Livelihoods MP Entitlements Matrix, however the supporting MP has not been available to the IESC for review. The MP is anticipated to describe the methodology and procedure applied to development and agreement of the entitlements matrix, including any grievance process applied.</p>		REP-0072-000-C02) Fishing Livelihoods MP Entitlements Matrix
Community engagement	10	<ul style="list-style-type: none"> <li>Engage with affected communities, including host communities through stakeholder engagement as described in PS1.</li> <li>Decision-making processes should include options and alternatives to resettlement and livelihood restoration where applicable.</li> <li>Disclosure of relevant information and participation with communities will continue during planning, implementation, monitoring and evaluation of compensation payments, livelihood restoration and resettlement to achieve outcomes consistent with the objectives of PS5.</li> <li>Additional provisions apply to consultations with Indigenous Peoples, in accordance with PS7.</li> </ul>	<p>Community engagement with respect to fishing communities commenced with the Stakeholder and Socio-economic Survey (2011) that identified 48 affected households. Expert researchers have carried out the livelihoods restoration investigation, confirming the 48 affected households, 45 households directly reliant on fishing. There are 75% vulnerable households. A number of options are being considered for compensation. The expert advisors were continuing ongoing engagement in order to determine appropriate compensation packages, implement, monitor, evaluate and close out livelihood restoration. BP has employed a fishing liaison staff member to facilitate this activity (Interviews). A detailed engagement plan has not been sighted; BP will develop a SSF MP (Livelihoods baseline s.1.4).</p>	<b>Partial Compliance</b>	SD2 Livelihood baseline survey of small-scale fishing activities (BP-SFZZZZ-EV-REP-0072-000-C02) Operator interview 20.11.14
Grievance mechanism	11	<ul style="list-style-type: none"> <li>Establish a grievance mechanism consistent with PS1 as early as possible in the project development phase</li> <li>The grievance mechanism must be designed to receive and address specific concerns about compensation and</li> </ul>	<p>A grievance mechanism for small-scale fishermen will be established (Livelihoods s.1.6). A timeframe for its development has not yet been identified. It is anticipated that this will be included in the Fishing Livelihoods MP.</p>	<b>Partial Compliance</b>	SD2 Livelihood baseline survey of small-scale fishing activities (BP-SFZZZZ-EV-



		relocation raised by displaced persons or members of host communities in a timely fashion, including a recourse mechanism to resolve disputes impartially.			REP-0072-000-C02) Operator interview
Resettlement and livelihood restoration planning and implementation	12	<ul style="list-style-type: none"> <li>Where involuntary resettlement is unavoidable, either as a result of a negotiated settlement or expropriation, carry out a census to collect appropriate socio-economic baseline data to identify persons who will be displaced and determine who will be eligible for compensation and assistance and discourage ineligible persons, such as opportunistic settlers.</li> <li>In the absence of host government procedures, establish a cut-off date for eligibility.</li> <li>Document and disseminate information about the cut-off date throughout the project area.</li> </ul>	Independent expert consultants (as at 20.11.14) were reported by the Operator to have validated the baseline information prior to preparation of the entitlements matrix. The IESC is not aware of whether a cut-off date has been established publicly at this stage.	<b>Partial Compliance</b>	SD2 Livelihood baseline survey of small-scale fishing activities (BP-SFZZZZ-EV-REP-0072-000-C02)  Operator interview
	13	<ul style="list-style-type: none"> <li>In cases where affected persons reject compensation offers that meet the requirements of this PS and, as a result, expropriation or other legal procedures are initiated, explore opportunities to collaborate with responsible government agencies and if permitted play an active role in resettlement action planning, implementation and monitoring ( refer to 30 – 32).</li> </ul>	The Livelihood restoration framework is yet to be established. The Operator has committed to doing so through a SSF MP (Livelihoods Baseline Survey s.1.4). External experts have been engaged by the Operator to develop the SSF MP. It is not yet clear whether the Operator intends to completion audit after access to the exclusion zone is reinstated (at the conclusion of construction). It is anticipated that this would be documented in the Fishing Livelihoods MP.		SD2 Livelihood baseline survey of small-scale fishing activities (BP-SFZZZZ-EV-REP-0072-000-C02)
	14	<ul style="list-style-type: none"> <li>Establish procedures to monitor and evaluate the implementation of a RAP or livelihood restoration plan (LRP) (see paragraphs19-25) and take corrective action as necessary.</li> <li>Retain competent resettlement professionals to provide advice on PS compliance and to verify the client's</li> </ul>			



		<p>monitoring information for projects with significant involuntary resettlement.</p> <ul style="list-style-type: none"> <li>Persons will be consulted during the monitoring process.</li> </ul>			
	15	<ul style="list-style-type: none"> <li>Implementation of RAP or LRP considered complete when adverse impacts have been addressed in a manner consistent with the relevant plan as well as the objectives of this PS.</li> <li>Commission an external completion audit of the RAP and LRP if necessary (depending on scale and complexity of physical and economic displacement).</li> <li>The completion audit should be undertaken once all mitigation measures have been substantially completed and once displaced persons are deemed to have been provided adequate opportunity and assistance to sustainably restore their livelihoods.</li> <li>Competent resettlement professionals will undertake the completion audit once the agreed monitoring period is concluded.</li> <li>The completion audit will include, at a minimum, a review of the totality of mitigation measures implemented, a comparison of implementation outcomes against agreed objectives, and a conclusion as to whether the monitoring process can be ended.</li> </ul>			
	16	<ul style="list-style-type: none"> <li>Develop a resettlement and/or livelihood restoration framework outlining principles compatible with this PS where the exact nature or magnitude is unknown due to the stage of project development.</li> <li>Once the individual project components are defined and the necessary information becomes available, such a framework will be expanded into a specific RAP or LRP and</li> </ul>			

		procedures in accordance with paragraphs 19 and 25.			
<b>Displacement</b>					
	17	<p>Displaced persons may be classified as persons who:</p> <ul style="list-style-type: none"> <li>· Have formal legal rights to the land or assets they occupy or use;</li> <li>· Do not have formal legal rights to land or assets, but have a claim to land that is recognised or recognisable under national law; or</li> <li>· Have no recognisable legal right or claim to the land or assets they occupy or use.</li> <li>· The census will establish the status of the displaced persons.</li> </ul>	<p>The displaced persons have been established through the Baseline survey (Nov 2014), and was reported to have been validated during another field input. Physical displacement for the SD2 Project is not yet confirmed (see below). Economic displacement will occur to those fishing communities engaging in small scale fishing activities in the Sangachal Bay (see below). However, full documentation of census and land acquisition is anticipated in a Fishing Livelihoods MP.</p>	<b>Partial Compliance</b>	<p>SD2 Livelihood baseline survey of small-scale fishing activities (BP-SFZZZ-EV-REP-0072-000-C02)</p> <p>Operator interview 20.11.14</p> <p>SD2 ESIA s.7.9, s.1.3, EIW ESIA Table 4.3</p>
	18	<p>Project-related land acquisition and/or restrictions on land use may result in the physical displacement of people as well as their economic displacement. Consequently, requirements of this PS in respect of physical displacement and economic displacement may apply simultaneously.</p>			
Physical displacement	19	<ul style="list-style-type: none"> <li>· In the case of physical displacement develop a RAP that covers at minimum the applicable requirements of this PS regardless of number of people affected.</li> <li>· The plan will be designed to mitigate the negative impacts of displacement; identify development opportunities; develop a resettlement budget and schedule; and establish the entitlements of all categories of affected persons (including host communities).</li> <li>· Particular attention will be paid to the needs of the poor and the vulnerable.</li> <li>· All transactions to acquire land rights, as well as compensation measures and relocation activities will be documented.</li> </ul>	<p>Physical displacement for the SD2 Project is not likely to occur at Associated Facilities for the SD2 Project to trigger this criteria. This may include either the ATA Yard or Sarinja waste facility, but based on documentation reviewed to date, this is not likely given industrialisation of the area. However, baseline data has not been sufficiently detailed to ensure no physical displacement (refer PS1).</p>	<b>Demonstrates Compliance</b>	



	20	<ul style="list-style-type: none"> <li>· Offer those who have to move to another location feasible resettlement options, including adequate replacement housing or cash compensation where appropriate; and provide relocation assistance suited to the needs of each group of displaced persons.</li> <li>· New resettlement sites built for displaced persons must offer improved living conditions.</li> <li>· The displaced persons' preferences with respect to relocating in pre-existing communities and groups will be taken into consideration.</li> <li>· Existing social and cultural institutions of the displaced persons and any host communities will be respected.</li> </ul>			
	21	<ul style="list-style-type: none"> <li>· In the case of physically displaced persons under paragraph 17, offer choice of replacement property of equal or higher value, security of tenure, equivalent or better characteristics and advantages of location or cash where appropriate.</li> <li>· Compensation in kind should be considered in lieu of cash.</li> </ul>			
	22	<ul style="list-style-type: none"> <li>· In the case of physically displaced persons (paragraph 17), offer them a choice of options for adequate housing with security of tenure so that they can resettle legally without facing the risk of forced eviction.</li> <li>· Where displaced persons own and occupy structures, compensate them for the loss of assets other than land, such as dwellings and other improvements of the land at full replacement cost, provided these persons have been occupying the project area prior to the cut-off date for eligibility.</li> <li>· Based on consultant with such displaced persons, provide relocation assistance</li> </ul>			



		sufficient for them to restore their standard of living at an adequate alternative site.			
	23	· Not required to compensate or assist those who encroach on the project area after the cut-off date for eligibility, provided the cut-off date has been clearly established and made public.			
	24	· Forced evictions will not be carried out except in accordance with the law and the requirements of the this PS.			
Economic Displacement	25	<p>· In the case of projects involving economic displacement only, develop a LRP to compensate affected persons and/or communities and offer other assistance that meets the objectives of this PS.</p> <p>· The LRP will establish the entitlements of affected persons and/or communities and will ensure that these are provided in a transparent, consistent, and equitable manner. The mitigation of economic displacement will be considered complete when affected persons or communities have received compensation and other assistance according to the requirements of the LRP and this PS, and are deemed to have been provided with adequate opportunity to re-establish their livelihoods.</p>	<p>Economic displacement includes loss of access to fishing grounds which is triggered through the temporary loss of access to an exclusion zone in the Sangachal Bay and the nearshore environment prior to installation works. The survey has been undertaken (SD2 Livelihood baseline survey of small scale fishing activities, Nov 2014) to identify the location, status and ownership of any fishing gear that may be directly or indirectly impacted from construction works.</p> <p>During interviews, the Operator indicated that entitlements:</p> <ul style="list-style-type: none"> <li>· investigate 48 households identified thus far, focusing on the 45 households reliant on fishing for incomes;</li> <li>· consider how to address instances where households have more than one individual named on the licence and householders (not on the licence) are also supported by the licence holder(s);</li> <li>· will preferentially promote compensation payments to account for disparities in reported household incomes;</li> </ul> <p>The entitlements matrix details:</p> <ul style="list-style-type: none"> <li>· income compensation</li> <li>· asset compensation</li> <li>· payment instalments.</li> </ul> <p>However, the methodology is not provided. This is anticipated in a Fishing Livelihoods MP.</p>	<b>Partial Compliance</b>	SD2 Livelihood baseline survey of small-scale fishing activities (BP-SFZZZ-EV-REP-0072-000-C02) Operator interview 20.11.14 FLMP Entitlements Matrix
	26	· If land acquisition or restrictions on land use result in economic displacement defined as loss of assets and/or means of livelihood, regardless of whether or not the affected people are physically displaced, the client will meet the requirements in paragraphs 27–29, as applicable.			
	27	· Economically displaced persons who face loss of assets or access to assets will be compensated for such loss at full replacement cost.			



		<ul style="list-style-type: none"> <li>· In cases where land acquisition or restrictions on land use affect commercial structures, affected business owners will be compensated for the cost of re-establishing commercial activities elsewhere, for lost net income during the period of transition, and for the costs of the transfer and reinstallation of the plant, machinery, or other equipment.</li> <li>· In cases affecting persons with legal rights or claims to land which are recognised or recognisable under national law (see paragraph 17 (i) and (ii)), replacement property (e.g., agricultural or commercial sites) of equal or greater value will be provided, or, where appropriate, cash compensation at full replacement cost.</li> <li>· Economically displaced persons who are without legally recognisable claims to land (see paragraph 17 (iii)) will be compensated for lost assets other than land (such as crops, irrigation infrastructure and other improvements made to the land), at full replacement cost. The client is not required to compensate or assist opportunistic settlers who encroach on the project area after the cut-off date for eligibility.</li> </ul>			
	28	<p>In addition to compensation for lost assets, if any, as required under paragraph 27, economically displaced persons whose livelihoods or income levels are adversely affected will also be provided opportunities to improve, or at least restore, their means of income- earning capacity, production levels, and standards of living:</p> <ul style="list-style-type: none"> <li>· For persons whose livelihoods are land-based, replacement land that has a</li> </ul>			



		<p>combination of productive potential, locational advantages, and other factors at least equivalent to that being lost should be offered as a matter of priority.</p> <ul style="list-style-type: none"> <li>For persons whose livelihoods are natural resource-based and where project-related restrictions on access envisaged in paragraph 5 apply, implementation of measures will be made to either allow continued access to affected resources or provide access to alternative resources with equivalent livelihood-earning potential and accessibility. Where appropriate, benefits and compensation associated with natural resource usage may be collective in nature rather than directly oriented towards individuals or households.</li> <li>If circumstances prevent the client from providing land or similar resources as described above, alternative income earning opportunities may be provided, such as credit facilities, training, cash, or employment opportunities. Cash compensation alone, however, is frequently insufficient to restore livelihoods.</li> </ul>			
	29	<ul style="list-style-type: none"> <li>Transitional support should be provided as necessary to all economically displaced persons, based on a reasonable estimate of the time required to restore their income-earning capacity, production levels, and standards of living.</li> </ul>			
<b>Private sector responsibilities under government managed resettlement</b>					
	30	<ul style="list-style-type: none"> <li>Where land acquisition and resettlement are the responsibility of the government, collaborate with responsible government agency to the extent permitted by the agency, to achieve outcomes that are consistent with this PS.</li> </ul>	<p>IESC considers that this criteria would only be triggered should the associated facility (ATA Yard) require a supplemental resettlement plan due to footprint expansion into municipality-owned land and displacement of individuals / groups from that site. The ESIA specifies that the construction contractor has responsibility for completion of</p>	<b>Demonstrates Compliance</b>	SD2 ESIA s.12.2.4)



		<ul style="list-style-type: none"> <li>In addition, where government capacity is limited, play an active role during resettlement planning, implementation, and monitoring, as described below.</li> </ul>	<p>any land acquisition processes (s.12.2.4), PS1 specifies "Contractors retained by, or acting on behalf of the client(s), are considered to be under direct control of the client and not considered third parties for the purposes of this Performance Standard" (PS1 para2). The ATA yard information suggests that due to SOCAR ownership there was no other land use, and so, no displacement. A detailed baseline study for the site was not available for IESC review.)</p>		
	31	<ul style="list-style-type: none"> <li>In the case of acquisition of land rights or access to land through compulsory means or negotiated settlements involving physical displacement, identify and describe government resettlement measures.</li> <li>If these measures do not meet the relevant requirements of this Performance Standard prepare a supplemental resettlement plan that together with the documents prepared by the responsible government agency, will address the relevant requirements of this PS (see General Requirements and requirements for Physical Displacement and Economic Displacement).</li> <li>Supplemental Resettlement Plan, must include at a minimum (i) identification of affected people and impacts;(ii) a description of regulated activities, including the entitlements of displaced persons provided under applicable national laws and regulations;(iii) the supplemental measures to achieve the requirements of this Performance Standard as described in paragraphs 19–29 in a way that is permitted by the responsible agency and implementation time schedule; and (iv) the financial and implementation responsibilities of the client in the execution of its Supplemental Resettlement Plan.</li> </ul>			
	32	<ul style="list-style-type: none"> <li>In the case of projects involving economic</li> </ul>			



# SUSTAINABILITY

FUTURE GROWTH

		<p>displacement only, identify and describe the measures that the responsible government agency plans to use to compensate affected communities and persons.</p> <ul style="list-style-type: none"><li>· If these measures do not meet the relevant requirements of this PS develop an Environmental and Social Action Plan to complement government action.</li><li>· This may include additional compensation for lost assets, and additional efforts to restore lost livelihoods where applicable.</li></ul>			
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## **6.7 PERFORMANCE STANDARD 6 – BIODIVERSITY CONSERVATION AND SUSTAINABLE MANAGEMENT OF LIVING NATURAL RESOURCES**

This section provides comment on the baseline characterisation and impact analysis of the biodiversity and natural resource assets associated with the Project area. The analysis focused on the adequacy of mitigation measures, MPs and Project monitoring. Particular attention was given on requirements for modified, natural and critical habitats and on legally protected areas and invasive species, which are the principle tenets of PS6, *Biodiversity Conservation and Sustainable Natural Resource Management*.

### **6.7.1 General**

#### **Direct and Indirect Impacts to Biodiversity**

Impacts to biodiversity are assessed for construction and operational phase including onshore and offshore activities under routine and non-routine scenarios. Specific assessment of construction and operational noise on bird species; flaring impacts to birds; impacts to marine species from drilling and completion discharges; potential affects to marine species from underwater noise; disturbance impacts from pipelines, wells, shore crossing and ST expansion; impacts to marine species from unplanned release of condensate and diesel.

At a regional level, the coastal zone of the Caspian Sea has been identified as an area of ornithological importance as it supports both internationally and nationally significant numbers of migrating and overwintering birds. Bird species of local and international importance are also known to frequent the coastline. Part of Sangachal Bay, immediately to the south of the proposed SD2 Pipeline Corridor, has been designated (not nationally designated) as a Key Bird Area (KBA)/Important Bird Area (IBA) as it is used by up to 25,000 migratory and overwintering birds. The area of the KBA nearest the ST is currently disturbed year round by noise from highway traffic which passes approximately 50m from the shoreline. Birds using the area are therefore likely to be habituated to vehicle noise. The major flyway for migrating waterfowl and coastal birds, which is most active during March and November, passes over the route of the proposed SD2 Pipeline Corridor.

Nine bird species of conservation significance have been recorded in the area surrounding ST since 2008, including the OUCN endangered Saker Falcon. Five species of IUCN listed endangered Sturgeon fish have been recorded within and adjacent to the SD contract area from 2008 surveys.

The bird surveys undertaken in the ST vicinity since 2008 have identified breeding birds within the area surrounding the ST. However, the habitat within the proposed onshore SD2 export pipeline corridor or ST expansion is not considered critical to breeding birds. They have been recorded throughout the area surrounding the ST and use no area exclusively for feeding or nesting.

Habitat assessments include the semi-desert terrestrial vegetation in the area of the ST expansion for SD2 and the wetland area on the eastern boundary of the ST, which will be disturbed by the condensate export pipeline crossing. These habitats were assessed as having limited biodiversity and ecological values. The coastal environment disturbed by the shore crossing of SD2 related pipelines was assessed in consideration of recognised conservation areas. The area has been previously disturbed by past pipe laying activities associated with SD1 and ACG developments and rehabilitation of the coastal environment from those activities was deemed to be successful.

Faunal surveys undertaken between 2002 and 2011 have confirmed the presence of the following in the ST vicinity:

- Euphrates jerboa (*Allactaga elater*) – International Union for Conservation of Nature (IUCN) Least Concern;
- Grey hamster (*Cricetulus migratorius*) – IUCN Least Concern;

- Marbled polecat (*Vormela peregusna*) – IUCN Vulnerable and Azerbaijan Red Data Book listed;
- Wolf (*Canis lupus*) – no designated conservation status in Azerbaijan;
- Sunwatcher Agama (*Phrynocephalus helioscopus*) – no designated conservation status in Azerbaijan Azerbaijan Red Data Book listed; and
- Spur-thighed tortoise (*Testudo graeca*) – IUCN Red Data List Vulnerable and Azerbaijan Red Data Book listed.

These species have all been found in low numbers (one or two individuals on any occasion) and, with the exception of the spur-thighed tortoise, have not been recorded consistently in surveys. The spur-thighed tortoise is likely to have been consistently recorded in surveys due to the relocation programme that was undertaken prior to and following the previous ACG and SD projects where spur-thighed tortoise were collected prior to the works and then reintroduced once the works were completed. The majority of suitable habitat for this species lies outside the area to be affected by the pipeline installation works. The areas to be affected are not considered to be critical or of particular importance for this species.

Indirect threats to biodiversity and ecosystems include assessment of impacts to water quality and sediments from drill cuttings disposal and sub-sea pipeline installation for potential impacts to benthic habitats and phytoplankton.

In 2008, the Caspian Seal was listed as 'Endangered' on the IUCN red list. No seals are known to currently breed in the Azerbaijani sector of the Caspian Sea and there are no records of seals occurring within Sangachal Bay. The Caspian seal is a transboundary species that migrates throughout the whole of the Caspian over an annual cycle. As such there is no exclusive Azerbaijan population although the species does make use of Azeri waters at different times of the year. Seal activity in the SD Contract Area is expected to be highest in spring when up to 4,000 seals may migrate towards Iranian Waters to the south. During the migration north in the autumn, numbers are expected to be less (1,000-2,000 individuals), with the seals travelling alone or in small shoals. Small numbers of seals are expected to be present in summer (approximately 500) with only very low numbers present in the winter months. Project related activities that may impact the Caspian seal populations migrating within or near the SD2 Contract Area have been assessed and include noise from drilling and operations and unplanned oil spill events.

The ESIA does not systematically identify and assess ecosystem services but does assess the Project's activities that affect terrestrial vegetation used for grazing, changes in hydrology at the ST expansions site and impacts to near shore ecology from pipeline shore crossings. Fish monitoring survey locations have been established along the coastal zone near the SD2 pipeline shore crossing works and include specific monitoring of species of commercial value.

The SD2 offshore area of impact and surrounds is already impacted by the presence of invasive marine species, particularly the benthos of the coastal zone. Water-column surveys in the SD2 Contract Area in recent years have indicated a substantial decline in native and endemic species, to the extent that the zooplankton community is dominated by two invasive species; the copepod *Acartia tonsa* and the ctenophore *Menmiopsis leydii*.

Habitat associated with onshore terminal construction and shore crossing has been assessed based on data gathered since 2008. Habitats associated with coastal wetlands are not identified as significant and have been substantially altered from industrial land use. The proposed onshore SD2 export pipeline corridor route will pass through predominantly desert/semi-desert habitat and along the eastern fringes of the wetland area south of the Terminal. The pipeline installation works will require the removal of vegetation and surface soil from an area of approximately 35 hectares (ha). The impact will be temporary as it is planned to reinstate the area affected along the route to its pre-construction condition. This approach is consistent with previous pipeline installation

and reinstatement activities completed for the earlier ACG and SD projects. Surveys completed following previous works have shown reinstatement has been successful and no significant impacts to terrestrial ecology have been recorded.

### **Biodiversity Impact Avoidance and Mitigation**

The SD2 ESIA includes terrestrial biodiversity mitigation measures during construction activities include:

- Prior to removal, vegetation will be inspected to detect the presence of wildlife and activities ceased until appropriate action is taken to ensure any wildlife encountered is not harmed within the ST vicinity;
- Areas for laydown of soil or loose construction materials will be identified to minimise impacts to habitats and potential for erosion and sedimentation into watercourses or drains located within the ST vicinity;
- Checks for wildlife will be undertaken prior to backfilling of the onshore pipeline trench. Any reptiles and mammals in the trench will be removed;
- An Ecological and Wildlife MP will be developed for ST vicinity and implemented to manage the relocation of any mammals, reptiles or any IUCN or Azerbaijan Red Data Book listed species encountered within the areas affected by the SD2 Project works.

The implementation of these measures during construction activities undertaken predominantly by contractors is planned through the ESMMP and through construction specific plans including the Ecological and Wildlife Protection MP (10/1/2014) and the Restoration and Landscape MP (14/01/2014).

Offshore construction activities associated with pipe laying, drilling and installations have been identified as having potential underwater noise impacts to seal (IUCN endangered Caspian Seal) and fish (includes the IUCN listed endangered *Sturgeon* species). This assessment focuses on the thresholds for auditory injury and strong behavioural reactions against which to assess potential impacts to fish and seals. Pipelaying activities in the nearshore and offshore environment is predicted to result in strong behavioural reactions in seals up to a distance of 570m from the source, while the corresponding ranges for hearing-generalist fish and hearing-specialist fish are 40m and 670m, respectively. Subsea installation activities involving a crane barge and a survey vessel operating close together are predicted to result in strong behavioural reactions in seals up to 60m, while corresponding ranges for hearing-generalist fish and hearing-specialist fish are 20m and 82m, respectively. The potential underwater noise impacts from construction activities offshore were assessed as moderate negative impacts due to the short-term duration of the activity and the temporary presence of sensitive receptors (seals and fish) in the vicinity of the activity.

The selection of near shore condensate export pipeline corridor considered the environmental data provided from Environmental surveys have been conducted in the Sangachal Bay area in 1996, 2000, 2003, 2006, 2008 and most recently in 2010 and 2011. The objective of the surveys is to provide information on the sediment chemistry, physical characteristics, macrobenthic fauna and plankton of Sangachal Bay.

The area of Sangachal Bay in which the proposed SD2 Export Pipeline Corridor is located is biologically similar to the main Bay area. Surveys of the area between 2008 and 2011 found no 'new' taxa and the natural variability between stations within the proposed SD2 Export Pipeline Corridor area was similar to that routinely observed within the main survey area.

### **Biodiversity Monitoring**

BP's AGT Region has implemented an Environmental Monitoring Programme designed to provide a long-term set of data, with the objective of ensuring an accurate picture of potential impacts on the surrounding environment, so that they can be managed and mitigated as effectively as possible. The Environmental Monitoring Programme follows a 10 year schedule and detailed monitoring plans are prepared for the next 3 years, with outline planning for the following 7 years. This approach allows a progressive and systematic modification of the programme to take into account the results and conclusions of the programme to date.

Offshore marine monitoring includes:

- Baseline surveys – to provide a general understanding of the physical, chemical and ecological parameters at a particular location before development commences. Any unusual or sensitive ecological features, which might affect the design of a development, can also be identified;
- Post-drill surveys – completed following drilling operations in order to assess the impact of drilling discharges on the surrounding environment;
- Routine environmental monitoring surveys – to provide an assessment of the impact of AGT Region operations; and
- Regional surveys – completed to permit the identification and type of environmental changes and trends that occurs over time.

Offshore marine monitoring has been conducted as part of the SD Contract Area development, with the primary focus being the benthic environment as sediments and their associated biological communities are widely considered to be the source of the most reliable indicators of ecological status and impact. Periodic water quality sampling is also undertaken.

In terms of onshore terrestrial operations, effort has focused on environmental monitoring in the vicinity of the ST in the form of terrestrial ecosystem monitoring, bird surveys, ambient air quality monitoring, and groundwater and surface water quality monitoring. In addition, nearshore fish monitoring and biomonitoring has been conducted within Sangachal Bay and future surveys will be conducted in accordance with the 10 year schedule. The Restoration and Landscape MP (IESC yet to review) is proposed for ST vicinity and will include details of the amount of spoil generated, reused, disposed of and the contamination potential of the spoil. The Plan will also cover details of restoration to restore all areas of disturbed land used on a temporary basis during the SD2 Project works to a condition which is similar to that at preconstruction.

The environmental monitoring programme will be expanded for the SD2 Project, to integrate operational monitoring of key discharges carried out by the AGT Region with the aim of regular monitoring is to establish an understanding of trends over time, taking into account results of concurrent regional surveys and initial baseline data. Combined with operational discharge monitoring, this approach provides a robust basis for assessing the impact of SD2 Project operations, and for comparing the observed impact with that predicted in the ESIA.

Baseline surveys have been completed at the platform and cluster locations. Surveys associated with the pipeline nearshore trenching are also completed. Fish population surveys were undertaken one year prior to trenching activities, during trenching and once trenching has been completed. Pre and post trenching seabed surveys will be undertaken. Post trenching seabed surveys will be undertaken one and three years after completion of trenching activities.

Environmental monitoring activities undertaken during the construction phase are carried out within the framework of the ESMMP and include surveys to ensure that management controls are effective.

### **Advice from External Experts**

Under the SD PSA, responsibility for the preparation and approval of environmental surveys associated with the Environmental Monitoring Programme rests with the Environmental Sub-Committee, which carries out an annual review of planned survey activities. The ESC comprises representatives of key stakeholders such as the SOCAR, the Council of Ministers, the MENR and the Azerbaijan National Academy of Sciences (ANAS). Practical supervision and review of ongoing activities is delegated to the ACG & SD Environmental Monitoring Technical Advisory Group, which comprises environmental specialists representing these organisations.

The SD2 Project, through the BP AGT Region, participates in regional efforts for Caspian seal conservation via the Caspian Environment Programme. The CEP was set up in 1998 with the backing of the five Caspian littoral states (Iran, Azerbaijan, Russia, Kazakhstan and Turkmenistan) to establish procedures for the conservation, management and sustainable development of the Caspian environment. A number of subsequent surveys and projects have been set up specifically in relation to the Caspian seal conservation.

### **6.7.2 Protection and Conservation of Biodiversity**

The SD2 ESIA provides a comprehensive assessment of biodiversity values of the terrestrial, coastal, inshore marine and offshore marine areas likely to be impacted by Project activities. The assessment relies on a monitoring data base that extends over a period of at least 10 years in most cases and covers the previous ACG and SD Projects. The assessment includes identification of species of international and national conservation significance, the habitats that support these species and the potential threats from Project related activities. Although the ESIA has not applied a PS6 specific critical habitat assessment, biodiversity values are assessed in consideration of species significance, habitat richness, proximity to recognised conservation areas, the unique characteristics of habitats, economic and social significance of habitats/species and international and national conservation status.

#### **Terrestrial Habitats**

The dominant habitats south of the ST are Desert/semi-desert and wetlands. The main vegetation assemblages in the vicinity of the ST are dominated by low perennial shrubs including coastal zone variants and others in association with grasses. None of the species present identified within the desert/semi-desert habitats area is included in the Azerbaijan Red Data Book or classified as vulnerable/threatened by the IUCN. The survey noted that the desert habitats in the vicinity of the ST are generally well grazed.

Wetland – the primary wetland area is located to the south of the ST. The wetland appears to be primarily fed by ephemeral watercourses including the Shachkaiya Wadi, together with other surface water runoff and some contribution from leakages in water pipes and discharges from the Sangachal Water Pump Station Baku Water Channel Department. In general, the wetlands are considered to comprise a complex mixture of habitats, which developed following construction of the Baku-Salyan Highway, adjacent railway line and the third-party pipeline corridor between the railway line and the ST. The wetlands experience high rates of siltation which has resulted in an impeded water flow that causes water to be retained across a series of topographical depressions.

The results of previous terrestrial flora surveys have indicated the presence of floral species included in the Azerbaijan Red Data Book or IUCN lists within the regional area, the latest 2011 data indicates that none of these species are located south of the ST. Local vegetation is therefore characterised by floral species which are typical for the area and are neither rare nor threatened.

### **Terrestrial Fauna**

During the 2002 wetland survey, three species of amphibians were recorded: All three amphibian species have been assessed against IUCN criteria and have been categorised as Least Concern. The European pond turtle is classified as Near Threatened by the IUCN. None of these species are included in the Azerbaijan Red Data Book .

Previous fauna surveys of the area surrounding the ST have identified the following IUCN Least Concern categorized species: sunwatcher agama, small five-toed jerboa, grey hamster and wolf. The spur-thighed tortoise and marbled polecat are listed as Vulnerable by the IUCN and are included in the Azerbaijan Red Data Book . The small five-toed jerboa is also included in the Azerbaijan Red Data Book. The 2008 survey for the same approximate area identified three species of reptile, rapid racerunner lizard (*Eremias velox*), snake-eyed lizard (*Ophisops elegans*) and Caspian bent-toed gecko (*Cyrtopodion caspium*). The Caspian bent-toed gecko has been assessed against the IUCN criteria and has been categorised as Least Concern. The ESIA states that the rapid racerunner and snake-eyed lizards have not yet been evaluated against the IUCN criteria.

The monitoring undertaken at and surrounding the ST to date indicates no evidence that the activities at the ST have had a significant impact on fauna. The presence of a number of species included within the IUCN and/or Azerbaijan Red Data Book lists have been recorded. However, these have generally been limited to a single survey. The exception is the spur-thighed tortoise (which is an IUCN Red list Vulnerable and Azerbaijan Red Data Book listed species).

While spur-thighed tortoises have been consistently recorded in the area surrounding the ST, their precise distribution has not been determined. The likely reason for the consistent records of this species is due to the relocation programme undertaken prior to and following the previous ACG and SD projects in which spur-thighed tortoise were collected prior to the works and then reintroduced away from the ST once the works were completed.

### **Birds**

Breeding bird surveys have been undertaken in the ST vicinity since 2001 with the most recent surveys completed in 2008, 2009, 2010 and 2011. Of the bird species recorded during the 2008 and 2009 surveys in the ST vicinity, a total of 23 species are considered to be resident. The 2010 and 2011 bird surveys recorded a similar number species, 86 and 88, respectively, with 27% of the bird species recorded as resident. Of these, 9 species are categorised as having conservation significance. Two species are IUCN endangered (Saker falcon and Egyptian vulture), two species are IUCN vulnerable, one species is listed as IUCN near threatened and also Azerbaijan Red Data Book listed, one species is IUCN near threatened only and one species is Azerbaijan Red Data Book listed only.

There is no evidence within the surveys completed to date to indicate that the habitat within the area around the ST is of unique value to breeding birds. Breeding birds are most sensitive to sudden unexpected and loud noise such as hammering. The ESIA analysis of available data suggests that birds frequently become habituated to anthropogenic noise including construction noise, with no recorded effect on behaviour or breeding success. The survey results obtained within the ST vicinity show there has been little change in the richness and number of bird species over time and suggest that the breeding birds are likely to be habituated to the industrial noise from the ST, Sangachal Power Station, highway traffic noise and other industrial activities in the area.

The Coastal Zone area to be impacted by the condensate export pipeline shore crossing and beach pull has been previously impacted by quarrying and disturbance and rehabilitation associated with past ACG and SD developments. The area supports desert vegetation similar to that of disturbed habitat around the SD2 Expansion Area and is dominated by sparse *Salsola nodulosa*. The area where the previous ACG/SD pipelines were installed has been rehabilitated using live plants. The results of surveys undertaken in 2007 and 2010

indicate that this effort has been successful with up to 57% vegetation cover by perennial species identified in 2010. There are no rare or threatened species present and habitat is typical of the area within the ST vicinity.

### **Coastal Birds**

At a regional level, the coastal zone of the Caspian Sea has been identified as an area of ornithological importance as it supports both internationally and nationally significant numbers of migrating and overwintering birds. Bird species of local and international importance are also known to frequent the coastline. Part of Sangachal Bay, immediately to the south of the proposed SD2 Pipeline Corridor, has been designated as a KBAIBA as it is used by up to 25,000 migratory and overwintering birds. The area has not been nationally designated. The area of the KBA nearest the ST is currently disturbed year round by noise from highway traffic which passes approximately 50m from the shoreline. Birds using the area are therefore likely to be habituated to vehicle noise. The major flyway for migrating waterfowl and coastal birds, which is most active during March and November, passes over the route of the proposed SD2 Pipeline Corridor. Birds using this route are primarily migrating to the southern coast of the Caspian Sea, the Kur-Araz lowland, Turkmenistan, southwest Asia and Africa for the winter and then fly north along the same route during spring.

### **Nearshore Environment:**

Sangachal Bay is a dynamic shallow water area with a mixture of habitats and sediment types. Benthic flora species within Sangachal Bay are predominately seagrass and algae. Dense beds of seagrass were present close to the shoreline in water depths of 1-3m, which form a coastal band approximately 200-500m wide. A narrow band of seagrass was also found in deeper water (6- 7m) nearly 2km from the shoreline, in an area of gravel. Seagrass was not present in areas of fine-grained soft muds and silts or growing on rock outcrops. The 2008 survey detected an increase in seagrass throughout Sangachal Bay since the 2006 survey and a fall in the area of algal habitat. Several species of macroalgae were identified, including six species of red algae. The majority of the macroalgae were found growing on hard substrata such as areas of rock outcrops, mussels, barnacles and dead shell fragments, in water depths of 5-11m. The species of seagrass and algae, which are neither rare nor threatened, are present throughout Sangachal Bay. Evidence suggests that the seagrass beds are either stable or expanding.

### **Nearshore biological characteristics**

The results of the most recent (2011) nearshore biological surveys indicate that the area of the Bay in which the proposed SD2 Export Pipeline Corridor is located is biologically similar to the main Bay survey area. No 'new' taxa were observed, and the natural variability between stations within the proposed SD2 Export Pipeline Corridor area was similar to that routinely observed within the main survey area. The 2008, 2010 and 2011 surveys also provide a clear indication of temporal variability, with a notable fluctuation in the numbers of amphipod and gastropod taxa. While amphipods and gastropods influence the overall species richness of the area, they occur at low frequency and abundance and therefore are unlikely to represent a significant component of community function. The benthic communities are dominated by polychaetes, oligochaetes, and bivalves; most of the biomass is contributed by invasive or introduced polychaete and bivalve species. While there are changes in dominance between successive surveys, there is no persistent trend.

The surveys indicate that the benthic community structure are subject to change which reflects the dynamic nature of Sangachal Bay; it is a shallow water environment, in which storm wave action will tend to occasionally redistribute sediment within the Bay, and may also occasionally introduce sediment from the adjacent coastal shelf area. Such shallow water areas are generally robust, as the communities are adapted to regular physical disruption. The macrobenthic community is dominated by relatively hardy annelids and bivalves; those taxa likely to be most sensitive to pollution.

Plankton within Sangachal Bay is dominated by alien/invasive species. The 2008 survey reports that since 2006, the zooplankton community of *Acartia tonsa* and *Mnemiopsis leidyi* has increased in abundance by nearly eight times. The results of the 2010 survey indicate a continued dominance by these invasive taxa.

### **Nearshore Fish and Mammals**

As part of the Environmental Monitoring Programme, regular fish monitoring is undertaken in the Sangachal Bay to ascertain the presence, contamination levels and health status of the fish population. The most recent surveys were completed in 2008 and 2009. A total of 11 fish species were caught, identified and enumerated in October 2008, and 10 fish species were identified and enumerated in May 2009. Among fish present in the catch, Sprat, Caspian roach, Kutum, Zherekh and Mullet have a commercial value whereas the Sandsmelt and Gobies have no commercial value. However, Sandsmelt and Gobies form part of the diet of valuable commercial fish such as Sturgeon, Salmon and predatory herrings.

In general, the results indicated that the health status of the fish in the survey area is satisfactory.

The Caspian Seal (*Phoca caspica*) is the only marine mammal in the Caspian Sea basin and is endemic to the area. An aerial survey carried out under the Darwin Initiative project in the North Caspian found that in the past decade the numbers of seals in the Caspian Sea reduced from approximately 400,000 to 111,000. In 2008, the Caspian Seal was listed as 'Endangered' on the IUCN red list. No seals are known to currently breed in the Azerbaijani sector of the Caspian Sea and there are no records of seals occurring within Sangachal Bay.

### **Offshore Biological Environment**

The SD Contract Area lies within the Central Caspian Basin, and comprises a shelf edge and a sloped area. The escarpment dissects the Contract Area from north-west to south-east. The sloped area ranges from a minimum water depth of approximately 60m in the north-east to a maximum of almost 700m in the south-east.

Seabed sediments: A total of 69 taxa were identified in the 2009 SD Contract Area Regional Survey. This is considerably less than the 108 taxa identified in the 2007 SDA Platform Location Baseline Benthic Survey and emphasises the distinctive nature of the area around the SDA location. Amphipod, oligochaete and gastropod species richness has declined moderately over time at the SD regional stations, while the number of polychaete, cumacean and bivalve species has remained fairly constant. There is no consistent trend in average abundance for any taxonomic group. The total number of species was considerably higher in 1998 (at 90), but has remained relatively constant at between 56 and 62 since 2000. This contrasts with a progressive increase in species richness within the coarser sediments around the SDA platform.

The benthic environment is dominated by small amphipods, polychaetes and oligochaetes, the majority of which are native or endemic species. These animals are dependent for food on organic material within the sediments, or in particulates immediately above the sediment. The primary forms of potential sensitivity are chemical contamination, smothering and physical disturbance of habitat which occurs from seabed disposal of WBM cuttings as has occurred for the Project activities within the ACG and SD Contract Areas. Monitoring over a number of years at ACG and SD offshore facilities has demonstrated that discharge of WBM drill cuttings do not lead to the chemical contamination of the sediment. Where cuttings deposits are deep (tens of centimetres to metres), the benthic habitat is effectively eliminated. With shallower deposits (less than 10cm, for example), burrowing organisms are capable of re-establishing themselves near the surface quite rapidly. Alteration of the structure of the habitat by physical events such as cuttings deposition has the potential to interfere with the construction of burrows and with feeding. Monitoring indicates that that, even when high barium concentrations indicate the presence of cuttings, there is little evidence that the structure of the habitat has been substantially altered.

During periods of discharge, very short-term disruption might occur within a small area, but adaptation will take place rapidly.

Most offshore biological communities contain one to three native species of filter-feeding bivalves. These organisms are not highly vulnerable to short-term high water turbidity arising from cuttings discharge, as they can close their valves and isolate themselves for several days if necessary. They are, however, effectively immobile and attached to their substrate, and are consequently more vulnerable to smothering from deposits of more than 1-2cm.

**Zooplankton:** Surveys between 2000 and 2009 show an increasing dominance of invasive zooplankton species. Native cladocera were represented by very low numbers of only two or three species (10 species were present in the 2001 survey). This data appears to reflect a significant decline in zooplankton diversity, which may be associated with the continued presence of *Mnemiopsis sp*, an invasive species of comb jelly, which has no natural predators and which itself is an effective predator on zooplankton and fish larvae.

**Phytoplankton:** The composition and diversity of the phytoplankton has remained comparatively unchanged over the monitoring period for the SD contract area. The phytoplankton was of similar diversity to the zooplankton in 2000 and 2001, with a total of 33 species identified in samples collected from three surveys. An additional four species were identified in the 2005 regional survey, bringing the total for the Contract Area to 37 species.

The residual operational impacts of the SD2 Project on biodiversity values are all assessed as minor. The continuation of the BP AGT environmental monitoring program will identify any significant residual impacts, not identified in the ESIA that may arise from both the construction and operational phases.

#### **Modified Habitat**

The onshore and offshore Project affected environments would classify as modified habitats due to extent of past disturbance, land use, invasive species and historic contamination. The proposed mitigation and management measures to be applied during the construction and operational phases of the Project as stated in the ESIA appear to sufficient and relevant to the potential for and significance of predicted impacts. However, detailed construction phase management measures have not been reviewed by the IESC.

#### **Critical Habitat**

No critical habitat has been identified within the Project Area of Influence. The Caspian seal migration through SD Contract Area of insufficient size to trigger Critical Habitat determination.

#### **Ecosystem Services**

No specific ecosystem services assessment completed for the Project. However, the ESIA has identified and assessed the interactions between the social and ecological values within the Project's potentially affected areas with specific relevance to the supporting services provided by coastal marine ecology and water quality for the maintenance of commercial fish stocks. The assessment includes direct and indirect impacts to fish stocks of commercial value through changes to water quality, seabed disturbance, changes to marine and coastal ecology, contamination of sediments and impacts of underwater noise resulting in temporary avoidance of the Project area. However, full compliance with this requirement would require specific ecosystem service assessment to be reviewed.

**Fish:** The SD Contract Area monitoring has identified migratory, semi migratory and resident species. Migratory species include the endangered sturgeon and shad species who spawn in in the rivers of the south-western and southern Caspian. Monitoring has identified individuals passing through the Contract Area. Resident species include non-commercial gobies that are common throughout the areas. Kilka is the most abundant commercial fish in the region and are widely distributed, including the Contract Area. Mullet are introduced species that occur in the area. IUCN endangered species include five species of Sturgeon. Fish species are vulnerable to drilling and completion works and subsea developments including pipe lays due to avoidance of sediment plumes and underwater noise.

Caspian Seal, is the only marine mammal present in the region and is endemic to the Caspian Sea. The species has been listed on the IUCN red list as 'Endangered' since October 2008. The Caspian seal population has decreased by more than 90% since the start of the 20<sup>th</sup> century and continues to decline, considered to be due to commercial hunting, habitat degradation (through introduction of invasive species), disease, industrial development, pollution and fishing operations using nets. The known migratory route of the population of Caspian seal in the Azerbaijani sector of the Caspian Sea passes through the SD Contract Area and is expected to be highest in spring when up to 4000 individuals may migrate south towards Iranian waters. The Caspian seal is expected to be sensitive to and will avoid highly turbid sediment plumes and underwater noise that is associated with SD2 well development, subsea installations and pipe laying activity.

### **Biodiversity Offsets**

There are no planned biodiversity offsets for this Project. Residual impacts from construction phase include moderate impacts to birds near the SD2 ST construction site and onshore pipe lay construction from excessive construction noise. This impact is expected to be temporary. Similarly the residual negative ecological impacts from shore crossing pipeline construction are temporary as site restoration works are expected to be successful (as per previous SD Project). The application of the Restoration and Landscape MP during and post construction requires that temporary disturbed land, including the third party operated shipyards, be restored in accordance with agreed criteria by the relevant contractors and inspected by BP for compliance to the criteria.

The offshore construction impacts to ecological values include pipeline commissioning discharges and noise from offshore construction. Again, these impacts are temporary in nature and therefore offsets would not be

**Table 6.7 Compliance Evaluation – Biodiversity Conservation and Sustainable Management of Living Natural Resources**

PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
<b>General</b>					
General	6	<p>In the risks and impacts identification process (PS1) consider direct and indirect project- related impacts on biodiversity and ecosystem services and identify significant residual impacts. The process should consider:</p> <ul style="list-style-type: none"> <li>· threats to biodiversity and ecosystems services focus habitat loss, degradation and fragmentation, invasive alien species, overexploitation, hydrological changes, nutrient loading, and pollution; and</li> <li>· the differing values attached to biodiversity and ecosystem services by Affected Communities and other stakeholders.</li> </ul>	<p>Impacts to biodiversity are assessed for construction and operational phase including onshore and offshore activities under routine and non-routine scenarios. Part of Sangachal Bay, immediately to the south of the proposed SD2 Pipeline Corridor, has been designated (not nationally designated) as a KBAIBA.</p> <p>The ESIA does not systematically specifically identify and assess ecosystem services but does assess the Project’s activities that affect terrestrial vegetation used for grazing, changes in hydrology at the ST expansions site and impacts to near shore ecology from pipeline shore crossings. Fish monitoring survey locations have been established along the coastal zone near the SD2 pipeline shore crossing works and include specific monitoring of species of commercial value.</p> <p>The SD2 offshore area of impact and surrounds is already impacted by the presence of invasive marine species, particularly the benthos of the coastal zone. Water-column surveys in the SD2 Contract Area in recent years have indicated a substantial decline in native and endemic species, to the extent that the zooplankton community is dominated by two invasive species.</p>	<b>Demonstrates Compliance</b>	SD2 ESIA
	7	Avoid impacts on biodiversity and ecosystem services. When not possible, implement measures to minimise impacts and restore biodiversity and ecosystem services.	<p>The proposed onshore SD2 export pipeline corridor route will pass through predominantly desert/semi-desert habitat and along the eastern fringes of the wetland area south of the ST. The pipeline installation works will require the removal of vegetation and surface soil from an area of approximately 35 hectares (ha). The impact will be temporary as it is planned to reinstate the area affected along the route to its pre-construction condition. This approach is consistent with previous pipeline installation and reinstatement activities completed for the earlier ACG and SD projects. Surveys completed following previous works have shown reinstatement has been successful and no significant impacts to terrestrial ecology have been recorded.</p>	<b>Demonstrates Compliance</b>	SD2 ESIA ESMMP; Ecological and Wildlife MP; Restoration and Landscape MP



PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
			<p>Terrestrial biodiversity mitigation measures during construction activities include: prior to removal, vegetation will be inspected to detect the presence of wildlife and activities ceased until appropriate action is taken to ensure any wildlife encountered is not harmed within the ST vicinity; areas for laydown of soil or loose construction materials will be identified to minimise impacts to habitats and potential for erosion and sedimentation into watercourses or drains located within the ST vicinity; checks for wildlife will be undertaken prior to backfilling of the onshore pipeline trench. Any reptiles and mammals in the trench will be removed; an Ecological and Wildlife MP (has been developed for all SD2 Project construction activities including the ST vicinity and implemented to manage the relocation of any mammals, reptiles or any IUCN or Azerbaijan Red Data Book listed species encountered within the areas affected by the SD2 Project works.</p>		
	8	<p>Where the project may cause risks or impacts to natural habitats, retain competent professionals to assist with conducting the risk and impact identification process in natural habitats. Where the project may cause risks or impacts to critical habitat, retain external experts with appropriate regional experience to assist in the development of a mitigation hierarchy that complies with PS6 and to verify the implementation of those measures.</p>	<p>Under the SD PSA, responsibility for the preparation and approval of environmental surveys associated with the Environmental Monitoring Programme rests with the ESC, which carries out an annual review of planned survey activities. The ESC comprises representatives of key stakeholders such as SOCAR, MENR and the Azerbaijan National Academy of Sciences . Practical supervision and review of ongoing activities is delegated to the ACG &amp; SD Environmental Monitoring Technical Advisory Group , which comprises environmental specialists representing these organisations.</p> <p>The SD2 Project, through the BP AGT Region, participates in regional efforts for Caspian seal conservation via the Caspian Environment Programme . The CEP was set up in 1998 with the backing of the five Caspian littoral states (Iran, Azerbaijan, Russia, Kazakhstan and Turkmenistan) to establish procedures for the conservation, management and sustainable development of the Caspian environment. A number of subsequent surveys and projects have been set up specifically</p>	<b>Demonstrates Compliance</b>	SD2 ESIA

PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
			in relation to the Caspian seal conservation.		
<b>Protection and Conservation of Biodiversity</b>					
	9	Habitat is defined as a terrestrial, freshwater, or marine geographical unit or airway that supports assemblages of living organisms and their interactions with the non-living environment. PS6 divides these into modified, natural, and critical habitats – which are a subset of modified or natural habitats.	The SD2 ESIA provides a comprehensive assessment of biodiversity values of the terrestrial, coastal, inshore marine and offshore marine areas likely to be impacted by Project activities. The assessment relies on a monitoring data base that extends over a period of at least 10 years in most cases and covers the previous ACG and SD Projects. The assessment includes identification of species of international and national conservation significance, the habitats that support these species and the potential threats from Project related activities. Although the ESIA has not applied a PS6 specific critical habitat assessment, biodiversity values are assessed in consideration of species significance, habitat richness, proximity to recognised conservation areas, the unique characteristics of habitats, economic and social significance of habitats/species and international and national conservation status.	<b>Demonstrates Compliance</b>	SD2 ESIA
	10	Consider biodiversity offsets only after appropriate measures to avoid, minimise and restore biodiversity have been applied. Design and implement biodiversity offsets to achieve measurable conservation outcomes, resulting in no net loss and preferably a net gain of biodiversity (and net gain is required in critical habitats). Ensure biodiversity offsets are designed to conserve the same biodiversity values (or better) that are being impacted.	There are no planned biodiversity offsets for this Project. Residual impacts from construction phase include moderate impacts to birds near the SD2 ST construction site and onshore pipe lay construction from excessive construction noise. This impact is expected to be temporary. Similarly the residual negative ecological impacts from shore crossing pipeline construction are temporary as site restoration works are expected to be successful (as per previous SD Project). The construction specific Restoration and Landscape MP is suitably comprehensive. The offshore construction impacts to ecological values include pipeline commissioning discharges and noise from offshore construction. Again, these impacts are temporary in nature and therefore offsets would not be expected.  The residual operational impacts of the SD2 Project on biodiversity values are all assessed as minor. The continuation of the BP AGT environmental monitoring program will identify any significant residual impacts, not identified in the ESIA that	<b>Demonstrates Compliance</b>	ESMMP; Ecological and Wildlife MP; Restoration and Landscape MP

PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
			may arise from both the construction and operational phases.		
Modified Habitat	11	Modified habitats may contain a large proportion of plant and/or animal species of non- native origin, and/or where human activity has substantially modified an area's primary ecological functions and species composition.	The onshore and offshore Project affected environments would classify as modified habitats due to extent of past disturbance, land use, invasive species and historic contamination. The mitigation and management measures to be applied during the construction and operational phases of the Project as stated in the ESIA are appear to sufficient and relevant to the potential for and significance of predicted impacts. These ESIA commitments are implemented through the construction phase ES MMP that applies cross the scope of the SD2 Project developments and includes specific contractor implemented MPs: Ecological and Wildlife MP; Restoration and Landscape MP.	<b>Demonstrates Compliance</b>	SD2 ESIA ES MMP; Ecological and Wildlife MP; Restoration and Landscape MP
	12	When modified habitat areas include significant biodiversity value, minimise impacts on areas of modified habitat that include significant biodiversity value and implement mitigation measures as appropriate.			
Natural Habitats	13	Natural habitats are areas composed of viable assemblages of plant and/or animal species of largely native origin, and/or where human activity has not essentially modified an area's primary ecological functions and species composition.	No natural habitats identified	<b>Demonstrates Compliance</b>	SD2 ESIA
	14	Ensure no significant conversion or degradation of natural habitats, unless the following conditions are met: <ul style="list-style-type: none"> <li>· there are no viable alternatives within the region;</li> <li>· the views of stakeholders with respect to the extent of conversion and degradation have been established; and</li> <li>· any conversion or degradation is mitigated according to the mitigation hierarchy.</li> </ul>	Not applicable	<b>Demonstrates Compliance</b>	SD2 ESIA
	15	Design mitigation measures to achieve no net loss of biodiversity (where feasible) by: <ul style="list-style-type: none"> <li>· Avoiding impacts on biodiversity through the identification and protection of set-asides;</li> <li>· Implementing measures to minimise habitat fragmentation, such as biological corridors;</li> </ul>	Not Applicable	<b>Demonstrates Compliance</b>	SD2 ESIA

PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
		<ul style="list-style-type: none"> <li>Restoring habitats during operations and/or after operations;</li> <li>Implementing biodiversity offsets.</li> </ul>			
Critical Habitat	16	<p>Critical habitats are areas with high biodiversity value, including:</p> <ul style="list-style-type: none"> <li>habitat of significant importance to Critically Endangered and/or Endangered species;</li> <li>habitat of significant importance to endemic and/or restricted-range species;</li> <li>habitat supporting globally significant concentrations of migratory species and/or congregatory species;</li> <li>highly threatened and/or unique ecosystems; and/or</li> <li>areas associated with key evolutionary processes.</li> </ul>	No critical habitat identified – Caspian seal migration through SD Contract Area of insufficient size to trigger Critical Habitat.	<b>Demonstrates Compliance</b>	SD2 ESIA
	17	<p>Ensure project activities are not implemented in areas of critical habitat unless the following conditions are met:</p> <ul style="list-style-type: none"> <li>there are no viable alternative locations within the region; there will be no measurable adverse impacts on the biodiversity values for which the critical habitat was designated or the ecological process supporting those biodiversity values;</li> <li>there will be no net reduction in the global and/or national/regional population of critically endangered or endangered species over a reasonable period of time;</li> <li>a long-term biodiversity monitoring and evaluation program is designed and integrated into the overall management programme.</li> </ul>			
	18	If the requirements above are met, describe mitigation strategies within a Biodiversity			

PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
		Action Plan that is designed to achieve net gains of the biodiversity values for which the critical habitat was designated.			
	19	Where offsets are proposed, demonstrate that the significant residual impacts on biodiversity will be adequately mitigated to meet the requirements of paragraph 17.			
Legally protected and internationally recognised areas	20	Where project falls in legally protected and internationally recognised areas – comply with the requirements for natural and critical habitats and in addition: <ul style="list-style-type: none"> <li>· demonstrate that the proposed development is legally permitted in such areas;</li> <li>· comply with any government recognised management plans for such areas;</li> <li>· consult protected area sponsors and managers, Affected Communities, Indigenous Peoples and other stakeholders, as appropriate; and</li> <li>· implement additional programmes to promote and enhance the conservation aims and effective management of the area.</li> </ul>	The Project does not fall within legally protected and/or internationally recognised areas.	<b>Demonstrates Compliance</b>	SD2 ESIA
Alien Invasive Species	21	Intentional or accidental introduction of alien, or non-native, species of flora and fauna into areas where they are not normally found can be a significant threat to biodiversity, since some alien species can become invasive, spreading rapidly and out-competing native species.	The onshore and offshore Project areas are substantially impacted by invasive species.	<b>Demonstrates Compliance</b>	SD2 ESIA
	22	Ensure there is no intentional introduction of alien species, unless this is carried out in accordance with the existing regulatory framework for such introduction or is subject to a risk assessment. Implement measures	Measures to prevent introduction of invasive marine species will be expected through normal MARPOL obligations for vessel movements and ballast water management	<b>Demonstrates Compliance</b>	SD2 ESIA

PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
		to avoid accidental or unintended introductions.			
<b>Management of Ecosystem Services</b>					
	24	Conduct a systematic review to identify priority ecosystem services which are: <ul style="list-style-type: none"> <li>· those which project operations are most likely to impact and which result in adverse impacts to Affected Communities;</li> <li>· Affected Communities must be consulted to determine priority ecosystem services.</li> </ul>	No specific ecosystem services assessment completed for the Project. However, the intent of this performance requirement is achieved through the ESIA that has identified and assessed the interactions between the social and ecological values within the Project's potentially affected areas with specific relevance to the supporting services provided by coastal marine ecology and water quality for the maintenance of commercial fish stocks. The assessment includes direct and indirect impacts to fish stocks of commercial value through changes to water quality, seabed disturbance, changes to marine and coastal ecology, contamination of sediments and impacts of underwater noise resulting in temporary avoidance of the Project area. The ESMMP provides a framework for construction phase implementation of management and mitigation measures that appear adequate to address priority ecosystem services of relevance to Affected Communities.	<b>Demonstrates Compliance</b>	SD2 ESIA ESMMP; Ecological and Wildlife MP; Restoration and Landscape MP; Pollution Prevention MP.
	25	Avoid adverse impacts on priority ecosystem services of relevance to Affected Communities, where there is direct management control or significant influence over these services. Where unavoidable, minimise impacts and implement measures to maintain the value and functionality of priority ecosystem services. With respect to impacts on priority ecosystem services on which the project depends, minimise impacts on ecosystem services and implement measures that increase resource efficiency of project operations (PS3). Additional provisions for ecosystem services are included in PS4, paragraph 8; PS5, paragraphs 5 and 25–29; PS 7, paragraphs 13–17 and 20; and PS8, paragraph 11.			
<b>Sustainable management of Natural Living Resources</b>					
			Only relevant to primary production of living natural resources, including natural and plantation forestry, agriculture, animal husbandry, aquaculture, and fisheries		

## **6.8 PERFORMANCE STANDARD 7 – INDIGENOUS PEOPLES**

### **6.8.1 Scope of Application**

IFC in PS7 uses the term “Indigenous Peoples” to refer to a distinct social and cultural group possessing the following characteristics to varying degrees:

- Self-identification as members of a distinct indigenous cultural group and recognition of this identity by others;
- Collective attachment to geographically distinct habitats or ancestral territories in the Project area and to the natural resources in these habitats and territories;
- Customary cultural, economic, social, or political institutions that are separate from those of the dominant society or culture; and
- An indigenous language, often different from the official language of the country or region.

Although the Operator has not provided evidence to exclude presence/absence of indigenous peoples in the ESIA process, based on the Project context, national data and other projects in the Project area, it is not considered that the IFC scope for ‘Indigenous peoples’ is triggered for this Project.

## **6.9 PERFORMANCE STANDARD 8 – CULTURAL HERITAGE**

### **6.9.1 Protection of Cultural Heritage in Project Design and Execution**

As defined by the IFC in PS8, *Cultural Heritage*, cultural heritage refers to tangible forms of cultural heritage, such as tangible property and sites having archaeological (prehistoric), paleontological, historical, cultural, artistic, and religious values, as well as unique natural environmental features that embody cultural values, such as sacred groves.

Tangible cultural heritage studies have been conducted in accordance with local laws by the Operator (2001, for the SD1 project, 2002 follow up survey), which found 11 archaeological finds/sites. In 2011 a survey was undertaken in the SD2 area (expansion site and west, pipeline landfall, caravanserai). The archaeology baseline survey area included all SD2 Project elements (including the EIW), and resulted in the identification of 182 Isolated Finds and 13 archaeological sites, the majority of which occurred within or near the EIW Project area. No evidence of buried archaeological or other data to indicate the presence of buried archaeological remains was found during the survey.

Baseline artefact finds were significant but not critical (see below) and mitigation measures were reported to have been instituted. This includes ground-borne vibration monitoring of the Sand Cave, which is in a fair but fragile condition, watching brief on 2 sites and movement by specialists of three archaeological sites. There is no evidence to suggest the presence of a large, extensive archaeological site in the onshore SD2 Export Pipeline Corridor, although the potential remains for the presence of small archaeological sites.

Marine cultural heritage will be identified through a review of data collected from previous surveys including 3D seismic and detailed bathymetry surveys and any further seabed surveys completed prior to pipeline and subsea infrastructure installation, to identify potential sites of cultural heritage value which lie within the areas affected by the works.

The ESIA describes that the ESMS for construction includes:

- A Cultural Heritage Management and Monitoring Plan (CHMMP), detailing how the SD2 Project will be managed in relation to potential cultural heritage impacts (including chance finds and watching brief and marine cultural heritage review, as per below); and
- An Archaeology and Cultural Heritage Close-Out Report will be issued to the Ministry of Culture and Tourism and Institute of Archaeology and Ethnography at completion of construction activities.

The CHMMP has been prepared and describes the regulatory framework; known cultural heritage and its protection; chance find procedures and watching brief; roles and responsibilities; and verification and monitoring.

BP's and the main construction and installation contractors procedures and plans will be used to collect and regularly report monitoring data to BP, including cultural heritage issues arising in the course of the works (e.g. archaeological finds)..

Expertise has been engaged to ensure cultural heritage works are conducted appropriately, in accordance with PS8 (para. 7) requirements. The Operator has engaged a team of specialists in undertaking cultural heritage baseline studies, as well as retaining specialists in undertaking site clearance monitoring by the Institute of Archaeology and Ethnography. For offshore works, the Operator has committed to engaging a marine cultural heritage specialist to identify any sites of cultural heritage value in the offshore works areas.

#### **6.9.1.1 Chance Find Procedure**

According to PS8 paragraph 8, provisions are to be made in the ESMS to manage Chance Finds.

A Chance Find procedure is a commitment of the ESIA (s.10.7.1), including: a Watching Brief to identify any artefacts of archaeological importance by specialists from the Institute of Archaeology and Ethnography; Any findings to be reported by Watching Brief Archaeologists immediately and any corrective measures required will be agreed with regulatory agencies; and that in the event archaeological resources are found during excavation work, Watching Brief archaeologists will assess appropriate controls and changes to the excavation work and whether more detailed archaeological assessment is required. This is documented in the CHMMP.

In interview with the Operator (20.11.2014), it was confirmed that the Procedure is in place, including site clearance monitoring by the Institute of Archaeology and Ethnography and that the BP has engaged and manages this Institute (rather than the site contractor for the ST and beach sites) to ensure consistency of approach, coordination and a single point of contact for regulatory agencies and watching brief specialists.

#### 6.9.1.2 Consultation

Paragraph 9 requires that the Project consult with Affected Communities who use, or have used within living memory, the cultural heritage for long-standing cultural purposes to identify cultural heritage of importance. The Operator has engaged with regulatory agencies including specialists at Institute of Archaeology and Ethnography and the Ministry of Culture and Tourism on cultural heritage matters, while engagement on cultural heritage with Affected Communities is described within the wider ESIA consultation. See also PS1 regarding consultation more broadly and a potential deficit of documentation on targeted consultation, e.g. on cultural heritage, with individuals or groups with specialist interests. However, the CHMMP documents points of engagement with the community on cultural heritage matters.

#### 6.9.1.3 Community Access

Allowing continued access by Affected Communities to cultural sites or provide alternative access, subject to overriding health, safety and security considerations, is required under PS8 (para 10). The ESIA describes the Caravanserai and Sand Cave are noted as State Protected Monuments; it does not appear that this restricts access to the sites in itself, as there is existing evidence of human use at both sites. The history of the Sand Cave including human use was not clear as determined through the Baseline study (2011). However, evidence was not seen during the audit of consultation to show what ongoing measures may be taken for site accessibility by public, if any (refer also above on consultation). The Sand Cave appears to be outside any blast zone that may be subject to restricted due to safety considerations, but this does not appear explicitly in documentation.

#### 6.9.1.4 Removal of Replicable Cultural Heritage

PS 8 (para.11) prescribes that mitigation measures that favour avoidance are put in place, and where avoidance is not feasible, apply a mitigation hierarchy broadly as follows:

- Minimise adverse impacts and implement restoration measures, in situ;
- Where restoration in situ is not possible, restore functionality in a different location;
- Permanent removal of historical and archaeological artefacts and structures; and
- Compensate for loss of that tangible cultural heritage.

The ESIA describes onshore archaeological finds and the mitigation measures proposed to be applied for cultural heritage management. The mitigation applied included movement of three archaeological artefacts. The Archaeology and Cultural Heritage MP was not sighted during the audit to verify the above however the interview with the Operator confirmed that the MP is currently being implemented effectively, and builds on past cultural heritage management by the Operator.

#### 6.9.1.5 Removal of Non-Replicable Cultural Heritage

PS8 (para. 12) specifies removal of non-replicable cultural heritage only in certain circumstances.

The ESIA describes onshore archaeological finds and the mitigation measures proposed to be applied for cultural heritage management. The mitigation hierarchy suggests avoidance and includes on site monitoring of the Sand Cave. The Caravanserai was 'scoped out' due to a lack of risk of flooding of the site due to EIW. The EIW ESIA indicates that the Archaeology and Cultural Heritage MP would be informed by site walkover activities.

Offshore potential archaeological sites are also proposed to be mitigated using the mitigation hierarchy, proposing avoidance during installation works based on data review by a marine cultural heritage resources specialist.

The Archaeology and Cultural Heritage MP was not sighted during the audit to verify the above however the interview with the Operator confirmed that the MP is currently being implemented effectively, and builds on past cultural heritage management by the Operator.

#### 6.9.1.6 Critical Cultural Heritage

Not applicable: critical cultural heritage has not been identified in the Project.

**Table 6.8 Compliance Evaluation – Cultural Heritage**

PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
<b>8. PS 8: Cultural Heritage</b>					
<b>Protection of cultural heritage in project design and execution</b>					
	6	<ul style="list-style-type: none"> <li>Comply with applicable national laws.</li> <li>Identify and protect cultural heritage by ensuring that internationally recognised practices are implemented for the protection, field-based study, and documentation of cultural heritage</li> </ul>	<p>Tangible cultural heritage studies have been conducted in accordance with local laws by the Operator (2001, for the SD1 project, 2002 follow up survey). In 2011 a survey was undertaken in the SD2 area and the archaeology baseline survey area included all SD2 Project elements (including the EIW). No evidence of buried archaeological or other data to indicate the presence of buried archaeological remains was found during the survey.</p> <p>Baseline artefact finds were significant but not critical and mitigation measures have been reported to be instituted.</p> <p>There is no evidence to suggest the presence of a site in the onshore pipeline corridor.</p> <p>Marine cultural heritage will be identified through a review of data collected from previous surveys and any further seabed surveys completed prior to pipeline and subsea infrastructure installation.</p> <p>The ESIA describes that the ESMS for construction will include:</p> <ul style="list-style-type: none"> <li>An Archaeology and Cultural Heritage MP will be prepared detailing how the SD2 Project will be managed in relation to potential cultural heritage impacts; and</li> <li>An Archaeology and Cultural Heritage Close-Out Report will be issued to authorities at completion of construction activities.</li> </ul> <p>BP's contractor's procedures and plans will be used to collect and regularly report monitoring data (e.g. archaeological finds). The CHMMP has been prepared and describes: The regulatory framework; known cultural heritage and its protection; chance find procedures and watching brief; roles and responsibilities; and verification and monitoring.</p>	<b>Demonstrates Compliance</b>	ESIA (s10.7, 10.10.1) Operator interview, London 17.11.14 CHMMP
	7	<ul style="list-style-type: none"> <li>Retain competent professionals to assist in identification and protection of cultural heritage. See also paragraphs 10 and 13 to 15.</li> </ul>	<p>The Operator has engaged a team of specialists in undertaking cultural heritage baseline studies, as well as retaining specialists in undertaking site clearance monitoring.</p> <p>Offshore works will be responsibility of a marine cultural</p>	<b>Demonstrates Compliance</b>	ESIA Operator interview, London

PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
			heritage specialist to identify any sites of cultural heritage value in the offshore works areas.		17.11.14
Chance find procedures	8	<ul style="list-style-type: none"> <li>· Siting and design to avoid significant adverse impacts to cultural heritage.</li> <li>· Determine whether the proposed location of a project is in areas where cultural heritage is expected to be found, either during construction or operations as part of the environmental and social risks and impacts identification process.</li> <li>· Develop provisions in the ESMS for managing chance finds through a chance find procedure.</li> <li>· Do not disturb any chance find until an assessment by competent professionals is made and actions consistent with the requirements PS8 are identified.</li> </ul>	<p>A Chance Find procedure is a commitment of the ESIA (s.10.7.1); Any findings to be reported by Watching Brief Archaeologists immediately; any corrective measures required will be agreed with regulatory agencies; Watching Brief archaeologists will assess appropriate controls and changes to the excavation work in the event of new finds; and whether more detailed archaeological assessment is required. Chance Find Procedure is in place, including site clearance monitoring.</p> <p>BP has engaged and manages this Institute to ensure consistency of approach, coordination and a single point of contact for regulatory agencies and watching brief specialists.</p>	<b>Demonstrates Compliance</b>	ESIA s10.7.1 Operator interview, London 17.11.14
Consultation	9	<ul style="list-style-type: none"> <li>· Consult with Affected Communities who use, or have used within living memory, the cultural heritage for long-standing cultural purposes to identify cultural heritage of importance.</li> <li>· Incorporate into the decision-making process the views of the Affected Communities on such cultural heritage.</li> <li>· Consult with relevant national or local regulatory agencies that are entrusted with the protection of cultural heritage.</li> </ul>	The Operator has engaged with regulatory agencies on cultural heritage matters. Engagement on cultural heritage with Affected Communities is described within the wider ESIA consultation, and the CHMMP describes situations in which engagement with communities would be undertaken See also PS1 regarding consultation more broadly.	<b>Demonstrates Compliance</b>	ESIA s10.7.1 Operator interview, London 17.11.14 CHMMP
Community access	10	<ul style="list-style-type: none"> <li>· Allow continued access by Affected Communities to cultural sites or provide alternative access subject to overriding health, safety and security considerations.</li> </ul>	The ESIA describes the Caravanserai and Sand Cave are noted as State Protected Monuments. The history of the Sand Cave including human use was not clear (refer Baseline study (2011)). The CHMMP describes vibration monitoring at the site and reporting back to the community on this monitoring. Evidence was not seen during the audit of consultation to show what ongoing measures may be taken for site accessibility by public, if any. See also above on consultation.	<b>Demonstrates Compliance</b>	ESIA s.6.9 CHMMP

PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
Removal or replicable cultural heritage	11	<p>Apply mitigation measures that favour avoidance. Where avoidance is not feasible, apply a mitigation hierarchy as follows:</p> <ul style="list-style-type: none"> <li>· Minimise adverse impacts and implement restoration measures, in situ, that ensure maintenance of the value and functionality of the cultural heritage, including maintaining or restoring any ecosystem processes needed to support it;</li> <li>· Where restoration in situ is not possible, restore the functionality of the cultural heritage, in a different location, including the ecosystem processes needed to support it;</li> <li>· The permanent removal of historical and archaeological artefacts and structures is carried out according to the principles of paragraphs 6 and 7;</li> <li>· Compensate for loss of that tangible cultural heritage, only where minimisation of adverse impacts and restoration to ensure maintenance of the value and functionality of the cultural heritage are demonstrably not feasible, and where the Affected Communities are using the tangible cultural heritage for long-standing cultural purposes.</li> </ul>	<p>The ESIA describes onshore archaeological finds and the mitigation measures proposed to be applied for cultural heritage management. Movement of three archaeological artefacts undertaken.</p> <p>The CHMMP was reviewed and the Operator confirmed that the MP is currently being implemented effectively, and builds on past cultural heritage management by the Operator.</p>	<b>Demonstrates Compliance</b>	ESIA (s10.7, 10.10.1) Operator interview, London 17.11.14 CHMMP
Removal or non-replicable cultural heritage	12	<p>Do not remove any non-replicable cultural heritage unless all of the following conditions are met:</p> <ul style="list-style-type: none"> <li>· There are no technically or financially feasible alternatives to removal;</li> <li>· The overall benefits of the project conclusively outweigh the anticipated cultural heritage loss from removal;</li> <li>· Any removal of cultural heritage is conducted using the best available technique.</li> </ul>	<p>The ESIA describes onshore archaeological finds and the mitigation measures proposed to be applied for cultural heritage management. The mitigation hierarchy suggests avoidance and includes on site monitoring of the Sand Cave. The Caravanserai was 'scoped out' due to a lack of risk of flooding of the site due to EIW. The EIW ESIA indicates that the Archaeology and CH MP would be informed by site walkover activities.</p> <p>Offshore potential archaeological sites are also proposed to be mitigated using the mitigation hierarchy, proposing avoidance during installation works based on data review by a marine</p>	<b>Demonstrates Compliance</b>	ESIA (s10.7, 10.10.1); EIW ESIA (Table 9.2, s.6.6) Operator interview, London 17.11.14

PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
			cultural heritage resources specialist. The Archaeology and CH MP was not sighted during the audit however the interview with the Operator confirmed that the MP is currently being implemented effectively, based on past experience.		
Critical cultural heritage	13	Critical cultural heritage consists of one or both of the following: <ul style="list-style-type: none"> <li>· the internationally recognised heritage of communities who use, or have used within living memory the cultural heritage for long-standing cultural purposes; or</li> <li>· legally protected cultural heritage areas, including those proposed by host governments for such designation.</li> </ul>	Critical cultural heritage has not been identified.	No action required	n/a
	14	<ul style="list-style-type: none"> <li>· Do not remove, significantly alter, or damage critical cultural heritage.</li> <li>· When impacts are unavoidable, use a process of Informed Consultation and Participation (ICP) of the Affected Communities (as per PS1) and which uses a good faith negotiation process that results in a documented outcome.</li> <li>· Retain external experts to assist in the assessment and protection of critical cultural heritage.</li> </ul>			
	15	Meet the following requirements where a project is located within a legally protected area or legally defined buffer zone: <ul style="list-style-type: none"> <li>· Comply with national/local regulations or protected area management plans;</li> <li>· Consult the areas' sponsors and managers, local communities and other key stakeholders;</li> <li>· Implement additional programs to promote and enhance conservation aims of the area.</li> </ul>			

PS Heading	Para. Ref.	Description of IFC PS Requirements	Findings	Compliance Category	Source
<b>Project's Use of Cultural Heritage</b>					
	16	Where a project proposes to use the cultural heritage, including knowledge, innovations, or practices of local communities for commercial purposes, the Inform communities of: <ul style="list-style-type: none"> <li>· their rights under national law;</li> <li>· the scope and nature of the proposed commercial development;</li> <li>· the potential consequences of such development.</li> </ul>	Not applicable	No action required	n/a
		Do not proceed with commercialisation unless: <ul style="list-style-type: none"> <li>· a process of ICP (see PS1) and which uses a good faith negotiation process that results in a documented outcome is undertaken;</li> <li>· fair and equitable sharing of benefits from commercialisation of such knowledge, innovation, or practice, consistent with their customs and traditions is provided.</li> </ul>	Not applicable	No action required	n/a

## **7. COMPLIANCE AGAINST IFC EHS GENERAL GUIDELINES**

The IESC review of compliance against the IFC EHS Guidelines was predominantly based on the site visit to the construction site at Sangachal; interviews with relevant SD2 Project personnel and review of environment, social and occupational health and safety plans developed for implementation during the construction phase of the Project. Detailed review of the application of the EHS General Guidelines relevant to the SD2 construction activities is limited due to the early stage of construction at the time of the site visit. Rather, the IESC have made findings based on the application of the EHS Guidelines based on plans, EMS strategies, policies, the ESIA in addition to the evidence collected during the site visits and interviews. This discussion provides the context from which the EHS General Guidelines compliance assessment has been undertaken.

The Project identified health and safety risks during the early select phase through the ISD Workshop for Selected Offshore Concept (16/6/2010;BP-SMZXXX-SA-REP-0020RevD1). The document describes the process for elimination and mitigation of safety risks through design selection, and the implementation of the Project's Design Hazard management Strategy. The intent of the Inherent Safer Design process is to eliminate hazards completely or reduce the magnitude sufficiently to eliminate the need for elaborate safety systems and procedures. The ISD workshop outcomes reviewed by the IESC included the SDB-PR Platform, the SDB-QU Platform and the Subsea facilities. The majority of safer design outcomes from the workshop were regarding platform configuration and equipment minimisation to reduce risk associated with fire and explosions and fires.

The SD2 Offshore Process Safety Plan for Select and Define (BP-SMZXXX-SA-PLN-0003REVD5; October 2010) details how the process safety strategy will be implemented for SD2; defines the timing of safety and loss prevention activities for each Project stage for integration with engineering schedule; details the Project safety engineering frameworks; defines key roles and interface management. The plan aims to ensure an integrated hazard management approach is implemented in facility design, construction/installation planning, and development of an operating strategy to achieve optimum protection of personnel.

SD2 Process safety Strategy provides the basis for compliance with The PSA and Azeri legislation; BP AGT Region HSSE Policy; BP's management standards and procedures.

- Hazard management approach:
  - Identify and evaluate major accident hazards;
  - Establish an inherent safer design;
  - Identify, evaluate and implement risk reduction measures;
  - Identify safety critical design measures and specify the performance requirements; and
  - Verify the performance requirements.

The SD2 HSE Plan (13/05/2014) describes the Project construction phase management of occupational health, industrial hygiene, safety, legal and regulatory compliance as well as environment and social responsibility. The document specifies the key occupational health and safety requirements for Project delivery teams, including contractors. The scope of the Plan includes the establishment of minimum safety standards for all SD2 Project activities and specifies responsibilities of individuals to apply the relevant standards to the various work activities. The HSE Plan provides a framework for prescriptive procedures and work instructions to be developed to ensure occupational health and safety standards are complied with for the wide range of activities undertaken during the SD2 Project construction. Project SD2 Programme HSSE MP (BP-SFZZZZ-HS-PLN-0004) (30/03/11) – provides an overarching HSSE Strategy at an early planning phase for the Project and includes the key integration of HSSE goals and BP Group Standards on Control of Work, for safety at work, and Integrity Management which focuses on total lifecycle integrity of plant.

Identification of hazards to workers is has occurred through a number of BP GPO defined mandatory processes which include Concept Selection for Inherently Safer Design (ETP-GP-24-03), HSSE Review of Projects (ETPGP-4801), Major Accident Risk Process (ETP-GP 48-02); Assessment Prioritisation and Management of Risk.

The Onshore Process Safety Plan (20/11/2010) BP-SMOAZZ-SA-PLN-0001-D3: Describes how the process strategy for the BP AGT Region is implemented for the SD-2 onshore facilities. The safety design philosophy follows the design concepts applied on SD-1, but incorporating lessons learned. The inputs to the Project Process Safety Plan include BP major project process safety technical integrity requirements, BP AGT processes and Project specific processes (e.g. Permit to work, site procedures, engineering documents register).

The SD2 Risk management process is described as a continuous, forward looking process that addresses issues that could impact critical Project execution objectives, and includes early and risk identification through the collaboration and involvement of relevant stakeholders. Each delivery area is considered to be a major project in its own right within the SD2 Programme portfolio. In the risk management process, the delivery area Managers are accountable for identifying and managing both Safety and Operational Risk and Strategic & Commercial and Compliance & Control risks for the sub-project scope, and the SD2 Project Integration Manager is responsible for coordinating risk management activities. The Risk process follows a standard flow of: Identification, Response, Monitoring, Learning and Closure. There is an overall risk lead and defined Role and Responsibilities both centrally (across the Project) and within the specific Delivery and Functional Teams. There is an issue Risk MP that is periodically updated and a management tool used (PMCS – Project Management Control System). This tool allows for risks to be tracked, ranked, reported and managed. It links the mitigating actions with the risks and clearly defines accountable person(s), target closure dates and how the risks are progressively mitigated. The level of Governance and endorsement for different risk categories is also defined and is in line with the wider BP GPO organisation.

The SD2 HSE Plan (13/5/2014) has been developed for the execute phase of the Project and describes how occupational health, industrial hygiene, safety, legal and regulatory compliance and environment and social responsibility impacts and risks will be managed in conformance with applicable BP requirements. The HSE Plan governs HSE requirements for SD2 Project and specifies the HSE requirements for SD2 Project to meet BP OMS. It also specifies the HSE requirements for Project delivery teams during construction, including plans and procedures. The document is designed as part of the HSE Management System to promote an effective common process for the management of HSE.

The HSE Plan provides an overarching framework for the implementation of environmental management programs required for the construction Phase of the Project. The framework includes the HSE policies, Project HSE objectives, identification of roles and responsibilities, HSE resourcing requirements, the organisation of HSE personnel, reporting and performance management. The HSE Plan provides essential detail of how the Project delivery teams, including contractors, will implement risk management including details on the risk identification and management tools to be used and how records of risk management processes shall be maintained. HSE incident management is detailed in the plan with processes developed to ensure effective corrective and preventative actions are implemented. HSE competency and training processes are established in the HSE Plan, including requirements for HSE training needs to be identified for all Project delivery teams.

The SD2 Project and delivery teams are required to use the ESMMP (10/2/2015) as the framework to deliver the environmental and social requirements, as defined by applicable legal, contractual and other requirements, including ESIA commitments. The ESMMP includes specific requirements for various work packages to manage and monitor environmental performance against the Environmental Design verification register, the SD2 Environmental and Social Compliance Register that includes ESIA commitments.

The ESIA and the SD12 HSE Plan describes the Project Environmental and Social Management and Monitoring Program which includes MPs designed to implement the environmental and social requirements during construction and include:

- **Restoration and Landscape Management Plan** – landscape management; soil management during construction; site restoration; spoil management; training; monitoring and reporting.
- **Waste management and Minimisation Plan** – waste hierarchy, procurement; classification; waste registers; handling; training; monitoring and reporting.
- **Ecological and Wildlife Management Plan** – baseline surveys; inspections; protection during construction; training; monitoring and reporting.
- **Pollution Prevention Management Plan**- energy efficiency; emissions management; wastewater management; sewage treatment and disposal; chemical management; noise and vibration; contaminated soils; training; monitoring and reporting.
- **Community Engagement and Nuisance Management and Monitoring** – grievance mechanism; nuisance management and monitoring (noise, light, odour, vermin)
- **Archaeology and Cultural Heritage Management** – protection of known CH resources; chance find procedure; watching brief procedure; training; monitoring and reporting.
- **Spill Prevention, Response, Notification and Close-Out Actions** – spill response procedures; spill prevention; training; monitoring and reporting.
- **Traffic and Transportation Management Plan** – driver raining, onsite and offsite vehicle movements; risk assessments for transport of heavy loads; monitoring and reporting.
- **Employee Relations Management Plan** – training and skill development; grievance mechanism; de-manning; monitoring and reporting.

Outcomes of discussions with SD2 Project HSE management in Baku on 20 November 2014 provided evidence of the HSE management structure in place and the current HSE performance for the construction phase. The SD2 HSSE Policy has been developed and includes a commitment to safety and outlines the obligations of individual to stop any unsafe work. The Policy includes commitments for risk reduction, compliance with legislation, and other standards including the ESIA commitments. Contractors are held accountable to the SD2 Project HSSE Policy and all Project personnel have an obligation to report incidents, including near miss events. The SD2 Project currently has a Recordable Injury Frequency rate of 0.04 (per 200,000 hrs). For the 2014 period up to 30 September, the Project has recorded 2 lost time injuries, 2 recordable injuries, 21 first aid treatments and 42 safety near misses. This data excludes offshore drilling. The two lost time injuries refer to a single fabrication accident that occurred at the ATA shipyard in July 2014.

HSE Incident reporting and the management of corrective and preventative actions occurs within the SD02 operational management systems. The IESC observed evidence of incident reporting and initial investigations relating to a vessel anchor drop incident.

Safety competency standards and minimum HSE training requirements are established through the operational management system and include minimum requirements for contractors. Completion of training is a measured HSE performance requirement and is monitored by the Operator. Monitoring of contractor HSE performance occurs through the BP monthly self-verification process that requires the contractor to self-assess against an established checklist of required HSE outcomes. The BP Site Safety Leader provides oversight of the self-assessment through validation using checks and audits. Examples of self-assessment forms completed were reviewed by the IESC and include the use of protective equipment, completion of workplace inspections, hazard

warnings, permit to work, safety training requirements, contractor safety controls and competency and qualifications of personnel (evidence included example HSSE self-verification checklists for M&S Vessel Upgrades and Saipem contractor). Examples of BP oversight of the self-verification process were also observed by the IESC. The use of internal audits also provides HSSE oversight of all SD2 activities, including contractors. A review of the internal audit report for an onshore contractor against the onshore transport management system was conducted to verify conformance to contract requirements and implementation of the contractor's transport plan. The internal audit included verification of competency, equipment and identification of corrective actions.

Management of emergencies which may impact worker health and safety is managed for the SD2 Project through BP' Crisis management and Emergency Response framework which includes an established response mechanism, site response teams, country based incident management team and regional business support team and an executive support team based in London. BP has a Baku emergency response team consisting of 120 personnel and mutual operating plan on management of emergency situations between the BP AGT Region and the Azerbaijani Ministry of Emergency Situations.

The SD2 Project has identified potential emergency scenarios that may impact on health, safety, the environment and communities. The ESIA includes identification, evaluation and mitigation/management of accident events. Emergency response plans are developed for significant scenarios and training drills are undertaken on a regular basis to ensure operational readiness and familiarity with emergency response requirements. The SD2 Project undertakes 20 emergency response exercise drill per year, of these 2 to 3 exercises involve external and government emergency response providers in addition to the BP-AGT emergency team. The offshore delivery units undertake 6-7 emergency response exercises annually. Each work site undertakes a weekly site muster and evacuation drill. Records of emergency response drills, exercise reports and debrief reports were reviewed by the IESC.

Compliance assessment table against IFC EHS General Guidelines is included as Appendix B.

## **8. COMPLIANCE AGAINST THE EQUATOR PRINCIPLES**

Assessment against the EPs has been undertaken, as per Table 8.1, below, assessing the SD2 as a Category A project. The Equator Principles follow the IFC Performance Standards, as such, content mirrors that in Chapter 6. The information presented in the following table is in short summary form only with compliance categories reflecting the same intent as those sections presented earlier.

**Table 8.1 Compliance Evaluation – Equator Principles**

Audit Criterion		Detail	Site Findings	Compliance Category
EP1	Principle 1: Review & Categorisation	When a project is proposed for financing, the EPFI will, as part of its internal social and environmental review and due diligence, categorise such project based on the magnitude of its potential impacts and risks in accordance with the environmental and social screening criteria of the International Finance Corporation (IFC).	Category A project	<b>Demonstrates Compliance</b>
EP2	Principle 2: Social & Environmental Assessment	An assessment has been prepared by borrower, consultant or external expert, and includes mitigation and management measures.	Key documentation: SD2 Project ESIA (November 2013), URS. EIW Project ESIA (December 2011), URS. Full list of Project documentation reviewed through Audit available in appendices. The remainder of the assessment demonstrates the information gaps according to each of the Principles.	<b>Partial Compliance</b>
EP3	Principle 3: Applicable Social & Environmental Standards	Non-OECD countries and OECD not High-Income: The project complies with, or established a justified deviation from, applicable IFC Performance Standards and EHS Guidelines (refer to Appendix B below) The Assessment process in both cases should address compliance with relevant host country laws, regulations and permits that pertain to social and environmental matters.	The assessment process was undertaken in compliance with national laws, regulations and permits, as well as the PSA (4 June 1996)	<b>Demonstrates Compliance</b>
EP4	Principle 4: Action Plan & Management System	EPFIs require the development and maintenance of an Action Plan (AP) to address findings, prioritise mitigation measures, and take corrective actions and monitoring measures. An Environmental and Social Management Systems (ESMS) has been established.	The social management program appears to be under development, where the ESIA describes that the Construction Phase ESMS will be developed for implementation by BP and construction contractors, in line with Plan, Check, Do, Act ESMS framework/BP 'SD2 Construction Phase E&S Management' framework. The Employee Relations MP has been provided for review to date (refer PS2). It is not clear for which SMP implementation has commenced by the Operator/construction contractors. The existing SMPs appear to favour impact and risk avoidance, include measurable targets and indicators and assign roles and responsibilities for timebound implementation.	<b>Demonstrates Compliance</b>

Audit Criterion		Detail	Site Findings	Compliance Category
EP5	Principle 5: Consultation & Disclosure	<p>EPFI will require the client to demonstrate effective Stakeholder Engagement as an ongoing process in a structured and culturally appropriate manner with Affected Communities and, where relevant, Other Stakeholders. For Projects with potentially significant adverse impacts on Affected Communities, the client will conduct an Informed Consultation and Participation process.</p>	<p>Stakeholder identification and analysis was described as commencing in 2008, however, evidence of past lessons and detailed stakeholder analysis has not been sighted, including identification of vulnerable groups, affected communities, community representatives, presented at the village level. The ESIA presents the results of a SSES. ASEP, informed by the analysis and SSES, documenting the targeted and ongoing engagement activities to target each of the stakeholder groups, has been provided. The SEP documents objectives, legislative standards, ESIA engagement activities, stakeholder identification and management, social investment, roles and responsibilities and monitoring and evaluation. A grievance process is reference but was not provided for IESC review. Ongoing engagement activity was described by the Operator as the responsibility of the SP team and CLOs at the village level, however documentation on local level engagement to support these activities has not been provided for review or by verification interview with affected communities. Further, TKAZ is the only construction contractor required to develop a SEP; the other sites are identified as having a lack of potential community interaction and hence no SEP required which appears to be based on little baseline data (refer definition of Project area of influence, above). Given the nature and scale of the Project, and proximity to components of the Project, the frequency of engagement during a period of rapid change at construction (6 monthly with Affected Communities) does not appear sufficient.</p>	<b>Partial Compliance</b>
		<p>In order to accomplish this, the appropriate assessment documentation, or non-technical summaries thereof, will be made available to the public by the borrower for a reasonable minimum period in the relevant local language and in a culturally appropriate manner. The borrower will take account of and document the process and results of the consultation, including any actions</p>	<p>The SD2 ESIA reports that a Public Consultation and Disclosure Plan was prepared for the SD2 Project, detailing the process through which stakeholders were identified and consulted, roles and responsibilities of the ESIA consultants and BP, and the grievance process for ESIA disclosure. This document has not been verified by the IESC. However, MPs (including the SEP) do not appear to have been disclosed with the ESIA, which is a critical non-compliance with</p>	<b>Partial Compliance</b>

Audit Criterion		Detail	Site Findings	Compliance Category
		agreed resulting from the consultation.	the performance standards and the intent for disclosure to communities of the activities to be undertaken to mitigate and manage those potential impacts that will affect them. Further, as the SEP is not disclosed it is not clear that affected communities are aware of the Operator's expectations on ongoing engagement, monitoring and reporting (e.g. that technical meetings can be held by request, or how to access the grievance mechanism).	
		For projects with adverse social or environmental impacts, disclosure should occur early in the Assessment process and in any event before the project construction commences, and on an ongoing basis.	The Draft ESIA report was submitted to the MENR and simultaneously released to public and stakeholder groups for comment. As part of the Draft ESIA consultation process, public meetings were held in Azim Kend, Sangachal Town and Umid during October 2011. Comments received on the Draft ESIA report were collated, analysed and responses issued where these were considered relevant. The ESIA was subsequently revised and finalised for MENR approval. EIW commenced Q1/2012.	<b>Demonstrates Compliance</b>
EP6	Principle 6: Grievance Mechanism	The borrower will inform the affected communities about the mechanism in the course of its community engagement process and ensure that the mechanism addresses concerns promptly and transparently, in a culturally appropriate manner, and is readily accessible to all segments of the affected communities.	The Community Engagement and Nuisance MMP as the mechanism through which community grievances will be received and managed. A grievance mechanism is in place for the Operator; the grievance log was verified by the IESC but note that the procedure was not sighted. A grievance mechanism is in place and the grievance log (not procedure) was verified by the IESC. Environmental monitoring data is shared with communities through CLOs when related to grievances. Regarding ongoing stakeholder engagement processes, the ST construction contractor TKAZ also has a SE and grievance process (independent of the BP process). Coordination is through two interface meetings annually. The four nearby villages have their own meeting with TKAZ who also undertakes self-verification of their stakeholder engagement and grievance process, with BP oversight and annual audit. Documentation on implementation and resolution of grievances was not sighted or verified with any complainants by the IESC but it appears that the intent of the Performance Standard is	<b>Partial Compliance</b>

Audit Criterion		Detail	Site Findings	Compliance Category
			being met. Additionally with respect to ongoing stakeholder engagement processes, the IESC notes that the ST construction contractor TKAZ also has a SE and grievance process, which operates independent of the BP process. The contractor undertakes self-verification of their SE and grievance process, with BP oversight and annual audit (planned for 2015).	
EP7	Principle 7: Independent Review	For all Category A projects and, as appropriate, for Category B projects, an independent social or environmental expert not directly associated with the borrower will review the Assessment, AP and consultation process documentation in order to assist EPFI's due diligence, and assess Equator Principles compliance.	Underway	
EP8	Principle 8: Covenants	An important strength of the Principles is the incorporation of covenants linked to compliance. For Category A and B projects, the borrower will covenant in financing documentation.	To be determined	
EP9	Principle 9: Independent Monitoring & Reporting	To ensure ongoing monitoring and reporting over the life of the loan, EPFIs will, for all Category A projects, and as appropriate, for Category B projects, require appointment of an independent environmental and/or social expert, or require that the borrower retain qualified and experienced external experts to verify its monitoring information which would be shared with EPFIs.	To be determined	

## 9. COMPLIANCE AGAINST EBRD PERFORMANCE REQUIREMENTS

The IFC PSs and EBRD PRs are in broad alignment, as such, the IESC presents here those sections which differ to the IFC Performance Standards, according to the description in the Figure below:

**PR 1: Environmental and Social Appraisal and Management**

- See PS1
- Addition: Training

**PR 2: Labour and Working Conditions**

- See PS 2
- Addition: Wages, Benefits and Conditions of Work

**PR 3: Pollution Prevention and Abatement**

- See PS 3

**PR 4: Community Health, Safety and Security**

- See PS 4

**PR 5: Land Acquisition, Involuntary Resettlement and Economic Displacement**

- See PS 5
- Addition: Loss of Amenities

**PR 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources**

- See PS 6

**PR 7: Indigenous Peoples**

- See PS 7

**PR 8: Cultural Heritage**

- See PS 8
- Additional: intangible cultural heritage

**PR 9: Financial Intermediaries**

- N/A

**PR 10: Information Disclosure and Stakeholder Engagement**

- See IFC PS 1
- Addition: Corporate Finance.

### 9.1 PR 1: TRAINING

Training of employees and contractors to ensure compliance with health, safety, social and environmental obligations and programs is a key aspect of the BP AGT Region's environmental and social management programmes which are implemented through the LOMS. The environmental management component of the LOMS is certified to the ISO14001 standard for environmental management systems. The SD2 Construction Phase ESMS has been developed by BP and includes definition of training needs and requirements for training delivery. The main design and construction contractors are required to conform fully to the BP SD2 Construction Phase ESMS including the competency and training requirements of the ESMS.

Emergency response training includes participation in periodic mock drills (see PR4). HSE Training is undertaken in accordance with the HSSE Management System Training specific to the Social Performance team internally is not known, however the Operator indicated that training is provided to both third parties in areas relevant to BP's operations (e.g. promoting *Voluntary Principles on Security and Human Rights* training in Azerbaijan, see PR4), (Operator interview, 20.11.14).

## **9.2 PR 2: WAGES, BENEFITS AND CONDITIONS OF WORK**

While the specific labour conditions are not documented in the ESIA, BP and its contractors are competitive employers for whom national legislative compliance is achieved through a contractor self-verification and auditing system. Salaries are competitive given the local market. Contractor wages are for determination by contractors (Operator interviews, 20.11.14).

## **9.3 PR 4: ENVIRONMENT AND NATURAL RESOURCE ISSUES**

The possible extent of exacerbation of natural events has been investigated: the potential for flooding has been investigated due to the footprint of the ST Project changing the hydrological flow regime. The cumulative impact assessment included the construction of the cement plant and the petrochemical complex with the expectation that these will alter local hydrological conditions, with a potential increase in flood risk at receptors. However, the SD2 ST expansion is not, in itself, expected to have a significant impact on flood levels at any receptor location assessed.

## **9.4 PR 5: LOSS OF AMENITIES**

While the ESIA did not specifically investigate a potential loss of public amenities, it is assumed that, based on the site visit, that the area of the ST is a highly modified, industrial environment and as such will not likely suffer the loss of public amenity.

## **9.5 PR 8: INTANGIBLE CULTURAL HERITAGE**

PR8 requires the assessment of intangible cultural heritage. While the Institute of Archaeology and Ethnography has been engaged in a watching brief on SD2, it is not evident what if any intangible cultural heritage investigation has occurred, is ongoing or planned for the future. The CHMMP does not detail study of this aspect. Intangible cultural heritage investigation is not a requirement of local laws or the PSA related to SD2.

## **9.6 PR 10: CORPORATE FINANCE**

Not applicable for this client.

**Table 9.1 Compliance Evaluation – EBRD Performance Requirements**

Requirement	EBRD Performance Measure	Site Findings
<b>Review and Categorisation</b>	The project is categorised under Category A, B or C.	The Project is Category A
<b>PR1: Social and Environmental Assessment</b>		
PR1 requires the client conduct a process of Social and Environmental Assessment that will consider in an integrated manner the potential social and environmental (including labour, health, and safety) risks and impacts of the project.	Social and Environmental Assessment	<p>Both the SD2 and EIW ESIA's have been developed to meet national standards, BP policy and the PSA. The PSA does not have any specific social objectives.</p> <p>The ESIA reports that assessment of potential impacts takes into account existing and planned controls and monitoring and mitigation measures developed as part of earlier ACG and SD projects (s.1.4.1), however in some instances the baseline data and documentation of prior experience is not fully described (e.g. construction yards, see further below).</p> <p>The EIW ESIA reports that internal 'lessons learned' from BP environmental and community engagement teams inputting to the development of the ESIA itself and informing the scope of the ESIA (EIW ESIA, s.8.3.3, 8.3.4). However through this process it appears that determination of material issues has been made prior to all issues being subject to the impact assessment process (e.g. screening out of community health safety and security issues in EIW ESIA, table 10.1; SD2 ESIA s.12.2).</p> <p>The Project's social Area of Influence is not clearly defined, and 'associated facilities' not addressed. Construction yard sites are listed as options which may be used and so are not fully documented. ATA and BDJF yards have now been selected and are in operation, the IESC notes that risk and impacts identification are not based on any baseline E&amp;S data for those facilities.</p> <p>While all options are highly industrialised areas, the ESIA refers to "Local, regional and national businesses and their staff" as one of the most potentially impacted stakeholder groups, however how this is measured, mitigated and managed is not evident.</p> <p>The ATA yard required additional land take beyond its original footprint, it is a site at which only BP work is being undertaken, and will also be used for waste management related activities. It is not evident that any social assessment was undertaken at the ATA yard.</p>
	Organisational Capacity and Commitment	<p>Competent professionals are engaged to manage the social performance function from within the BP AGT Regions Team supported by external experts as required. The BP Social Performance Group comprises a team of 14, delivering social performance components of the ESMS under service level agreements to the BP GPO during the construction phase.</p> <p>Alignment evident with wider Project activities (e.g. Labour Management Committee and Forum to ensure coordination between community relations delivery by the BP and its contractors, to meet labour management initiatives and commitments).</p> <p>The ESMS describes training requirements for its delivery. Interviews demonstrate the necessary experience is in place as the SP and SDI team is an existing group having delivered earlier phases of the SD project, and internal</p>

Requirement	EBRD Performance Measure	Site Findings
		management support to deliver social performance program requirements. The ESIA was conducted by competent professionals (ESIA 1.4.2) with the assistance of external experts.
	Managing Contractors	Areas of third party involvement and ownership include the local fabrication yards, with the BDJF owned by SOCAR. The ESIA does not detail approaches where the Operator can reasonably exercise control over this facility. Fabrication works carried out at the BDJF includes activities for other projects as well as BP, while ATA yard is utilised wholly for BP activities. So, some control could reasonably be exercised at the ATA site. IESC has not sighted documentation to demonstrate how risks and impacts at this site may be influenced (e.g. SEP, meeting minutes on ATA site risk assessment and management).
	Training	Training in issues such as emergency response is achieved through periodic drills (see PR4). Training specific to the Social Performance team internally is not known, however the Operator indicated that training is provided to both third parties in areas relevant to BP's operations (e.g. promoting <i>Voluntary Principles on Security and Human Rights</i> training in Azerbaijan, see PR4), (Operator interview, 20.11.14).
	Community Environmental and Social Action Plan	The social management program appears to be under development. Construction Phase ESMS will be developed for implementation by BP and construction contractors, in line with Plan, Check, Do, Act ESMS framework/BP 'SD2 Construction Phase E&S Management' framework. The Employee Relations MP has been provided for review to date (refer PS2), the SEP (see PS1) and CHMMP (see PS8). The MPs broadly favour impact and risk avoidance, include measurable targets and indicators and assign roles and responsibilities for timebound implementation; however some additional level of detail is required in the SEP for addressing specific needs of vulnerable communities and engagement in line with the nature and scale of the Project, and disclosure of information.
	Performance Monitoring and Review	The Construction phase ESMS is to include a schedule of monitoring, inspection and audit of performance, including confirmation that construction and installation contractors are meeting ESMMP expectations (s.14.2.1). However, inclusion of Affected Community representatives in this process appears somewhat weak, with sharing of monitoring data where these relate to grievances (interview) or at the request of Affected communities. Inspections and audits are included to track ESIA commitment compliance in E&S Management: "Measurement, Evaluation and Corrective Action" and "management and review" phases. ESMS effectiveness outcomes are reported to senior management via quarterly ESIA compliance dashboard reports. Representatives from Affected Communities participate in working groups with BP to monitor and review the Project. Working groups are in place (interview with Operator 20.11.14) with participation from the municipality, local authorities, the BP executive committee, land team, government department of pipelines, BP security and BP social performance teams. The working groups (located in districts and regions along the pipeline in the AGT region, plus at Sangachal) meet quarterly and annually. Minutes, Terms of reference or other documentation regarding these groups has not been verified by IESC.
<b>PR2: Labour and Working Conditions</b>		
PR2 requires compliance, at a minimum, with	Human Resource Policies	The IESC received information specifying that the SD2 construction contract clauses have been developed to align with and exceed the SD2 ESIA commitments relating to Employee Relationship MP and workforce welfare and training.

Requirement	EBRD Performance Measure	Site Findings
national labour, social security and occupational health and safety laws, and the principles and standards embodied in the International Labour Organisation (ILO) conventions.		<p>Contracts are required to include:</p> <ul style="list-style-type: none"> <li>· PPE minimum requirements;</li> <li>· Site amenities provision according to use ratios;</li> <li>· Grievance mechanism in place by the contractor with BP oversight;</li> <li>· Potable water and catering specifications;</li> <li>· ERMP;</li> <li>· Medical services and pre-employment screening;</li> <li>· Self-verification requirements by the contractor;</li> <li>· Human resource and employee relationship management metrics reporting; and</li> <li>· De-manning communications requirements.</li> </ul> <p>Additionally, contractors are required to develop a Training Plan, and Nationalisation Plan and individual Development Plans for staff.</p> <p>Monthly metrics reporting is required to BP.</p> <p>Conformance is achieved through a three-stage process: Self-verification, Oversight, and Assurance. A Code of Conduct is in place –The Employee Relations MP outlines requirements for contractors.</p> <p>Human Resource Policies and Procedures are reported to be in place and a Project Code of Conduct is in place (interviews with Operator, 20.11.14). Information on Employee Relationship management and an Employee Relationship MP were provided for IESC review.</p>
	Human Resource Policies	A Code of Conduct is in place (interviews with Operator, 20.11.14). The Employee Relations MP outlines requirements for contractors
	Working Relationships	BP has a Labour Management Committee, which monitors labour management performance of all Contractors and potential IR/ER issues, develops plans to mitigate risks, provides guidance and direction to Contractors' management, ensures alignment, reviews external trends/environment. Additionally BP uses a Labour Management Forum to ensure policies and procedures are met.
	Working Conditions and Terms of Employment	No ATA staff are members of a union (ESIA s.7.34). Employees are free to join or form a union / workers' organisation (Operator interview 20.11.14). Additionally, Contractors have a role to ensure that there are no barriers to legitimate freedom of association through trade union membership or collective bargaining (ERMP, s.4.2). Specific conditions with migrant workers are not known, other than that a large portion of the current construction workforce (while BP aims for workforce nationalisation) is Turkish (Operator interview, 20.11.14).
	Child Labour	The ESIA does not specifically refer to employment of children / age of potential employees, or to the use of forced labour. However, the Employee Relations MP specifically requires that any breaches of employment policy such as child or forced labour are to be reported to BP and relevant authorities. The IESC notes that while Azerbaijani law enables employment of 16 year olds, BP policy is to employ only persons aged 18 years and over and non-forced labour. Contractors are also required through a certified Code of Conduct to employ only persons over the age of 18 years and only voluntary/non-compulsory labour.
	Forced Labour	

Requirement	EBRD Performance Measure	Site Findings
	Non-Discrimination and Equal Opportunity	The Employee Relations MP requires that BP and its contractors comply with the rule of law but not provisions for this implementation. While the ESIA does not make any provisions for gender equality issues - especially in relation to the Project workforce – all national legislation requirements must be met, including equal opportunity. Gender equality issues are discussed in the baseline study, however it is not clear how these issues are addressed from a management perspective with respect to non-discrimination in the workforce.
	Worker's Organisations	Employees are free to join or form a union / workers' organisation (Operator interview 20.11.14) and BP's code of conduct specifies: 'We will seek to work in good faith with trades unions and other bodies that our employees collectively choose to represent them within the appropriate legal framework.'
	Retrenchment	It is anticipated that retrenchment of large numbers of the construction workforce will occur (see s.12.3.3, 5.15). A demanning plan is stipulated in the Employee Relations MP and BP has indicated that any demobilisation of the personnel will be conducted in strict compliance with applicable local legislation. Further, BP is to be satisfied that the contractor is undertaking planning/communication processes, with the contractor keeping BP informed on methods it has in place for carrying out each phase of demobilisation, and in line with historical management of Project demobilisations through a consistent and fair approach to employees.
	Grievance Mechanism	The ESIA mentions grievance handling (s.12.3.2 and Table 14.1) and the site audit confirmed it is in place and being implemented. The Employee Relations MP also requires that a grievance process be implemented for contractors.
	Occupational Health and Safety	Identification of hazards to workers is has occurred through a number of BP GPO defined mandatory processes which include Concept Selection for Inherently Safer Design (ETP-GP-24-03), HSSE Review of Projects (ETPGP-4801), Major Accident Risk Process (ETP-GP 48-02); Assessment Prioritisation and Management of Risk. Onshore Process Safety Plan (20/11/2010) BP-SMOAZZ-SA-PLN-0001-D3: Describes how the process stagey for the BP AGT Region is implemented for the SD-2 onshore facilities. The safety design philosophy follows the design concepts applied on SD-1, but incorporating lessons learned. The inputs to the Project Process Safety Plan include BP major project process safety technical integrity requirements, BP AGT processes and Project specific processes (e.g. Permit to work, site procedures, engineering documents register).
	Non-Employee Workers	Self-verification process in place by BP to ensure third parties have an ESMS that complies with BP's requirements. GOO is responsible for: subcontractor management; audits and inspections. At this Project phase, GPO is responsible for oversight of the self-verification process of construction contractors, while the AGT Federal team looks at overall assurance processes. The Operator reported that an auditing arrangement is in place by BP of its contractors, which is then reported up through the company's management system. The Employee Relations MP requires a self-verification system in place for monitoring the performance of its contractors (interviews, Employee Relations MP), a review by BP after 30 days of mobilisation, and periodic (6 monthly) audits by the Operator. Labour Management Forums and Labour Management Committee are the forum through which the Operator manages and monitors contractor performance. The Employee Relations MP provides for the establishment of grievance processes by contractors / subcontractors, including procedures required by the Operator, circumstances under which the Operator is required to be notified

Requirement	EBRD Performance Measure	Site Findings
		about grievances and industrial disputes, and stop work meetings. The MP provides for Labour Management Committees as the forum for ensuring consistency in application across the Project, including in grievance management/process.
	Supply Chain	The Operator described in interviews that suppliers in the contracting process are screened to ensure no child or forced labour is used however documentation was not sighted to verify this. Further the Operator reported on the program for supplier development, which included BP policy and code of conduct awareness for companies in the supply chain. ESIA (s.13.6.2.5) describes BP's efforts to develop the supply chain. BP also supports the development of local suppliers through training and financing programmes, building skills and sharing BP's internal standards and practices as appropriate. Such activities enable a greater number of local businesses to participate in their supply chain and in a manner that is compliant with child/forced labour requirements.
	Wages, Benefits and Conditions of Work	While the specific labour conditions are not documented in the ESIA, BP and its contractors are competitive employers for whom national legislative compliance is achieved through a contractor self-verification and auditing system. Salaries are competitive given the local market. Contractor wages are for determination by contractors (Operator interviews, 20.11.14).
<b>PR3: Pollution Prevention and Abatement</b>		
PR3 requires projects compliance and operation with relevant EU environmental requirements as well as with applicable national law. Where EU environmental requirements do not exist, the client will apply other good international practice such as the World Bank Group Environmental Health and Safety Guidelines.	Pollution Prevention, Resource Conservation and Energy Efficiency	The SD2 Programme HSE MP (Rev D1) provides the overarching Project principles for the application of resource efficiency and pollution prevention principles. These Principles are defined as: identify and understand impacts; consult with others; design and avoid adverse impacts and minimise use of natural resources. The Project has considered technical and financial feasibility of resource efficiency and pollution prevention measures through the design selection phase, as described in the ESIA Chapter 4, based on the applied experience with SD1.
	Pollution Prevention, Resource Conservation and Energy Efficiency	The overarching environmental performance objectives for the SD project are included in the Project-specific EPS developed by a working group consisting of Azerbaijani Government departments, regulators and academic institutions. However, the EPS are yet to be endorsed by the MENR and therefore these standards do not yet have legal force. Until such time as the EPS are fully authorised, the Project must comply with the more generic environmental standards included in the Product Sharing Agreement and which describe the standards and practices common for international petroleum industry that were in existence at the time the PSA was signed - 1996. The ESIA (Chapter 2/5) states that the SD2 Project will comply with the intent of current national legislation where those requirements are consistent with the provisions of the PSA, and do not contradict, or are otherwise incompatible with, international petroleum industry standards and practice. The PSA is stated as being higher in the legislative hierarchy in Azerbaijan and over-riding the National Legislation. The SD2 Basis of Design for ambient air quality, noise, water quality and is consistent with WBG EHS Guidelines, WHO ambient air quality guidelines. Stack heights have applied GIIP as specified in WBG EHS Guidance. See further detail in below sections. The ESIA describes the obligation of the Project in regards to EU environmental requirements due to Azerbaijan's entry to the EU.
	Wastes	Drilling and completion activities have been assessed in the SD2 ESIA with impact avoidance and mitigation measures identified based on the drilling experience of earlier SD and ACG field developments.

Requirement	EBRD Performance Measure	Site Findings
		<p>The drilling and completion activities from the MODU will include sub surface and sea floor discharges of WBM and drill cuttings; onshore disposal and re-use of LTMOBM; cement discharge to the sea during the cementing of geotechnical holes; release of control fluids to sea during BOP testing of wells; MODU cooling water uptake and discharge; and, the discharges to the sea of ballast water, treated black water, grey water and deck drainage from the MODUs and support vessels.</p> <p>The Project has described the selection of drilling methodologies and drill chemicals to ensure that discharges to the sea and sea floor are minimised. WBM are separated from cuttings as far as practicable and re-used; No LTMOBM are discharged to the sea during drilling.</p> <p>Batches of barite supplied for use in WBM formulations meet applicable heavy metals concentration standards.</p> <p>A number of options were considered for the disposal of produced water during the initial stages of SD2 planning and a hierarchy of produced water management has been developed to minimise the potential major negative effects of pond storage odour as experienced during SD1 operations.</p>
	Safe Use and Management of Hazardous Substances and Materials	<p>The SD2 Project has adopted chemical selection criteria based on PSA requirements, international obligations, national legislation and Operator standards to ensure that chemicals that may be released to the environment, specifically marine waters, do not result in adverse environmental impacts. The chemical selection and hazardous materials management approach reflects GIIP and the WBG EHS Guidance. The Project has specified chemicals that will not be used on the Project due to international, national, and industry imposed bans.</p> <p>Non-routine loss of condensate poses a significant pollution risk for the SD2 Project, which is effectively, mitigated through documented spill prevention and response strategies. The avoidance and mitigation of pollution for SD2 applies the lessons learned from SD1 and ACG operations.</p>
	Emergency Preparedness and Response	
	Industrial Production	
	Ambient Considerations	<p>Project alternatives were defined during the early conceptual design of the SD2 Project with options assessed using a range of criteria including the reduction of negative impacts.</p> <p>In order to identify potential impacts to receptors, an understanding of the existing conditions was established prior to execution of Project activities. A number of environmental and socio-economic surveys were undertaken within the SD Contract Area, along the proposed SD2 pipeline corridor, within Sangachal Bay and in vicinity of the ST to support the preparation of the previous ACG and SD ESIA's. Monitoring has also been undertaken from 2004 as part of the Environmental Monitoring Programme. Onshore environmental surveys completed in the vicinity of the ST include noise, odour, visual context and light surveys, dust, a contamination survey, wetland characterisation survey, geotechnical, hydrological and cultural heritage baseline surveys.</p>
	Greenhouse Gas Emissions	<p>Key GHG emission reduction considerations in design include the flare reduction measures ;offshore gas compression preferred above onshore compression; offshore flaring chosen over offshore venting; direct drive gas turbines onshore selected in preference to electric drives; and, waste heat recovery on onshore compression gas turbines. The ESIA (Chapter 13) estimates that these efficiency measures have resulted in a reduction of approximately 103,700 ktonnes</p>

Requirement	EBRD Performance Measure	Site Findings
		of CO2 emissions across the SD PSA period.
	Pesticide Use and Management	N/A
<b>PR4: Community Health and Safety and Security</b>		
PR4 requires the client to identify and evaluate the risks and potential impacts to the health and safety of the affected community during the design, construction, operation, and decommissioning of the project and establish preventive measures and plans to address them in a manner commensurate with the identified risks and impacts.	Infrastructure and Equipment Safety	The EIW and SD2 ESIA describes design and construction under guidance of appropriate expertise of the early works and facilities. At the design phase this includes the 'Intent/Planning and Controls' phases (including ENVIID) undertaken in the SD2 Environmental Design Verification process. Key actions to be taken to designed out risks are described as well as key procedures and controls to be implemented during construction (EIA ESIA s.13.4). The SD2 ESIA describes infrastructure and equipment design and safety with respect to minimising nuisance issues and safe operations and risk prevention to affected communities (SD2 ESIA s.5.5.2). ST-Community distances were described by the Operator in the event of a most extreme hypothetical accident, none of which would reach local communities. Commitment is made to communicate the potential hazards associated with offsite traffic movements, as part of ongoing community liaison and management through a Traffic MP and Community Interaction and Social Impact MP during EIW (Table 12.1) and the Programme HSE MP.
	Hazardous Material Safety	There is no specific description evident of hazardous materials management and safety with reference to community health and safety. The Operator has described HSE leadership, planning and management, legal and regulatory framework, health and safety, security, environmental and social responsibility, contractor management and self-verification in the Programme HSE MP, demonstrating an established system in place for addressing emergencies. As with other SMPs, this however does not appear to have been disclosed, which is inconsistent with the intent of the PRs. The EIW ESIA describes the mitigation hierarchy to prevent accidents and avoid or minimise exposure to harmful materials (ESIA s.11.4.1). The HSSE management system requires for EIW a Pollution Prevention and Control Plan will be prepared for hazardous materials prior to transport (s.12.4.1), and Pollution Prevention MP as the key mechanism for ensuring no offsite discharges of hazardous material thereby minimising public exposure due to SD2 Project.
	Environmental and Natural Resource Issues	Possible extent of exacerbation of natural events have been investigated: flooding has been investigated due to the footprint of the ST Project changing stormwater flow regime. The cumulative impact assessment assessed the construction of the cement plant and the petrochemical complex with the expectation that these will alter local hydrological conditions, with a potential increase in flood risk at receptors; however, the SD2 ST expansion is not, in itself, expected to have a significant impact on flood levels at any receptor location assessed.
	Community Exposure to Disease	The EIW ESIA includes HSSE requirements on contractors to develop a <u>Community Interaction and Social Impact MP</u> to detail how construction work will be managed so as to avoid and <u>mitigate potential social impacts between construction workers and neighbouring communities</u> . This is to include a grievance mechanism. Additionally, a <u>Community Health Plan</u> is required to address community health risks associated with the EIW. BP reports that all contractor required plans are developed and approved in accordance with all contractor self-verification and BP audit processes. The Sangachal construction camp will be used for contractor expat workers and camp construction is not completed – camp habitation is planned for late 2Q/3Q 2015. The EIW ESIA scope includes the construction camp,

Requirement	EBRD Performance Measure	Site Findings
		<p>which is constructed within the site boundary (an offsite location was scoped out due to security issues, thereby avoiding potential impacts). It is isolated from local communities, and TKAZ's procedures relating to camp management are being further updated to support completion and habitation of the camp.</p> <p>Construction is the responsibility of the SD2 construction contractor, and has capacity for 600 people. A largely international (Turkish) construction workforce was reported by the Operator in interviews to have been assembled to deliver the EIW with a <u>nationalisation process in place</u> (i.e. which intends to increase the localisation of the workforce, from camp-based to home-based, and as far as practicable, from the Affected Communities nearest the ST location). While nationalisation in itself does not decrease disease transmissibility, it can discourage influx populations through promotion of local employment, with subsequent health benefits. The KPIs are under currently development for camp management, as reported by the Operator in audit interviews.</p> <p><u>As construction-community interactions were scoped out of the ESIA process (i.e. these are not included in ESIA commitments register and so, are not tracked and monitored), these MPs become critical in ensuring ongoing avoidance and mitigation of potential community exposure to Project-induced impacts.</u></p>
	Emergency Preparedness and Response	<p>In addition to response on PR1/PS1, the Operator reported that services to construction and operations to the Azerbaijan region is provided through: site response teams at each facility; country based team support; and regional business support. Any major incidents also receive support from London, and global response teams where required. Crisis plans are in place for high-risk locations, as well as condensate and oil spill response teams. Local government capacity to respond to emergency situations is satisfactory. A Mutual Operations Plan is in place to direct how the Operator and government work together on emergency response.</p> <p>Exercises are run periodically with communities to be aware of risks and threats at the local level. Communications are via external affairs to manage external media, with notification processes to government agencies prescribed. The MOP describes mass media communications and procedures. BP identifies that Contractors operating the construction sites are primarily responsible for emergency response management. This includes development and testing of site specific emergency response plans; maintaining adequate response resources; and notes that if community liaison is required at the SD2 ST site or the beach pull then BP via the C&amp;EA organisation will lead, at all other sites contractors will lead. The Operator notes that until the SD2 ST site becomes hydrocarbon live and will be managed under the operations management system. Audit is in place; BP undertake oversight and assurance of the contractors emergency response capability.</p> <p>However, while the principle of external engagement is described (Programme HSE MP: 'the Project shall promote open and constructive relationship between the SD2 Project and external stakeholders'), the documentation describing specific communications, information disclosure and response activities, including local Affected Community involvement in preparedness and response requirements, by either BP or the contractor, has not been sighted for verification by the IESC. (See also PS1/PR10 on stakeholder engagement and information disclosure).</p>
	Security Personnel Requirements	<p>The Security arrangements for BP in Azerbaijan follow BP group security guidelines. Security risks in Azerbaijan are routinely assessed; investigated as required; and training provided to promote security awareness. Inter-Agency Security Committee meetings have been in place since 2006 as a forum for exchange between local</p>

Requirement	EBRD Performance Measure	Site Findings
		communities and private security. The Operator has been promoting <i>Voluntary Principles on Security and Human Rights</i> training in Azerbaijan. This has included the Export Pipeline Protection Department and BP's own private security contractor in Azerbaijan.
<b>PR5: Land Acquisition, Involuntary Resettlement and Economic Displacement</b>		
PR5 requires that the client avoid or minimise, involuntary resettlement, mitigate adverse social and economic impacts from land acquisition or restrictions on affected persons' use of and access to land, improve or, at a minimum, restore the livelihoods and standards of living of displaced persons to pre-project levels, to improve living conditions among displaced persons through provision of adequate housing with security of tenure at resettlement sites.	Project Design	Alternative designs were considered in both the EIW and SD2 ESIA documents, including 'no Project' option was considered and rejected (SD2 ESIA s.4.1). The EIW ESIA considers alternative road alignments (EIW ESIA s.4.1.2). The footprint of the ST expansion site was assessed in EIW ESIA (EIW ESIA s.4.1.1). Construction camp location was selected following expansion site and access road locations (EIW ESIA s.4.1.3).
	Consultation	Community engagement with respect to fishing communities commenced with the SSES (2011) that identified 48 affected households. Expert researchers have carried out the livelihoods restoration investigation, confirming the 48 affected households, 45 households directly reliant on fishing. There are 75% vulnerable households. A number of options were reported to have been considered for compensation and an entitlements matrix has been developed. The basis for the matrix (e.g. supporting Livelihoods MP and consultation therein) has not been made available to IESC. The expert advisors were continuing ongoing engagement in order to determine appropriate compensation packages, implement, monitor, evaluate and close out livelihood restoration. BP has employed a fishing liaison staff member to facilitate this activity. (Interviews) A detailed engagement plan has not been sighted; BP will develop a SSF MP (Livelihoods baseline s.1.4).
	Grievance Mechanism	A grievance mechanism for small-scale fishermen will be established (Livelihoods s.1.6). A timeframe for its development has not yet been identified.
	Compensation and Benefits for Displaced Persons	The displaced persons have been established through the Baseline survey (Nov 2014), and was validated during another field input, which was reported to have occurred in February 2015. Physical displacement for the SD2 Project is not yet confirmed (see below) but is very unlikely based on reported industrialisation of the potential sites (e.g. ATA Yard).
	Resettlement Planning and Implementation	Economic displacement will occur to those fishing communities engaging in small scale fishing activities in the Sangachal Bay (see below).
	Resettlement Action Plan	Until such time as the SSF MP is established, the compensation framework is not clearly communicated; the entitlements matrix that has been prepared is not clear in absence of a guiding MP. This is to be developed in conjunction with affected stakeholders by consultative process (Livelihoods Baseline, s.1.4).
	Livelihood Restoration Framework	Physical displacement for the SD2 Project is not likely to occur unless the Associated Facilities for the SD2 Project trigger this criteria. This may include either the ATA Yard or Sarinja waste facility, however is very unlikely due to industrialisation of the site and SOCAR ownership and use prior to its acquisition for the Project. (refer PS1). (refer PS1)
	Physical Displacement	Economic displacement includes loss of access to fishing grounds which is triggered through the temporary loss of access to an exclusion zone in the Sangachal Bay and the nearshore environment prior to installation works.
	Economic Displacement	

Requirement	EBRD Performance Measure	Site Findings
		<p>The survey has been undertaken (SD2 Livelihood baseline survey of small scale fishing activities, Nov 2014) to identify the location, status and ownership of any fishing gear that may be directly or indirectly impacted from construction works.</p> <p>During interviews, the Operator indicated that entitlements:</p> <ul style="list-style-type: none"> <li>· investigate 48 households identified thus far, focusing on the 45 households reliant on fishing for incomes;</li> <li>· consider how to address instances where households have more than one individual named on the licence and householders (not on the licence) are also supported by the licence holder(s);</li> <li>· will preferentially promote compensation payments to account for disparities in reported household incomes;</li> <li>· will be informed by past compensation payments;</li> <li>· may be informed by an inventory of fishing equipment;</li> <li>· will consider a mix agreed as appropriate between stakeholders (Interview 20.11.14).</li> </ul> <p>The entitlements matrix details:</p> <ul style="list-style-type: none"> <li>· income compensation;</li> <li>· asset compensation</li> <li>· payment instalments.</li> <li>· However, the methodology is not provided but is anticipated to be included in a Fishing Livelihoods MP.</li> </ul>
	Private Sector Responsibilities Under Government Managed Resettlement	<p>IESC considers that this criteria would only be triggered should the associated facility (ATA Yard) require a supplemental resettlement plan due to footprint expansion into municipality-owned land.</p> <p>Additional documentation is required on the ATA yard. The ESIA specifies that the construction contractor has responsibility for completion of any land acquisition processes (s.12.2.4). The ATA yard information suggests that due to SOCAR ownership there was no other land use, and so, no displacement. While contractually the ATA Yard is not required to develop any consultation MP (see PS1/PR10), the <u>exact nature of the arrangements between the ATA Yard and BP are not clear with respect to any resettlement, and so lines of responsibility in documentation of yard activities and on the communities potentially displaced by it, are also not clear.</u> A detailed baseline study for the site was not available for IESC review.</p>
	Loss of Amenities	<p>While the ESIA did not specifically investigate a potential loss of public amenities, it is assumed that, based on the site visit, that the area of the ST is a highly modified, industrial environment and as such will not likely suffer the loss of public amenity. Context of other associated facilities are not known without additional information / site inspection.</p>
<b>PR6: Biodiversity Conservation and Sustainable Natural Resource Management</b>		
PR6 require the client to identify the potential impacts on biodiversity in the projects area of influence likely to be caused by the project through the	Appraisal of Issues and Impacts	<p>Impacts to biodiversity are assessed for construction and operational phase including onshore and offshore activities under routine and non-routine scenarios. Part of Sangachal Bay, immediately to the south of the proposed SD2 Pipeline Corridor, has been designated (not nationally designated) as a KBA/IBA.</p> <p>The ESIA does not systematically specifically identify and assess ecosystem services but does assess the Project's activities that affect terrestrial vegetation used for grazing, changes in hydrology at the ST expansions site and impacts to near shore ecology from pipeline shore crossings. Fish monitoring survey locations have been established along the coastal zone near the SD2 pipeline shore crossing works and include specific monitoring of species of</p>

Requirement	EBRD Performance Measure	Site Findings
environmental and social assessment process. The extent of due diligence should be sufficient to fully characterise the environmental risks and impacts, consistent with a precautionary approach and reflecting the concerns of relevant stakeholders.		commercial value. The SD2 offshore area of impact and surrounds is already impacted by the presence of invasive marine species, particularly the benthos of the coastal zone. Water-column surveys in the SD2 Contract Area in recent years have indicated a substantial decline in native and endemic species, to the extent that the zooplankton community is dominated by two invasive species.
	Habitat Protection and Conservation	The proposed onshore SD2 export pipeline corridor route will pass through predominantly desert/semi-desert habitat and along the eastern fringes of the wetland area south of the ST. The pipeline installation works will require the removal of vegetation and surface soil from an area of approximately 35 hectares (ha). The impact will be temporary as it is planned to reinstate the area affected along the route to its pre –construction condition. This approach is consistent with previous pipeline installation and reinstatement activities completed for the earlier ACG and SD projects. Surveys completed following previous works have shown reinstatement has been successful and no significant impacts to terrestrial ecology have been recorded. Terrestrial biodiversity mitigation measures during construction activities include: prior to removal, vegetation will be inspected to detect the presence of wildlife and activities ceased until appropriate action is taken to ensure any wildlife encountered is not harmed within the ST vicinity; areas for laydown of soil or loose construction materials will be identified to minimise impacts to habitats and potential for erosion and sedimentation into watercourses or drains located within the ST vicinity; checks for wildlife will be undertaken prior to backfilling of the onshore pipeline trench. Any reptiles and mammals in the trench will be removed; an Ecological and Wildlife MP (not reviewed by IESC) is proposed to be developed for ST vicinity and implemented to manage the relocation of any mammals, reptiles or any IUCN or Azerbaijan Red Data Book listed species encountered within the areas affected by the SD2 Project works.
	Invasive Species	The onshore and offshore Project areas are substantially impacted by invasive species. Measures to prevent introduction of invasive marine species will be expected through normal MARPOL obligations for vessel movements and ballast water management
	Sustainable Management and Use of Living Resources	N/A
	Fisheries	The ESIA has identified and assessed the interactions between the social and ecological values within the Project’s potentially affected areas with specific relevance to the supporting services provided by coastal marine ecology and water quality for the maintenance of commercial fish stocks. The assessment includes direct and indirect impacts to fish stocks of commercial value through changes to water quality, seabed disturbance, changes to marine and coastal ecology, contamination of sediments and impacts of underwater noise resulting in temporary avoidance of the Project area. However, full compliance with this requirement would require specific ecosystem service assessment to be reviewed.
	Genetically Modified Organisms (EBRD)	N/A
Supply Chain (EBRD)	N/A	

Requirement	EBRD Performance Measure	Site Findings
	Biodiversity and Tourism (EBRD)	N/A
<b>PR7: Indigenous Peoples</b>		
PR7 requires an assessment of impacts on Indigenous Peoples. The client is expected to first avoid adverse effects and where this is not feasible, to prepare an Indigenous Peoples' Development Plan so as to minimise and/or mitigate any potential adverse impacts and identify benefits.	<ul style="list-style-type: none"> <li>· Assessment</li> <li>· Avoidance of Adverse Impacts</li> <li>· Information Disclosure, Consultation and Informed Participation</li> <li>· Preparation of an Indigenous Peoples Development Plan</li> <li>· Compensation and Benefit Sharing</li> <li>· Impacts on Traditional or Customary Lands Under Use</li> <li>· Relocation of Indigenous Peoples from Traditional or Customary Lands</li> <li>· Cultural Resources</li> <li>· Grievance Mechanism and Prevention of Ethnically Based Discrimination</li> </ul>	Indigenous peoples' is not likely triggered for this Project.
<b>PR8: Cultural Heritage</b>		
PR8 require the client to identify if any cultural heritage is likely to be adversely affected by the project, and assess the likelihood of any chance finds. The client is responsible for locating and designing a project	Protection of Cultural Heritage in Project Design and Execution (MIGA)	Tangible cultural heritage studies have been conducted in accordance with local laws by the Operator (2001, for the SD1 project, 2002 follow up survey). In 2011 a survey was undertaken in the SD2 area and the archaeology baseline survey area included all SD2 Project elements (including the EIW). No evidence of buried archaeological or other data to indicate the presence of buried archaeological remains was found during the survey. Baseline artefact finds were significant but not critical and mitigation measures have been reported to be instituted. There is no evidence to suggest the presence of a site in the onshore Pipeline Corridor. Marine cultural heritage will be identified through a review of data collected from previous surveys and any further seabed surveys completed prior to pipeline and subsea infrastructure installation. The CHMMP has been prepared and describes:
	Screening for Risks or Impacts on Cultural Heritage (EBRD)	

Requirement	EBRD Performance Measure	Site Findings
so as to avoid significant damage to cultural heritage.		· The regulatory framework; known cultural heritage and its protection; chance find procedures and watching brief; roles and responsibilities; and verification and monitoring.
	Impacts on Intangible Heritage (EBRD)	PR8 requires the assessment of intangible cultural heritage. While the Institute of Archaeology and Ethnography has been engaged in a watching brief on SD2, it is not evident what if any intangible cultural heritage investigation has occurred, is ongoing or planned for the future. Intangible cultural heritage investigation is not a requirement of local laws or the Product Sharing Agreement related to SD2.
	Avoiding Impacts	The ESIA describes that the ESMS for construction will include:
	Assessing Impacts that Cannot be Avoided (EBRD)	· A CHMMP was prepared detailing how the SD2 Project will be managed in relation to potential cultural heritage impacts; and An Archaeology and Cultural Heritage Close-Out Report will be issued to authorities at completion of construction activities.
	Managing Impacts on Cultural Heritage (EBRD)	· BP's contractor's procedures and plans will be used to collect and regularly report monitoring data (e.g. archaeological finds). The CHMMP has been prepared and describes: · The regulatory framework; known cultural heritage and its protection; chance find procedures and watching brief; roles and responsibilities; and verification and monitoring.
	Chance Find Procedures (EBRD)	A Chance Find procedure is a commitment of the ESIA (s.10.7.1); Any findings to be reported by Watching Brief Archaeologists immediately; any corrective measures required will be agreed with regulatory agencies; Watching Brief archaeologists will assess appropriate controls and changes to the excavation work in the event of new finds; and whether more detailed archaeological assessment is required. Chance Find Procedure is in place, including site clearance monitoring. BP has engaged and manages this Institute to ensure consistency of approach, coordination and a single point of contact for regulatory agencies and watching brief specialists. This is documented in the CHMMP.
	Consultation with Affected Communities (EBRD)	The Operator has engaged with regulatory agencies on cultural heritage matters. Engagement on cultural heritage with Affected Communities is described within the wider ESIA consultation, and the CHMMP describes situations in which engagement with communities would be undertaken. See also PS1/PR10 regarding consultation more broadly.
Project's Use of Cultural Heritage	Not applicable	
<b>PR10: Information Disclosure and Stakeholder Engagement</b>		
PR10 requires that the EBRD agree with the client how the relevant requirements of this PR will be addressed as part of the client's overall environmental and social	· Stakeholder Engagement and Analysis	The ESIA somewhat documents the stakeholder engagement and consultation processes. Analysis of stakeholders was undertaken prior to scoping, disclosure of ESIA documents was carried out in line with BP's requirements. Ongoing engagement activity is the responsibility of the SP team and CLOs at the village level, however documentation to support these activities is reference but not documented for provided for review by IESC ( <u>ongoing stakeholder analysis and planning, ongoing disclosure, participatory processes, documentation of the grievance mechanism and ongoing reporting to Affected communities</u> ). Given the nature and scale of the Project, and proximity to components of the Project, the frequency of engagement during a period of rapid change at construction (6

Requirement	EBRD Performance Measure	Site Findings
<p>appraisal process, ESAP and/or Management System. PR10 is to be read in conjunction with PR1.</p>		<p>monthly with Affected Communities) may not appear sufficient; this period has not been disclosed to those affected communities</p>
	<p>Stakeholder Engagement Plan</p>	<p>Stakeholder identification and analysis (from 2008 onward) built on existing knowledge of the Project stakeholders and lessons learned from past engagement. Evidence of past lessons and detailed stakeholder analysis has not been sighted, including identification of vulnerable groups, affected communities, and community representatives, presented at the village level.</p> <p>The ESIA presents the results of a SSES, which created a baseline from which to measure Project impacts and benefits.</p> <p>A SEP has been provided to IESC, but does not present engagement tailored to each of the affected communities including any vulnerable people within those communities. The SEP presents a strong focus of engagement with and reporting to Government rather than community and community representatives. Evidence unavailable of efforts engage with affected communities around third party sites, including arrangements/coordination efforts with the third party Operators of those sites. BPs contract requirements for example at the ATA yard do not obligate the contractor at that site to engage with communities nearby (refer ESMMP).</p>
	<p>Information Disclosure</p>	<p>A Public Consultation and Disclosure Plan is unverified by the IESC, but was prepared for the SD2 Project, detailing the process through which stakeholders were identified and consulted, roles and responsibilities of the ESIA consultants and BP, and the grievance process for ESIA disclosure. It documents the disclosure steps that were taken and high level issues that were raised during the consultation process (s.8.3.4).</p> <p>The Draft ESIA report was submitted to authorities and released for public comment. Draft ESIA consultation included public meetings in 3 neighbouring villages during October 2011.</p> <p>Comments received on the Draft ESIA report were collated, analysed and responses issued where relevant. The ESIA was then finalised for MENR approval.</p> <p>However, the disclosure did not include the ESMPs for the Project, which is a significant gap in meeting the intent of the Performance requirements.</p>
	<p>Meaningful Consultation</p>	<p>ESIA consultation included initial scoping with government agencies. EIW scoping also included internal stakeholders (EIW ESIA s.8.3.4). For both SD2 and EIW ESIAs, two scoping phase workshops were held in Baku then the SSES undertaken in the ST area by socioeconomic experts.</p> <p>Final consultation occurred with draft ESIA release (60 days of public disclosure in Baku, at site, and in Sangachal and Umid villages).</p> <p>BP may complete a close out survey/report back to affected communities following the SSES.</p> <p>It is not evident that efforts were made to consult with those communities who may be impacted by associated facilities (construction yards, waste facility), and third parties are not required to develop their own community engagement plans, as is specified in the ESMS, thereby limiting any ongoing proactive consultation with communities at those sites.</p>

Requirement	EBRD Performance Measure	Site Findings
	Disclosure and Consultation on Category A Projects	<p>MPs (including the SEP) do not appear to have been disclosed with the ESIA, which is a critical non-compliance with the performance requirements and the intent for disclosure to communities of the activities to be undertaken to mitigate and manage those potential impacts that will affect them.</p> <p>BP having operated in the region since 2007 has extensive consultation experience at the ST and surrounds. However in the ESIA and provided additional documentation, the Operator has not clearly demonstrated that it has <u>identified and analysed all primary stakeholders within the Project area of influence</u>. The Company also needs to <u>describe how the results from stakeholder analysis have been used to develop the ongoing community engagement program</u>, i.e. the results should be used in the Public Consultation and Disclosure Plan to justify the different approaches to engagement with different stakeholder groups. Although an expansion of an existing facility, the <u>engagement should still reflect the nature and scale of the Project risks, including with those who will be most affected</u> (as defined as 'Affected Communities' in close proximity to the site and associated facilities, with a stake in socio-environmental related impacts), <u>as well as those with professional and regulatory interests</u>.</p> <p>The ESIA consultation process is described to include initial scoping with government agencies (MENR), followed by consultation with other agencies (MoCT, IoAE). In the case of the EIW additionally with internal stakeholders (EIW ESIA s.8.3.4). For both SD2 and EIW ESIAs, two scoping phase workshops were held in Baku (scientific and academic institutions, public and civil society). This was then followed by the SSES in the villages in the ST area, undertaken by socioeconomic experts (note, the SSES is a baseline survey not a stakeholder engagement process). Data was gathered using household surveys, FGDs and interviews, and information on the Project was disclosed (posters, presentations and leaflets) at the village level.</p> <p>Final consultation occurred with draft ESIA release, with 60 days of public disclosure at various sites in Baku, at the site, and in Sangachal and Umid villages. Additionally, consultation meetings targeted the scientific community in Baku, and the general public at consultation meetings in Baku and two villages near the ST.</p> <p>The Operator indicated they may complete a close out survey/report back to affected communities following the SSES. It is <u>not evident that efforts were made to consult with those communities who may be impacted by associated facilities</u> (construction yards, waste facility), or whether any consultation was carried out by third parties in cooperation with BP to achieve this purpose.</p>
	Engagement During Project Implementation and External Reporting	Mechanisms for reporting back to communities on implementation of Action Plans (ESMPs) are periodic, with a minimum of six-monthly reports to communities during construction phase only, as reported in the ESMP. Annual reports are not specific to the Affected Communities or the ongoing impacts and risk management in the Project Area of Influence. Reporting requirements during operations is not defined.
	· Corporate Finance	Not applicable.
	Grievance Mechanism	<p>The ESIA (Table 14.1) states the Community Engagement and Nuisance MMP includes community grievances. A grievance mechanism is in place and the grievance log (not procedure) was verified by the IESC. Environmental monitoring data is shared with communities through CLOs when related to grievances.</p> <p>Regarding ongoing stakeholder engagement processes, the ST construction contractor TKAZ also has a SE and grievance process (independent of BPs). Coordination is through two interface meetings annually. The four nearby</p>



# SUSTAINABILITY

FUTURE GROWTH

Requirement	EBRD Performance Measure	Site Findings
		villages have their own meeting with TKAZ who also undertakes self-verification of their SE and grievance process, with BP oversight and annual audit. Documentation on this was not sighted by the IESC. It is not clear whether grievance mechanisms have been publicly disclosed, as these are part of the SMPs.

## **10. COMPLIANCE AGAINST EBRD SUB-SECTORAL ENVIRONMENTAL AND SOCIAL GUIDELINES: PETROLEUM AND COAL PRODUCTS**

### **Environment**

The SD2 Project demonstrates general compliance against the EBRD Sub-sectoral environmental guidelines relevant to Petroleum and Coal Products. The Project environmental design standards are developed from GIIP have been applied for the operational SD1 project facilities where proven good environmental performance is demonstrated. Construction level environmental management measures have been developed and appear to be implemented. The environmental and social management systems that apply to the SD2 construction and the SD1 operations are mature systems with proven performance in achieving compliance with national and Operator standards.

The SD2 HSE Plan (13/5/2014) has been developed for the execute phase of the Project and describes how occupational health, industrial hygiene, safety, legal and regulatory compliance and environment and social responsibility impacts and risks will be managed in conformance with applicable BP requirements. The HSE Plan governs HSE requirements for SD2 Project and specifies the HSE requirements for SD2 Project to meet BP OMS. It also specifies the HSE requirements for Project delivery teams during construction, including plans and procedures. The document is designed as part of the HSE Management System to promote an effective common process for the management of HSE.

The HSE Plan provides an overarching framework for the implementation of environmental management programs required for the construction Phase of the Project. The framework includes the HSE policies, Project HSE objectives, identification of roles and responsibilities, HSE resourcing requirements, the organisation of HSE personnel, reporting and performance management. The HSE Plan provides essential detail of how the Project delivery teams, including contractors, will implement risk management including details on the risk identification and management tools to be used and how records of risk management processes shall be maintained. HSE incident management is detailed in the plan with processes developed to ensure effective corrective and preventative actions are implemented. HSE competency and training processes are established in the HSE Plan, including requirements for HSE training needs to be identified for all Project delivery teams.

The SD2 Project and delivery teams are required to use the ESMMP (10/2/2015) as the framework to deliver the environmental and social requirements, as defined by applicable legal, contractual and other requirements, including ESIA commitments. The ESMMP includes specific requirements for various work packages to manage and monitor environmental performance against the Environmental Design verification register, the SD2 Environmental and Social Compliance Register which includes ESIA commitments.

### **Social**

The social components of the EBRD Sub-sector guidelines examine the following issues:

- Labour standards, contracting and remuneration;
- Wages and working hours;
- Overtime;
- Labour authority inspection;
- Workers grievance process; and
- Union / workers organisation.

The findings of the audit against the guidelines show that:

- While the specific labour conditions are not documented, BP and its contractors are competitive employers for whom national legislative compliance is achieved through a contractor self-verification and auditing system;
- Salaries are competitive given the local market. Contractor wages are for determination by contractors;
- Documentation on overtime and labour inspectorate audits has not been sighted by IESC;
- There is a grievance process reported for BP and for its contractors, again, verified through a contractor self-verification and BP auditing system; and
- BP employees are free to join a union/workers organisation; the BP code of conduct specifies a commitment to working in good faith with such organisations acting on behalf of their employees.

The Table below provides additional detail.

**Table 10.1 Compliance Evaluation – EBRD Sub-Sectoral Environmental and Social Guidelines: Petroleum and Coal Products**

<b>EBRD: Sub-sectoral Environmental and Social Guidelines:</b>	<b>Site Findings</b>	<b>Compliance Category</b>
<b>Guide to Initial Due Diligence Site Visits</b>		
<b>General Guidance</b>		
What is the standard of “housekeeping” on site? Do areas look clean and tidy? Look for evidence of any recent spills or releases of raw materials/product.	Inspection of the SD2 construction site reflects a high level of housekeeping and active implementation of HSE management including hazardous materials management. No observed spills.	<b>Demonstrates Compliance</b>
Confirm organisational responsibilities and systems for EHS and social issues and check that EHS systems cover both all employees and contractors.	Organisational responsibilities are assigned and planned (reviewed HSE and Social organisational charts). The environmental social management program appears to be under development; Construction Phase ESMS will be developed for implementation by BP and construction contractors, in line with Plan, Check, Do, Act ESMS framework/BP ‘SD2 Construction Phase E&S Management’ framework. The Employee Relations MP has been provided for review to date (refer PS2), no other SMPs provided so unclear on which SMP implementation has commenced by the Operator/construction contractors.	<b>Demonstrates Compliance</b>
What processes are undertaken and hazardous materials stored including volumes? Have the risks associated with handling of petroleum products been documented and addressed in appropriate systems?	The SD2 HSE Plan and the ESMMP provide adequate processes to address hazardous material risks including the risk of handling hydrocarbons.	<b>Demonstrates Compliance</b>
Does the organisation have any ISO accredited systems in place which may be related to quality, environment and health and safety? Does the organisation plan to obtain any ISO standards?	The environment component of the LOMS is third party certified to ISO14001.	<b>Demonstrates Compliance</b>
Note signs of poor housekeeping, such as signs of spillages and high numbers of empty or partially full drums (what is the condition of these drums?). Particularly note any recent spills. Look for evidence of any recent spills or releases of raw materials/product.	None observed	<b>Demonstrates Compliance</b>
Check the condition of any assets, facilities, and equipment. What systems are in place to monitor and maintain physical assets? What investment in asset management is planned? Does the business plan and financials reflect these planned investments? Look for wear and tear and poor maintenance.	Reviewed audit and inspection process in place through the HSE Plan and the ESMMS.	<b>Demonstrates Compliance</b>
<b>Air Emissions Management</b>		
What systems and resources are in place to ensure the	Construction phase air quality management and monitoring is implemented through the	<b>Demonstrates</b>

<b>EBRD: Sub-sectoral Environmental and Social Guidelines:</b>	<b>Site Findings</b>	<b>Compliance Category</b>
facility complies with permitted air emission limits (including air emission limits related to occupational health)? If relevant, is the facility compliant with permitted air emission limits and if not, what measures and investments are required to ensure compliance?	ESMMS – includes specific air quality targets.	<b>Compliance</b>
<b>Health Safety and Fire Risk Management</b>		
Check signage around the site: · Does it convey the health and safety risks? · Are fire exits and/or evacuation routes clearly marked? · Are there demarcated routes for pedestrians and vehicles?	Signage and emergency response in place for current SD2 onshore construction at ST.	<b>Demonstrates Compliance</b>
Is fire –fighting and first aid equipment available? Is there trained and competent fire -fighting resource on site?	Fire extinguishers and first aid kits available at ST construction site.	<b>Demonstrates Compliance</b>
Check the age and condition of equipment, look for signs of wear and tear, degradation, leaks and breaks.	Fire extinguishers were checked on a regular basis and tagged.	<b>Demonstrates Compliance</b>
Check that solid waste storage and disposal (storage equipment) is in a good condition.	Waste storage at ST construction site OK. Construction phase waste MPs in place	<b>Demonstrates Compliance</b>
Are staff wearing Personal Protective Equipment and have been appropriately trained to use the equipment?	Use of PPE at ST construction site observed – including hard hats, high visibility clothing, hearing protection, appropriate footwear and eye protection.	<b>Demonstrates Compliance</b>
<b>Inspection and Incidents</b>		
Check the conditions and duration of validity for all permits.	Not reviewed during site visit	Not assessed
Have the premises been inspected recently by the regulatory authorities for health, hygiene and environment? What were their findings?	Unknown	Not assessed
Does the organisation have insurance in place to cover the recall of contaminated/faulty products? Have there been any recent product recall incidents?	Unknown	Not assessed
Does the organisation have insurance to cover any significant damage to the environment/community/operations? Review the terms of the insurance cover?	Unknown	Not assessed
Has the organisation been subject to environment, safety or quality audits by customers/insurers? What was the outcome of these audits?	Internal audits of contractors undertaken by Operator.	<b>Demonstrates Compliance</b>

<b>EBRD: Sub-sectoral Environmental and Social Guidelines:</b>	<b>Site Findings</b>	<b>Compliance Category</b>
Have there been any recent incidents on site such as fatalities, fires/explosions, spills? Is insurance in place to cover such incidents?	For the 2014 period up to 30 September, the Project has recorded 2 lost time injuries, 2 recordable injuries, 21 first aid treatments and 42 safety near misses. This data excludes offshore drilling. The two lost time injuries refer to a single fabrication accident that occurred at the ATA shipyard in July 2014. HSE Incident reporting and the management of corrective and preventative actions occurs within the SD02 operational management systems. The IESC observed evidence of incident reporting and initial investigations relating to a vessel anchor drop incident.	Not assessed
Does the business plan have line items for environment, health and safety improvements as well as asset management, and maintenance?	HSMS is integrated with the SD2 management system.	<b>Demonstrates Compliance</b>
<b>Investment</b>		
Where are the organisations main markets? Are they manufacturing or exporting to the EU? Will new product standards such as REACH regulation be relevant? Could the organisations markets and hence revenue be impacted by REACH? Is investment required?	N/A	
Review budgets for capital expenditure (capex) and operational expenditure to cover EHS matters. Does the business plan have line items for environment, health, safety and social improvements as well as asset management and maintenance?	N/A	
If investment or refinancing will lead to restructuring of the organisation, what will be the potential impacts on health and safety at the operation and wider community? Have these been considered and assessed by the company?	N/A	
If the company plans to invest in new technology what will be the impact on human resources?	N/A	
<b>Financials and risk management</b>		
Does the organisation have insurance to cover any significant damage to the environment/community/operations (this may be covered by public liability insurance or the organisation may be party to an industry scheme). Review the terms of the cover.	Unknown	
Does the organisation have insurance in place to cover	Unknown	

<b>EBRD: Sub-sectoral Environmental and Social Guidelines:</b>	<b>Site Findings</b>	<b>Compliance Category</b>
the recall of "contaminated" oil/coal products? Have there been any recent product recall incidents?		
Does the business plan have line items for environment, health and safety improvements as well as asset management/maintenance? Are appropriate provisions set aside to meet environmental and social obligations?	Unknown	
Check the conditions and duration of validity for all permits. Is the company required to comply or implement any EHS improvement plans?	Unknown	
<b>Noise and Odours</b>		
Note the noise and dust levels at the site to determine whether abatement equipment is in use or might be required.	Yes – Environmental Design Basis for SD2 specifies equipment requirements to ensure compliance with Project noise standards. Construction noise managed by contractors and BP via the Community Engagement and Nuisance MMP.	<b>Demonstrates Compliance</b>
Note any odours that might cause a nuisance.	Odours from produced water stored onsite are recognised as a significant issue and alternative treatment and disposal options are preferred. Noise emissions during construction are predicted to exceed Project standards at the Sangachal township. Additional noise monitoring and management is proposed during peak construction period. Construction odour managed and monitored via the Community Engagement and Nuisance MMP.	<b>Demonstrates Compliance</b>
<b>Storage</b>		
Check the condition of storage facilities for raw materials and finished products.	N/A	<b>Demonstrates Compliance</b>
Confirm that audits are undertaken to monitor the condition of storage equipment. Review findings from the latest audits.	N/A	<b>Demonstrates Compliance</b>
Check for automatic safeguards on machinery to prevent accidental injury.	N/A	<b>Demonstrates Compliance</b>
<b>Waste storage</b>		
Check that solid waste storage and disposal (storage equipment) is in a good condition;	Solid waste storage observed during ST construction site visit appears OK. Construction phase Waste management and Minimisation Plan in place and effective.	<b>Demonstrates Compliance</b>
Check that waste storage areas are clear of debris and that skips are covered to prevent waste escaping, for example, check that waste containers have lids or are stored in an area with a roof.	Observed OK	<b>Demonstrates Compliance</b>
Does the organisation have lagoons on site to store oil contaminated waste? Have these lagoons been on site for some time or are they been developed relatively recently?	Not for SD2 construction at ST. SD1 Ponds currently used for produced formation water. Monitoring and inspection programme in place for ponds.	<b>Demonstrates Compliance</b>

<b>EBRD: Sub-sectoral Environmental and Social Guidelines:</b>	<b>Site Findings</b>	<b>Compliance Category</b>
If they are "old" there is a risk they may have leaked and caused contamination.		
<b>Water Abstraction &amp; Management</b>		
What amounts and quality of water are required? Where is the water obtained from? Is the water recycled? If changes are proposed will there be adequate water resources to meet any planned increases in production? Have the potential impacts been assessed?	Not significant during construction phase.	
<b>Waste Water Management</b>		
What liquid effluents are produced? What discharge control measures are employed?	<p>During construction of the SD2 onshore facilities, sewage will be routed to the new Sewage Treatment Plant (STP) when operational or collected by road tanker, handled as liquid waste and removed from site.</p> <p>Sewage will be treated to comply with applicable Project standards: pH (6-9), 5 day BOD of less than 20mg/l, total coliform &lt;400MPN (Most Probable Number) per 100ml, COD of less than 100mg/l, suspended solids of less than 30mg/l and residual chlorine less than 1mg/l (used for irrigation) or less than 0.2mg/l (discharge to the environment).</p> <p>Treated sewage will be used for irrigation or dust control (preferred option) within the vicinity of ST.</p> <p>Residual chlorine content of the sewage discharged from the treatment plant into the wadi will be measured daily.</p> <p>Samples will be taken from the STP discharge outlet and analysed weekly for pH and daily for BOD, total coliforms, COD and suspended solids against applicable Project standards.</p> <p>Assurance monitoring will be completed monthly.</p> <p>Results from effluent monitoring will be submitted to the MENR monthly.</p> <p>Sewage sludge will be transported off site for disposal to an appropriately licensed facility.</p> <p>Sumps will be used to provide contingency storage when the STP requires maintenance or is not available. Waste water from the sumps will be collected by road tanker, handled as liquid waste and removed from site.</p>	<b>Demonstrates Compliance</b>
Is effluent and wastewater treated before discharge? If so, check the condition of the treatment plant and location of discharge.		
Check the condition of the wastewater treatment plant and location of discharge points for wastewater from the facility. Note the colour and appearance of adjacent watercourses.		
Note whether the wastewater treatment plant discharges to a local watercourse or the municipal wastewater treatment works. Higher environmental risks will be associated with facilities discharging to water courses.		
What does the quality of these discharges look like? Note the colour and appearance of adjacent watercourses.		
Is water quality tested? What are the waters tested for? Where are the samples taken from and how often? Do the discharges have to meet set standards? Does the waste water treatment plants have the capacity to deal with any planned expansion at the site?		
Check for automatic safeguards on machinery to prevent accidental injury.		
<b>Social, Labour and Community</b>		
Check that labour standards, contracting and remuneration are in line with national law and are consistent with the average for the sector.	The specific labour conditions on the Project are not specified in documentation, however in interviews the Operator indicated that compliance with national law is achieved through contractor self-verification and auditing system (interview 20.11.14)	<b>Demonstrates Compliance</b>
Check that wages and working hours are consistent with	Monthly minimum wage (2011) is AZN 85 (ESIA s.7.19). The working hours and wages on the	<b>Demonstrates</b>

<b>EBRD: Sub-sectoral Environmental and Social Guidelines:</b>	<b>Site Findings</b>	<b>Compliance Category</b>
the average for the sector and national standards.	Project are not specified in documentation, however in interviews the Operator indicated that salaries are competitive given the local market. Contractor wages are for determination by contractors. Compliance with national law is achieved through contractor self-verification and auditing system (interview 20.11.14)	<b>Compliance</b>
Check that hours worked, including overtime, are recorded and staff should receive written details of hours worked and payment received.	As above - however could not be verified through the audit - documentation not sighted.	<b>Demonstrates Compliance</b>
Has the Company received inspections from the local labour inspectorate in the previous three years? Have these resulted in any penalties, fines, major recommendations or corrective action plans?	As above - however could not be verified through the audit - documentation not sighted.	<b>Demonstrates Compliance</b>
Does the organisation have a grievance mechanism which allows employees to raise workplace concerns?	Main construction and installation contractors (including their sub-contractors) used by BP during the SD2 Project are required to develop and implement their own ERMP which will include a grievance mechanism that is available for use by the workforce (s.12.6). BP's own grievance process is specified in the BP-CDZZZZ-EV-PLN-6002-000-P02 / AGT Projects Employee Relations Plan (see s.7)	<b>Demonstrates Compliance</b>
Are employees free to form, or join, a worker's organisation of their choosing?	No ATA staff are members of a union (ESIA s.7.34). Employees are free to join or form a union / workers' organisation (Operator interview 20.11.14) and BP's code of conduct specifies: 'We will seek to work in good faith with trades unions and other bodies that our employees collectively choose to represent them within the appropriate legal framework.' Additionally, Contractors have a role to ensure that there are no barriers to legitimate freedom of association through trade union membership or collective bargaining (ERMP, s.4.2).	<b>Demonstrates Compliance</b>
<b>Action Plans</b>		
Dependent on the individual business, select appropriate improvements from the list above to include in the action plan. As a minimum, any business should be required to have the following in place:		
<b>Environmental, Health and Safety</b>		
Operational procedures to manage environmental, health and safety risks.	SD2 HSE MP and construction phase plans implemented through the ESMMP. The environmental social management program appears to be under development; Construction Phase ESMS will be developed for implementation by BP and construction contractors, in line with Plan, Check, Do, Act ESMS framework/BP 'SD2 Construction Phase E&S Management' framework. The Employee Relations MP has been provided for review to date (refer PS2), no other SMPs provided so unclear on which SMP implementation has commenced by the Operator/construction contractors. The ESIA (Table 14.1) refers to SMPs to be developed, including:	<b>Demonstrates Compliance</b>

EBRD: Sub-sectoral Environmental and Social Guidelines:	Site Findings	Compliance Category
	<ul style="list-style-type: none"> <li>· Community engagement and nuisance MMP; and</li> <li>· Archaeology and Cultural Heritage MMP.</li> </ul> Mitigation hierarchy unclear: existing SMPs have not been sighted to enable validation, or to determine whether the MPs favour impact and risk avoidance, include measurable targets and indicators and assign roles and responsibilities for time bound implementation.	
Monitoring programmes.	The Construction phase ESMMP includes monitoring programmes to assess performance in complying with ESIA commitments and interfaces with the Stakeholder Engagement Plan. ESMS effectiveness outcomes are reported to senior management via quarterly ESIA compliance dashboard reports. Representatives from Affected Communities participate in working groups with BP to monitor and review the Project. Working groups are in place (interview with Operator 20.11.14) with participation from the municipality, local authorities, the BP executive committee, land team, government department of pipelines, BP security and BP social performance teams. The working groups (located in districts and regions along the pipeline in the AGT region, plus at Sangachal) meet quarterly and annually. Minutes, Terms of Reference or other documentation regarding these groups has not been verified by IESC.	<b>Demonstrates Compliance</b>
Improvement objectives, targets and project plans.	HSE Policy (Azerbaijan Developments) adequately describes objectives and principles that guide the Project. The ESIA for SD2 has been developed in line with BPs own standards, National legislation and the PSA.	<b>Demonstrates Compliance</b>
Training for personnel.	Employee Relations MP	<b>Demonstrates Compliance</b>
Plans for asset management.	Unknown	
Regular inspections, checks and audits with records to demonstrate achievement of the required level of performance against legal requirements and improvement action.	Inspections and audits are included to track ESIA commitment compliance in E&S Management: "Measurement, Evaluation and Corrective Action" and "management and review" phases. ESMS effectiveness outcomes are reported to senior management via quarterly ESIA compliance dashboard reports. Audit and inspection programmes are implemented for all Project construction activities via the HSE Plan and the ESMS.	<b>Demonstrates Compliance</b>
Emergency plans for environment, health and safety accidents or hygiene noncompliance.	Construction phase emergency management is described in the SD2 HSE Plan. Emergencies are managed for the SD-2 Project through BP' Crisis Management and Emergency Response framework which includes an established response mechanism, site response teams, country based incident management team and regional business support team and an executive support team based in London. BP has a Baku emergency response team consisting of 120	<b>Demonstrates Compliance</b>

<b>EBRD: Sub-sectoral Environmental and Social Guidelines:</b>	<b>Site Findings</b>	<b>Compliance Category</b>
	personnel and mutual operating plan on management of emergency situations between the BP AGT Region and the Azerbaijani Ministry of Emergency Situations	
Waste management plans.	Waste Management and Minimisation Plans are developed and implemented for construction phase; Offshore drilling waste MPs in place for wells and completions.	<b>Demonstrates Compliance</b>
Plans to deal with closure and remediation and/or decommissioning of the site.	Construction related remediation and restoration is included in the Restoration and Landscape MP and the Pollution Prevention MP	<b>Demonstrates Compliance</b>
Management review/demonstrated involvement in environment, health, safety and hygiene management.	Management review is established within the construction phase ESMS via the Programme HSE Plan	<b>Demonstrates Compliance</b>
Strategic and operational plans which account for EHS issues.	Safety Case Plans; ESIA construction phase MPs; SD2 Process safety Strategy provides the basis for compliance with The PSA and Azeri legislation; BP AGT Region HSSE Policy; BP's management standards and procedures which are generally aligned with the WBG EHS Guidelines.	<b>Demonstrates Compliance</b>

## **11. COMPLIANCE AGAINST ADB SAFEGUARD POLICY STATEMENTS**

### **11.1 SAFEGUARD POLICY STATEMENT**

The ADB SPS addresses the following safeguards:

- Environmental safeguards;
- Involuntary Resettlement safeguards;
- Indigenous Peoples Safeguards; and
- Special Requirements for Different Finance Modalities.

The intent of the ADB SPS on Environmental and Indigenous Peoples Safeguards are in broad alignment with that which is presented for IFC Performance Standards, as follows in the following figure.

- Environmental safeguards:
  - Refer PS 1, 2, 3, 4, 6, 8.
- Involuntary Resettlement safeguards:
  - See section 11.2 below, and PS 5.
- Indigenous Peoples Safeguards:
  - Refer PS 7.
- Special Requirements for Different Finance Modalities:
  - See section below.

Thus, the exceptions to audit findings presented earlier are presented below, firstly focusing on Involuntary Resettlement Safeguards Policy Statement.

### **11.2 INVOLUNTARY RESETTLEMENT SAFEGUARDS**

In this section, findings are presented relating to #3: Involuntary Resettlement Safeguards, as this differs from IFC and EBRD requirements on the same issue (see IFC PS 5, above).

The objectives of the safeguard statement is to avoid involuntary resettlement wherever possible; to minimise involuntary resettlement by exploring Project and design alternatives; to enhance, or at least restore, the livelihoods of all displaced persons in real terms relative to pre-Project levels; and to improve the standards of living of the displaced poor and other vulnerable groups.

The Safeguard scope includes physical displacement and economic displacement as a result of (i) involuntary acquisition of land, or (ii) involuntary restrictions on land use or on access to legally designated parks and protected areas. It covers them whether such losses and involuntary restrictions are full or partial, permanent or temporary.

The key findings of the audit against the ADB Involuntary Resettlement Safeguards Policy are as follows, noting that this section of the findings addresses the economic displacement of fishermen from the Sangachal Bay only. Assessment of other components of the Project (i.e. completion of historical resettlement by the SD project) is contained in the IFC PS 5 chapter above.

## **1. Compensation, Assistance and Benefits for Displaced Persons**

Physical displacement for the SD2 Project is not yet confirmed as this is dependent on baseline information describing the ATA Yard; however, it is not likely to be triggered if there has been no new residential settlement near the Yard since last investigated, in 2011 (see also IFC PS 5).

Economic displacement will occur to those households engaging in small scale fishing activities in the Sangachal Bay.

A Livelihood restoration framework, through a SSF MP, is yet to be established to manage this impact but is understood to be in development. While compensation at full replacement cost is a requirement of the SPS (para. 8, 10), it has not yet been determined what the method was to develop the Entitlements Matrix that has been provided to IESC. During interviews, the Operator indicated that entitlements:

- Will be informed by investigation of 48 households identified thus far, focusing on the 45 households reliant on fishing for incomes;
- consider how to address instances where households have more than one individual named on the licence and householders (not on the licence) are also supported by the licence holder(s);
- will preferentially promote compensation payments to account for disparities in reported household incomes;
- will be informed by past compensation payments;
- may be informed by an inventory of fishing equipment; and
- will consider a mix agreed as appropriate between stakeholders.

It is anticipated that the applied methodology will be included in the SSF MP. The MP will include identification of appropriate (financial and non-financial) livelihood restoration measures by agreement with stakeholders, for the duration of the temporary loss of access. The Entitlements Matrix does specify income and asset compensation, but the basis is not specified.

Further, the SPS recognises eligibility to those who have been in the Project area prior to the cut-off date (para 8). IESC is not aware of the establishment of a cut-off date, however, the validation fieldwork may have presented an opportunity for this to be announced. Whether this was undertaken is not known, and again is anticipated to be included in the SSF MP. The validation fieldwork will be undertaken by experts qualified to assist in valuation, consistent with the SPS requirements (para 10).

While the SPS requires compensation to be applied promptly (para 12), but recognises that while compensation is required to be paid before displacement, full implementation of the resettlement plan might take longer (para 14). BP has indicated that it may not be able to meet compensation prior to the loss of access occurring (commencement of trenching works) due to the time required for consultation and reaching agreement. The Operator has not yet documented a date for delivery of the MP and the compensation measures. The Entitlements matrix indicates two payments to be made for compensation, but not the timing or the date of loss of access.

SPS requires that involuntary resettlement should be conceived of and executed as part of a development project or program (para 13). BP has not commented on whether the SSF MP will be linked to a wider development program; the opportunity of fishermen to benefit from the Project more widely will also depend on the type/mode of compensation agreed between the Operator and stakeholders. This may also be considered in relation to the SPS requirement to ensure standards of living to same or better than pre-displacement levels (para 12).

## **2. Social Impact Assessment**

A socioeconomic survey and census is required to identify all displaced persons (SPS para 15). The displaced persons have been identified through the Baseline Survey (Nov 2014), building on data obtained during the SSES (2011), and which is understood to have been validated during another field input (February 2015). The SPS (para 15) requires information regarding the cut-off date will be documented and disseminated throughout the project area, however IESC is not aware if this has been achieved (as per above). Further, the SPS requires an SIA with an inventory assets, livelihoods and income estimate, presented as gender disaggregated data. The Entitlements Matrix provided to IESC does not disaggregate by gender. While a Livelihood Baseline Survey has been undertaken (Nov 2014), the future planned validation field survey has the potential to document these aspects, e.g. in the SSF MP. An asset survey was flagged during audit interviews, along with incomes/livelihoods estimates, as a potential component of the validation work (interviews, 20.11.14). The terms of reference for the validation work have not been viewed by IESC to verify this work plan.

Further, a social impact assessment for resettlement required under the SPS (para 16) should identify individuals and groups who may be differentially or disproportionately affected by the Project because of their disadvantaged or vulnerable status. The baseline study identified 48 affected households, 45 of whom are directly reliant on fishing. Vulnerable households make up 75% of impacted households. The SSF MP has the potential to ensure management actions to minimise disproportionate impacts to this group. The current outline for the SSF MP includes the identification of specific measures to address the needs of vulnerable households (Livelihoods Baseline survey, s.1.4).

## **3. Resettlement Planning**

The Operator is required, under the SPS requirements, to prepare a resettlement plan if the proposed Project will have involuntary resettlement impacts. The objective of a resettlement plan is to ensure that livelihoods and standards of living of displaced persons are improved, or at least restored to pre-Project (physical and/or economic) levels and that the standards of living of the displaced poor and other vulnerable groups are improved, not merely restored (para 17). The Livelihood restoration framework is yet to be established. The Operator has committed to doing so through a SSF MP (Livelihoods Baseline Survey s.1.4), which will include:

- The mechanisms to be used to engage with Project-affected fishing households to validate information underpinning the impact assessment and to ascertain their preferences and priorities in relation to mitigation measures;
- Identification of appropriate livelihood restoration measures (financial and non-financial)
- Identification of specific measures to address the needs of vulnerable households;
- The grievance procedure for small-scale fishermen, in line with the existing grievance procedures of the SD2 Project;
- The methods that will be used to implement the livelihood restoration measures identified including schedule, organisational responsibilities, and the mechanisms that will be used to agree the measures with stakeholders including the local government, MENR and the fishermen;
- The methods used to monitor and evaluate implementation of the livelihood restoration measures; and
- Estimated budget for implementation (Livelihoods Survey s.1.4).

SPS paragraph 18 requires that a resettlement plan will be based on the social impact assessment and through meaningful consultation with the affected persons including specific measures addressing the needs of female headed households, gender-inclusive consultation, information disclosure, and grievance mechanisms. Audit finding include that consultation with the affected persons commenced with preparation of the Stakeholder and

Socio-economic Survey (2011), followed by the Livelihoods Baseline Survey (Nov 2014). The Operator intends to now prepare a SSF MP incorporating meaningful consultation to negotiate and determine options for compensation, including specific measures for vulnerable households (Livelihoods survey s.1.4). See also safeguards criteria #28.

The Operator has indicated that compensation payments will be based on legal requirements and past experience of compensation by the Operator in SD1 phases of the wider project (interview with Operator 20.11.14), in compliance with paragraph 19 requirement that national laws and regulations are to be reflected in the framework.

Costs for compensation / relocation / livelihoods can be considered for finance (para. 20), however in this instance the borrower is not the Project Operator. Requirements of the SPS on vulnerable people (para 21), undertaking a census (para 22), and contingency funds (para 23) will be documented as the livelihood restoration framework (SSF MP) is developed, in accordance with the minimum elements designed in paragraph 3 above. Qualified experts should prepare the resettlement plan (para 24), which BP is meeting by engaging external experts to develop the SSF MP (Operator interview, 20.11.14).

#### **4. Negotiated Land Acquisition**

SPS paragraph 25 indicates that the social impact assessment criteria does not apply to negotiated settlements, unless expropriation would result upon the failure of negotiations. This does not apply in this situation as it is understood that acquisition of the pipeline landfall area was achieved by negotiated settlement.

#### **5. Information Disclosure**

ADB requires a range of documentation to be disclosed on the ADB website relating to the resettlement, including:

- a draft resettlement plan and/or resettlement framework endorsed by the borrower/client before Project appraisal;
- the final resettlement plan endorsed by the borrower/client after the census of affected persons has been completed;
- a new resettlement plan or an updated resettlement plan, and a corrective action plan prepared during Project implementation, if any; and
- the resettlement monitoring reports.

The SSF MP is yet to be developed for disclosure and will be subject to discussion with ADB for determination. Resettlement information should be prepared in an understandable manner to affected people and other stakeholders (para. 27). Disclosure regarding compensation matters has not yet been sighted by IESC.

#### **6. Consultation and Participation**

Meaningful consultation is required with affected persons (para 28), in a manner commensurate with the impacts on affected communities, paying particular attention to vulnerable groups. Further to paragraphs 2 and 3 above, ongoing engagement is continuing by BP and in order to determine appropriate compensation packages, implement, monitor, evaluate and close out livelihood restoration. The Operator has a dedicated fishing liaison staff member with the team to facilitate this activity (Operator interviews, 20.11.14).

A detailed engagement plan for this purpose has not been sighted/yet to be developed; the Operator has committed to developing a SSF MP that will include the mechanisms to be used to engage with Project-affected fishing households to validate information underpinning the impact assessment and to ascertain their preferences

and priorities in relation to mitigation measures. Further, it should identify specific measures to address the needs of vulnerable households (Livelihoods baseline s.1.4).

### **7. Grievance Redress Mechanism**

The SPS (para 29) requires that a mechanism is established to receive and facilitate the resolution of affected persons' concerns and grievances about physical and economic displacement and other Project impacts, paying particular attention to the impacts on vulnerable groups. The audit findings include that the outline for the Livelihoods Baseline Study acknowledges the need to establish a grievance mechanism for small-scale fishermen, in line with the existing grievance procedures of the SD2 Project, identified in the next steps (Livelihoods s.1.6). A timeframe for its development and disclosure has not yet been identified to IESC.

### **8. Monitoring and Reporting**

The SPS requires that (para 30) BP will monitor and measure the progress of implementation of the resettlement plan and semi-annual monitoring reports developed (para 31). The SSF MP will include the methods used to monitor and evaluate implementation of the livelihood restoration measures and the estimated budget for implementation (Livelihoods Baseline Survey s.1.4).

It is not yet clear whether the Operator intends to completion audit after access to the exclusion zone is reinstated (at the conclusion of construction).

### **9. Unanticipated Impacts**

This safeguard is not currently applicable.

### **10. Special Considerations for Indigenous Peoples**

The criteria for Indigenous Peoples is not triggered for the SD2 Project (See also IFC PS 7).

**Table 11.1 Compliance Evaluation – ADB Involuntary Resettlement Safeguards**

Involuntary Resettlement Safeguards		
1. Compensation, Assistance and Benefits for Displaced Persons		
<p>8. The borrower/client will provide adequate and appropriate replacement land and structures or cash <u>compensation at full replacement cost</u> for lost land and structures, adequate compensation for partially damaged structures, and relocation assistance, if applicable, to those persons described in para. 7(i) and 7(ii) prior to their relocation. For those persons described in para. 7(iii), the borrower/client will compensate them for the loss of assets other than land, such as dwellings, and also for other improvements to the land, at full replacement cost. The entitlements of those under para. 7(iii) is given only if they occupied the land or structures in the project area prior to the <u>cut-off date for eligibility</u> for resettlement assistance.</p>	<p>Physical displacement for the SD2 Project is not yet confirmed as this is dependent on additional information describing the ATA Yard; however, it is not likely to be triggered if there has been no new residential settlement near the Yard since last investigated, in 2011 (see also IFC PS 5). Economic displacement will occur to those households engaging in small scale fishing activities in the Sangachal Bay.</p>	<b>Partial Compliance</b>
<p>9. Preference will be given to land-based resettlement strategies for displaced persons whose livelihoods are land-based. These strategies may include resettlement on public land, or on private land acquired or purchased for resettlement. Whenever replacement land is offered, displaced persons are provided with land for which a combination of productive potential locational advantages, and other factors is at least equivalent to the advantages of the land taken. If land is not the preferred option of the displaced persons, or sufficient land is not available at a reasonable price, non-land-based options built around opportunities for employment or self-employment should be provided in addition to cash compensation for land and other assets lost. The lack of land will be demonstrated and documented to the satisfaction of ADB.</p>	<p>A Livelihood restoration framework, through a SSF MP, is yet to be established to manage this impact. While compensation at full replacement cost is a requirement of the SPS (para. 8, 10), it has not yet been determined. The <u>MP will include identification of appropriate (financial and non-financial) livelihood restoration measures by agreement with stakeholders</u>, for the duration of the temporary loss of access. Further, the SPS recognises eligibility to those who have been in the Project area prior to the cut-off date (para 8). IESC is <u>not aware of the establishment of a cut-off date</u>, however, the validation fieldwork may present an opportunity for this to be announced. The validation fieldwork will be <u>undertaken by experts qualified</u> to assist in valuation, consistent with the SPS requirements (para 10).</p>	<b>Demonstrates Compliance</b>
<p>10. The rate of compensation for acquired housing, land and other assets will be calculated at <u>full replacement costs</u>. The calculation of full replacement cost will be based on the following elements: (i) fair market value; (ii) transaction costs; (iii) interest accrued, (iv) transitional and restoration costs; and (v) other applicable payments, if any. Where market conditions are absent or in a formative stage, the borrower/client will consult with the displaced persons and host populations to obtain adequate information about recent land transactions, land value by types, land titles, land use, cropping patterns and crop production, availability of land in the project area and region, and other related information. The borrower/client will also collect baseline data on housing, house types, and construction materials. Qualified and experienced experts will undertake the valuation of acquired assets. In applying this method of valuation, depreciation of structures and assets should not be taken into account.</p>	<p>While the SPS requires compensation to be applied promptly (para 12), but recognises that while <u>compensation is required to be paid before displacement, full implementation of the resettlement plan might take longer (para 14)</u>. BP has indicated that it may not be able to meet compensation prior to the loss of access occurring (commencement of trenching works) due to the time required for consultation and reaching agreement. The Operator has <u>not yet documented a date for delivery of the MP and the compensation measures</u>.</p>	<b>Partial Compliance</b>
<p>11. In the case of physically displaced persons, the borrower/client will provide (i) relocation assistance, secured tenure to relocation land, better housing at</p>		<b>Demonstrates Compliance</b>

<p>resettlement sites with comparable access to employment and production opportunities, and civic infrastructure and community services as required; (ii) transitional support and development assistance, such as land development, credit facilities, training, or employment opportunities; and (iii) opportunities to derive appropriate development benefits from the project.</p>	<p>SPS requires that involuntary resettlement should be conceived of and executed as part of a development Project or program (para 13). BP has <u>not commented on whether the SSF MP will be linked to a wider development program</u>; the opportunity of fishermen to benefit from the Project more widely will also depend on the type/mode of compensation agreed between the Operator and stakeholders. This may also be considered in relation to the SPS requirement to ensure standards of living to same or better than pre-displacement levels (para 12). During interviews, the Operator indicated that entitlements:</p> <ul style="list-style-type: none"> <li>· Will be informed by investigation of 48 households identified thus far, focusing on the 45 households reliant on fishing for incomes</li> <li>· consider how to address instances where households have more than one individual named on the licence and householders (not on the licence) are also supported by the licence holder(s)</li> <li>· will preferentially promote compensation payments to account for disparities in reported household incomes</li> <li>· will be informed by past compensation payments</li> <li>· may be informed by an inventory of fishing equipment</li> <li>· will consider a mix agreed as appropriate between stakeholders.</li> </ul>	
<p>12. In the case of economically displaced persons, regardless of whether or not they are physically displaced, the borrower/client will <u>promptly compensate</u> for the loss of income or livelihood sources at full replacement cost. The borrower/client will also provide assistance such as credit facilities, training, and employment opportunities so that they can improve, or at least restore, their income-earning capacity, production levels, and <u>standards of living to pre-displacement levels</u>. The borrower/client will also provide opportunities to displaced persons to <u>derive appropriate development benefits from the project</u>. The borrower/client will compensate economically displaced people under paragraph 7(iii) for lost assets such as crops, irrigation infrastructure, and other improvements made to the land (but not for the land) at full replacement cost. In cases where land acquisition affects commercial structures, affected business owners are entitled to (i) the costs of re-establishing commercial activities elsewhere; (ii) the net income lost during the transition period; and (iii) the costs of transferring and reinstalling plant, machinery, or other equipment. Business owners with legal rights or recognised or recognisable claims to land where they carry out commercial activities are entitled to replacement property of equal or greater value or cash compensation at full replacement cost.</p>		<p><b>Partial Compliance</b></p>
<p>13. Involuntary resettlement should be <u>conceived of and executed as part of a development project or program</u>. In this regard, the best strategy is to provide displaced persons with opportunities to share project benefits in addition to providing compensation and resettlement assistance. Such opportunities would help prevent impoverishment among affected persons, and also help meet the ethical demand for development interventions to spread development benefits widely. Therefore borrowers/clients are encouraged to ascertain specific opportunities for engaging affected persons as project beneficiaries and to discuss how to spread such opportunities as widely as possible among affected persons in the resettlement plan.</p>		
<p>14. The borrower/client will ensure that no physical displacement or economic displacement will occur until (i) compensation at full replacement cost has been paid to each displaced person for project components or sections that are ready to be constructed; (ii) other entitlements listed in the resettlement plan have been provided to displaced persons; and (iii) a comprehensive income and livelihood rehabilitation program, supported by an adequate budget, is in place to help</p>		

<p>displaced persons improve, or at least restore, their incomes and livelihoods. While <u>compensation is required to be paid before displacement, full implementation of the resettlement plan might take longer</u>. If project activities restrict land use or access to legally designated parks and protected areas, such restrictions will be imposed in accordance with the timetable outlined in the resettlement plan agreed between the borrower/client and ADB.</p>		
<p><b>2. Social Impact Assessment</b></p>		
<p>15. The borrower/client will conduct socioeconomic survey(s) and a census, with appropriate socioeconomic baseline data to identify all persons who will be displaced by the project and to assess the project's socioeconomic impacts on them. For this purpose, normally a cut-off date will be established by the host government procedures. In the absence of such procedures, the borrower/client will establish a cut-off date for eligibility. Information regarding the cut-off date will be documented and disseminated throughout the project area. The social impact assessment (SIA) report will include (i) identified past, present and future potential social impacts, (ii) an inventory of displaced persons and their assets, (iii) an assessment of their income and livelihoods, and (iv) gender-disaggregated information pertaining to the economic and sociocultural conditions of displaced persons. The project's potential social impacts and risks will be assessed against the requirements presented in this document and applicable laws and regulations of the jurisdictions in which the project operates that pertain to involuntary resettlement matters, including host country obligations under international law.</p>	<p>A socioeconomic survey and census is required to identify all displaced persons (SPS para 15). The <u>displaced persons have been identified</u> through the Baseline Survey (Nov 2014), building on data obtained during the SSES (2011), and is to be validated during another field input (estimated to be conducted end 2014/start 2015). The SPS (para 15) requires information regarding the cut-off date will be documented and disseminated throughout the Project area, however IESC is not aware if this has been achieved (as per above). Further, the SPS requires an <u>SIA with an inventory assets, livelihoods and income estimate, presented as gender disaggregated data</u>. While a Livelihood Baseline Survey has been undertaken (Nov 2014), the future planned validation field survey has the potential to document these aspects. An asset survey was flagged during audit interviews, along with incomes/livelihoods estimates, as a potential component of the validation work (interviews, 20.11.14). <u>The terms of reference for the validation work have not been viewed by IESC to verify this work plan</u>. Further, a social impact assessment for resettlement required under the SPS (para 16) should <u>identify individuals and groups who may be differentially or disproportionately affected by the Project</u> because of their disadvantaged or vulnerable status. The baseline study identified 48 affected households, 45 of whom are directly reliant on fishing. Vulnerable households make up 75% of impacted households. The SSF MP has the potential to ensure management actions to minimise disproportionate impacts to this group. The current outline for the SSF MP includes the <u>identification of specific measures to address the needs of vulnerable households</u> (Livelihoods Baseline</p>	<p><b>Partial Compliance</b></p>
<p>16. As part of the social impact assessment, the borrower/client will identify individuals and groups who may be differentially or disproportionately affected by the project because of their disadvantaged or vulnerable status. Where such individuals and groups are identified, the borrower/client will propose and implement targeted measures so that adverse impacts do not fall disproportionately on them and they are not disadvantaged in relation to sharing the benefits and opportunities resulting from development.</p>	<p>Further, a social impact assessment for resettlement required under the SPS (para 16) should <u>identify individuals and groups who may be differentially or disproportionately affected by the Project</u> because of their disadvantaged or vulnerable status. The baseline study identified 48 affected households, 45 of whom are directly reliant on fishing. Vulnerable households make up 75% of impacted households. The SSF MP has the potential to ensure management actions to minimise disproportionate impacts to this group. The current outline for the SSF MP includes the <u>identification of specific measures to address the needs of vulnerable households</u> (Livelihoods Baseline</p>	<p><b>Partial Compliance</b></p>

	survey, s.1.4).	
<b>3. Resettlement Planning</b>		
17. The borrower/client will prepare a resettlement plan, if the proposed project will have involuntary resettlement impacts. The objective of a resettlement plan is to ensure that livelihoods and standards of living of displaced persons are improved, or at least restored to pre-project (physical and/or economic) levels and that the standards of living of the displaced poor and other vulnerable groups are improved, not merely restored, by providing adequate housing, security of land tenure and steady income and livelihood sources. The resettlement plan will address all relevant requirements specified in Safeguard Requirements 2, and its level of detail and comprehensiveness of the resettlement plan will be commensurate with the significance of involuntary resettlement impacts. An outline of resettlement plan is provided in the annex to this appendix.	The Operator is required, under the SPS requirements, to prepare a resettlement plan if the proposed Project will have involuntary resettlement impacts. The objective of a resettlement plan is to ensure that <u>livelihoods and standards of living of displaced persons are improved, or at least restored to pre-Project (physical and/or economic) levels and that the standards of living of the displaced poor and other vulnerable groups are improved, not merely restored</u> (para 17). The Livelihood restoration framework is yet to be established, however the Operator has <u>undertaken to doing so through a Small Scale Fishing MP</u> (Livelihoods Baseline Survey s.1.4), which will include:	<b>Partial Compliance</b>
18. A resettlement plan will be based on the social impact assessment and through meaningful consultation with the affected persons. A resettlement plan will include measures to ensure that the displaced persons are (i) informed about their options and entitlements pertaining to compensation, relocation, and rehabilitation; (ii) consulted on resettlement options and choices; and (iii) provided with resettlement alternatives. During the identification of the impacts of resettlement and resettlement planning, and implementation, the borrower/client will pay adequate attention to gender concerns, including specific measures addressing the need of female headed households, gender-inclusive consultation, information disclosure, and grievance mechanisms, to ensure that both men and women receive adequate and appropriate compensation for their lost property and resettlement assistance, if required, as well as assistance to restore and improve their incomes and living standards.	<ul style="list-style-type: none"> <li>· The mechanisms to be used to engage with Project-affected fishing households to validate information underpinning the impact assessment and to ascertain their preferences and priorities in relation to mitigation measures;</li> <li>· Identification of appropriate livelihood restoration measures (financial and non-financial)</li> <li>· Identification of specific measures to address the needs of vulnerable households;</li> <li>· The grievance procedure for small-scale fishermen, in line with the existing grievance procedures of the SD2 Project;</li> </ul>	<b>Partial Compliance</b>
19. The borrower/client will analyse and summarise national laws and regulations pertaining to land acquisition, compensation payment, and relocation of affected persons in the resettlement plan. The borrower/client will compare and contrast such laws and regulations with ADB's involuntary resettlement policy principles and requirements. If a gap between the two exists, the borrower/client will propose a suitable gap-filling strategy in the resettlement plan in consultation with ADB.	<ul style="list-style-type: none"> <li>· The methods that will be used to implement the livelihood restoration measures identified including schedule, organisational responsibilities, and the mechanisms that will be used to agree the measures with stakeholders including the local government, MENR and the fishermen;</li> </ul>	<b>Demonstrates Compliance</b>
20. All costs of compensation, relocation, and livelihood rehabilitation will be considered project costs. To ensure timely availability of required resources, land acquisition and resettlement costs may be considered for inclusion in ADB financing. Resettlement expenditure is eligible for ADB financing if incurred in compliance with ADB's safeguard policy statement and with ADB-approved resettlement planning documents. If ADB funds are used for resettlement costs, such expenditure items	<ul style="list-style-type: none"> <li>· The methods used to monitor and evaluate implementation of the livelihood restoration measures;</li> <li>· Estimated budget for implementation (Livelihoods Survey s.1.4).</li> </ul> <p>SPS para. 18 requires that a resettlement plan will be based on the social impact assessment and through</p>	<b>Partial Compliance</b>

<p>will be clearly reflected in the resettlement plan.</p>	<p><u>meaningful consultation with the affected persons</u></p>	
<p>21. The borrower/client will include detailed measures for income restoration and livelihood improvement of displaced persons in the resettlement plan. Income sources and livelihoods affected by project activities will be restored to pre-project levels, and the borrower/client will make every attempt to improve the incomes of displaced persons so that they can benefit from the project. For vulnerable persons and households affected, the resettlement plan will include measures to provide extra assistance so that they can improve their incomes in comparison with pre-project levels. The resettlement plan will specify the income and livelihoods restoration strategy, the institutional arrangements, the monitoring and reporting framework, the budget, and the time-bound implementation schedule.</p>	<p>including specific measures addressing the needs of female headed households, gender-inclusive consultation, information disclosure, and grievance mechanisms. Audit finding include that consultation with the affected persons commenced with preparation of the SSES (2011), followed by the Livelihoods Baseline Survey (Nov 2014). The Operator intends to now prepare a SSF MP incorporating meaningful consultation to negotiate and <u>determine options for compensation, including specific measures for vulnerable households</u> (Livelihoods survey s.1.4). See also safeguards criteria #28.</p>	
<p>22. The information contained in a resettlement plan may be tentative until a census of affected persons has been completed. Soon after the completion of engineering designs, the borrower/client will finalise the resettlement plan by completing the census and inventories of loss of assets. At this stage, changes to the resettlement plan take the form of revising the number of displaced persons, the extent of land acquired, the resettlement budget, and the timetable for implementing the resettlement plan. The entitlement matrix of the resettlement plan may be updated at this stage to reflect the relevant changes but the standards set in the original entitlement matrix cannot be lowered when the resettlement plan is revised and finalised. The borrower/client will ensure that the final resettlement plan (i) adequately addresses all involuntary resettlement issues pertaining to the project, (ii) describes specific mitigation measures that will be taken to address the issues, and (iii) ensures the availability of sufficient resources to address the issues satisfactorily.</p>	<p>The Operator has indicated that <u>compensation payments will be based on legal requirements and past experience of compensation by the Operator</u> in SD1 phases of the wider Project (interview with Operator 20.11.14), in compliance with paragraph 19 requirement that national laws and regulations are to be reflected in the framework. Costs for compensation / relocation / livelihoods can be considered for finance (para. 20), however in this instance the borrower is not the Project Operator. Requirements of the SPS on vulnerable people (para 21), undertaking a census (para 22), and contingency funds (para 23) will be documented as the livelihood restoration framework (SSF MP) is developed, in accordance with the minimum elements designed in paragraph 3 above. <u>Qualified experts should prepare the resettlement plan</u> (para 24), which BP is meeting by engaging external experts to develop the SSF MP (Operator interview, 20.11.14). In absence of the MP being developed and disclosed, this requirement is not currently met.</p>	
<p>23. Projects with significant involuntary resettlement impacts will need adequate contingency funds to address involuntary resettlement impacts that are identified during project implementation. The borrower/client will ensure that such funds are readily available. Moreover, the borrower/client will consult with displaced persons identified after the formulation of the final resettlement plan and inform them of their entitlements and relocation options. The borrower/client will prepare a supplementary resettlement plan, or a revised resettlement plan, and will submit it to ADB for review before any contracts are awarded.</p>		
<p>24. The borrower/client will use qualified and experienced experts to prepare the social impact assessment and the resettlement plan. For highly complex and sensitive projects, independent advisory panels of experts not affiliated with the project will be used during project preparation and implementation.</p>	<p>External experts have been engaged by the Operator to develop the SSF MP. (Operator interview, 20.11.14)</p>	<p><b>Demonstrates Compliance</b></p>
<p><b>4. Negotiated Land Acquisition</b></p>		

<p>25. Safeguard Requirements 2 does not apply to negotiated settlements, unless expropriation would result upon the failure of negotiations. The borrower/client is encouraged to acquire land and other assets through a negotiated settlement wherever possible, based on meaningful consultation with affected persons, including those without legal title to assets. A negotiated settlement will offer adequate and fair price for land and/or other assets. The borrower/client will ensure that any negotiations with displaced persons openly address the risks of asymmetry of information and bargaining power of the parties involved in such transactions. For this purpose, the borrower/client will engage an independent external party to document the negotiation and settlement processes. The borrower/client will agree with ADB on consultation processes, policies, and laws that are applicable to such transactions; third-party validation; mechanisms for calculating the replacement costs of land and other assets affected; and record-keeping requirements.</p>	<p>Not applicable at this time</p>	
<p><b>5. Information Disclosure</b></p>		
<p>26. The borrower/client will submit the following documents to ADB for disclosure on ADB's website:</p> <ul style="list-style-type: none"> <li>· a draft resettlement plan and/or resettlement framework endorsed by the borrower/client before project appraisal;</li> <li>· the final resettlement plan endorsed by the borrower/client after the census of affected persons has been completed;</li> <li>· a new resettlement plan or an updated resettlement plan, and a corrective action plan prepared during project implementation, if any; and</li> <li>· the resettlement monitoring reports.</li> </ul>	<p><b>For ADB determination</b> The SSF MP is yet to be developed for disclosure</p>	<p><b>Compliance yet to be confirmed.</b></p>
<p>27. The borrower/client will provide relevant resettlement information, including information from the documents in para. 26 in a timely manner, in an accessible place and in a form and language(s) understandable to affected persons and other stakeholders. For illiterate people, suitable other communication methods will be used.</p>	<p>Disclosure regarding compensation matters has not yet been sighted by IESC however it is understood that baseline data gathering, verification and stakeholder engagement has been undertaken.</p>	<p><b>Partial Compliance</b></p>
<p><b>6. Consultation and Participation</b></p>		
<p>28. The borrower/client will conduct meaningful consultation with affected persons, their host communities, and civil society for every project and subproject identified as having involuntary resettlement impacts. Meaningful consultation is a process that (i) begins early in the project preparation stage and is carried out on an ongoing basis throughout the project cycle; (ii) provides timely disclosure of relevant and adequate information that is understandable and readily accessible to affected people; (iii) is undertaken in an atmosphere free of intimidation or coercion; (iv) is gender inclusive and responsive, and tailored to the needs of disadvantaged and vulnerable groups; and (v) enables the incorporation of all relevant views of affected</p>	<p><u>Meaningful consultation is required</u> with affected persons (para 28), in a manner commensurate with the impacts on affected communities, paying particular attention to vulnerable groups. Further to paragraphs 2 and 3 above, ongoing engagement is continuing by BP and in order to determine appropriate compensation packages, implement, monitor, evaluate and close out livelihood restoration. The Operator has a dedicated fishing liaison staff member with the team to facilitate this activity (Operator interviews,</p>	<p><b>Partial Compliance</b></p>

<p>people and other stakeholders into decision making, such as project design, mitigation measures, the sharing of development benefits and opportunities, and implementation issues. Consultation will be carried out in a manner commensurate with the impacts on affected communities. The borrower/client will pay particular attention to the need of disadvantaged or vulnerable groups, especially those below the poverty line, the landless, the elderly, female headed households, women and children, Indigenous Peoples, and those without legal title to land.</p>	<p>20.11.14). A <u>detailed engagement plan for this purpose has not been sighted/yet to be developed</u>; the Operator has committed to developing a SSF MP that will include the mechanisms to be used to engage with Project-affected fishing households to validate information underpinning the impact assessment and to ascertain their preferences and priorities in relation to mitigation measures. Further, it will identify specific measures to address the needs of vulnerable households (Livelihoods baseline s.1.4).</p>	
<p><b>7. Grievance Redress Mechanism</b></p>		
<p>29. The borrower/client will establish a mechanism to receive and facilitate the resolution of affected persons' concerns and grievances about physical and economic displacement and other project impacts, paying particular attention to the impacts on vulnerable groups. The grievance redress mechanism should be scaled to the risks and adverse impacts of the project. It should address affected persons' concerns and complaints promptly, using an understandable and transparent process that is gender responsive, culturally appropriate, and readily accessible to the affected persons at no costs and without retribution. The mechanism should not impede access to the country's judicial or administrative remedies. The borrower/client will inform affected persons about the mechanism.</p>	<p>The SPS (para 29) requires that a mechanism is established to receive and facilitate the <u>resolution of affected persons' concerns and grievances</u> about physical and economic displacement and other project impacts, paying particular attention to the impacts on vulnerable groups. The audit findings include that the outline for the Livelihoods Baseline Study acknowledges the need to establish a grievance mechanism for small-scale fishermen, in line with the existing grievance procedures of the SD2 Project, identified in the next steps (Livelihoods s.1.6). A <u>timeframe for its development and disclosure has not yet been identified</u>.</p>	<p><b>Partial Compliance</b></p>
<p><b>8. Monitoring and Reporting</b></p>		
<p>30. The borrower/client will monitor and measure the progress of implementation of the resettlement plan. The extent of monitoring activities will be commensurate with the project's risks and impacts. In addition to recording the progress in compensation payment and other resettlement activities, the borrower/client will prepare monitoring reports to ensure that the implementation of the resettlement plan has produced the desired outcomes. For projects with significant involuntary resettlement impacts, the borrower/client will retain qualified and experienced external experts or qualified NGOs to verify the borrower's/client's monitoring information. The external experts engaged by the borrower/client will advise on safeguard compliance issues, and if any significant involuntary resettlement issues are identified, a corrective action plan will be prepared to address such issues. Until such planning documents are formulated, disclosed and approved, the borrower/client will not proceed with implementing the specific project components</p>	<p>The SPS requires that (para 30) BP will <u>monitor and measure the progress</u> of implementation of the resettlement plan and semi-annual monitoring reports developed (para 31). The <u>SSF MP will include the methods used to monitor and evaluate implementation of the livelihood restoration measures</u> and the estimated budget for implementation (Livelihoods Baseline Survey s.1.4). It is understood that external experts have been engaged in developing the baseline, validation and entitlements matrix to date. It is not yet clear whether the Operator intends to completion audit after access to the exclusion zone is reinstated (at the conclusion of construction).</p>	<p><b>Partial Compliance</b></p>

<p>for which involuntary resettlement impacts are identified.</p> <p>31. The borrower/client will prepare semi-annual monitoring reports that describe the progress of the implementation of resettlement activities and any compliance issues and corrective actions. These reports will closely follow the involuntary resettlement monitoring indicators agreed at the time of resettlement plan approval. The costs of internal and external resettlement monitoring requirements will be included in the project budget.</p>		
<b>9. Unanticipated Impacts</b>		
<p>32. If unanticipated involuntary resettlement impacts are found during project implementation, the borrower/client will conduct a social impact assessment and update the resettlement plan or formulate a new resettlement plan covering all applicable requirements specified in this document.</p>	Not currently applicable.	<b>Demonstrates Compliance</b>
<b>10. Special Considerations for Indigenous Peoples</b>		
<p>33. The borrower/client will explore to the maximum extent possible alternative project designs to avoid physical relocation of Indigenous Peoples that will result in adverse impacts on their identity, culture, and customary livelihoods. If avoidance is impossible, in consultation with ADB, a combined Indigenous Peoples plan and resettlement plan could be formulated to address both involuntary resettlement and Indigenous Peoples issues. Such a combined plan will also meet all relevant requirements specified under Safeguard Requirements 3.</p>	Indigenous peoples criteria are not triggered for this Project	<b>Demonstrates Compliance</b>

### 11.3 GENDER AND DEVELOPMENT POLICY

The ADB's GAD Policy adopts mainstreaming as a key strategy in promoting gender equity. The key elements include:

- Gender sensitivity: to observe how ADB operations affect women and men, and to take into account women's needs and perspectives in planning its operations.
- Gender analysis: to assess systematically the impact of a project on men and women, and on the economic and social relationship between them.
- Gender planning: to formulate specific strategies that aim to bring about equal opportunities for men and women.
- Mainstreaming: to consider gender issues in all aspects of ADB operations, accompanied by efforts to encourage women's participation in the decision-making process in development activities.
- Agenda setting: to assist DMC governments in formulating strategies to reduce gender disparities and in developing plans and targets for women's and girls' education, health, legal rights, employment, and income-earning opportunities.

The audit findings on GAD are as follows:

- Gender equality issues are described in the ESIA but without viewing SMPs in detail, it is somewhat evident that baseline data is specifically used to inform and track various aspects of operations, social performance and sustainable development initiatives at the local, regional and national level.
- Access to Project benefits for women are encouraged at the Project design stage through a number of sustainable development initiatives. These have included:
  - Helping to establish women's collectives to make globes and hoods (sewing project to make PPE), income generation project of carpet weaving (with the IDP community, in Umid).
  - The social impact assessment identifies residual impacts as increased economic flows, including through the BP SD initiatives, such as supply chain initiatives for women, as referred to above.

The following table provides a detailed assessment against the GAD Policy.

**Table 11.2 Compliance Evaluation – ADB Gender and Development Policy Assessment**

ADB Gender and Development Policy	Site Findings	Compliance Category
Gender issues must be considered at all stages of the project cycle: identification, preparation, implementation, and monitoring and evaluation (see Operations Manual which provides guidance on implementation of policies, i.e. Gender and Development at a project level).	Gender equality issues described in social baseline (ESIA s.7.19) The ESIA does not provide a clear description of how these are incorporated into the broader EMS or SMMPs, however IESC notes areas in which gender has been considered and incorporated into various aspects of operations including social performance and sustainable development initiatives (interviews 20.11.14).	<b>Demonstrates Compliance</b>
1. Project Design. For each relevant project output, describe any actions, features, mechanisms, strategies,	It is not clear whether a specific GAD implementation plan is in	<b>Demonstrates Compliance</b>

ADB Gender and Development Policy	Site Findings	Compliance Category
<p>and/or targets included in the project design to maximise positive gender equality impacts and promote women’s active involvement in the project and direct access to project benefits. Any targets set for women’s participation or access to project benefits should be mentioned and highlighted here. Any gender capacity-building assistance for executing or implementing agencies, or provisions to mobilise and train women, should also be mentioned here. Budget line items for gender and development (GAD) activities should be listed. Policy dialogue to improve women’s access to assets such as land or to address the strategic needs of women should be highlighted.</p> <p>2. Implementation. The implementation arrangements to ensure the features and mechanisms designed in the project to address GAD objectives should be described here. This section should describe (i) inclusion of GAD specialists among the implementation consultants, (ii) engagement of nongovernment organisations to facilitate women’s participation, and (iii) preparation of a GAD implementation plan to systematically implement the GAD components or specific GAD reporting requirements.</p> <p>3. Monitoring and Evaluation. Provision and requirements for collection of sex--disaggregated data in the baseline surveys and development of monitoring indicators to assess the gender-differentiated impact of the project should be highlighted here. Any provision to involve women in the monitoring and evaluation of the project should also be described. Requirements to discuss gender issues and impacts in any midterm review and regular progress reports to be submitted to ADB should also be mentioned.</p>	<p>place, however, access to Project benefits for women are encouraged at the Project design stage through a number of sustainable development initiatives. These have included: helping to establish women’s collectives to make globes and hoods (sewing project to make PPE), income generation project of carpet weaving (with the IDP community, in Umid). (Operator interviews 20.11.14)</p> <p>Sex disaggregated baseline data has been prepared from which to monitor changes due to Project interventions in future (ESIA s.7). The social impact assessment identifies residual impacts as increased economic flows, including through the BP SD initiatives, such as supply chain initiatives for women, as referred to above (ESIA 12.4.2).</p>	

#### 11.4 INCORPORATION OF SOCIAL DIMENSIONS INTO ADB OPERATIONS

ADB’s policy on Incorporation of Social Dimensions into ADB Operations requires that social dimensions that need to be taken into account from the country strategy formulation, programming, and Project processing phases onward:

The key social dimensions, supported by specific ADB policies or strategies, include:

- participation;
- gender and development;
- social safeguards; and
- management of social risks, especially among vulnerable groups.

ADB operations incorporate social dimensions to ensure the following social development outcomes, especially for the poor, vulnerable, and excluded groups:

In pursuing these social development outcomes, ADB:

- encourages consultation with and participation by stakeholders;
- addresses gender considerations in relevant aspects of ADB operations;

- integrates social analysis in preparing country partnership strategies and regional strategies and programs; and
- ensures that project design and implementation arrangements include actions to enhance benefits and to monitor and evaluate the distribution of the benefits of the project, with performance targets and indicators for monitoring and evaluating benefits included in the design and monitoring framework of the project performance management system.

The audit findings on the policy are as follows:

- Social issues have been outlined within the SD2 Project ESIA. The Project, while a private sector enterprise, will also provide opportunities for poverty reduction through: increased economic flows, Community investment programs and local content development initiatives.
- Gender is addressed in the section above (ADB GAD); resettlement (see section IFC PS5); IPs are not triggered by this Project.
- The ESIA identifies a range of SMPs to be developed by the Project to ensure social and environmental management is resourced, implemented and tracked.
- Social baseline data gathering, analysis and assessment has been undertaken through preparation and delivery of the EIW and SD2 ESIA for the Project.
- SMPs have been identified through the assessment process, however the IESC notes that not all of the content for some SMPs has been provided for review (e.g. SEP), if at all, so it is not possible to indicate whether content meets lender requirements.

The following table provides a detailed assessment against the policy.

**Table 11.3 Compliance Evaluation – Incorporation of Social Dimensions into ADB Operations**

ADB Social Dimensions (see OM Incorporation of Social Dimensions into ADB Operations)	Site Findings	Compliance Category
<b>1. Social Dimensions in Project Conceptualisation</b>		
6. An initial analysis is required for all loan and grant-based investment projects and programs to identify social issues, including: (i) expected poverty and social impacts of the intervention as a contribution to results at the sector and country levels; (ii) identify key social issues (such as participation, gender, involuntary resettlement, indigenous peoples, labour, affordability, and other risks and/or vulnerabilities) that need to be addressed during implementation of the project; (iii) identify plans and terms of reference to assist in project preparation; and (iv) identify and allocate resources for conducting social analysis during the feasibility study or due diligence.	Social issues have been outlined within the SD2 Project ESIA. The Project, while a private sector enterprise, will also provide opportunities for poverty reduction through: increased economic flows (ESIA s.12.4.2), community investment programs (ESIA s.7.12) and Local content development initiatives (ESIA s.7.13). Gender is addressed in section above (ADB GAD); resettlement (see section IFC PS5); IPs are not triggered by this Project. The ESIA identifies a range of SMPs to be developed by the Project to ensure social and environmental management is resourced, implemented and tracked (Table 14.1).	<b>Demonstrates Compliance</b>
<b>2. Social Dimensions in Project Design</b>		
8. Based on the findings of the initial scoping, a social analysis should be carried out during project design to examine opportunities, constraints, and likely social impacts of the project, and to identify and formulate design measures and implementation	The ESIA social baseline data commenced with existing information from past components of the overall ST activities and history of the Community Engagement Team (see	<b>Partial Compliance</b>

ADB Social Dimensions (see OM Incorporation of Social Dimensions into ADB Operations)	Site Findings	Compliance Category
arrangements to maximise the social benefits and avoid or minimise the social risks of the project in a participatory manner. The social analysis should be organised and sequenced. Social impacts shall also be assessed in relation to their contribution to inclusive growth and the MDGs. Where significant negative impacts are likely, a separate mitigation plan such as a resettlement plan, indigenous peoples development plan, or labour retrenchment plan should be prepared in consultation with and participation of stakeholders, particularly with those who will be affected.	EIW ESIA s.3.2.1); followed by undertaking of a SSES (SSES, 2011). SIA was then carried out based on past experience in the area and in thematic area with alternatives assessed compared to the base case (ESIA 3.2.3.1).	
9. The results of the social analysis, should include specific plans such as a gender action plan, resettlement plan, indigenous peoples development plan, or other measures to address social issues.	ESIA Table 10.1 lists the full suite of ESMPs designed for this Project, including: SSF MP.	
12. For sector loans, social dimensions will be addressed in the sector analysis, and social indicators and benchmarks will be developed as part of the sector performance.	n/a	

## 11.5 PUBLIC COMMUNICATIONS POLICY

The ADB *Public Communications Policy* requires public disclosure of Project information by borrowers, and to promote dialogue with affected people and stakeholders through the availability of Project information in a manner, form and language appropriate to them.

Audit findings on the *ADB Public Communications Policy* are:

- While BP publicly disclosed the SD2 ESIA, this was for a period of 60 days. Any additional disclosure requirements are for determination by ADB prior to the Bank's investment decision.
- The ESIA somewhat documents the stakeholder engagement and consultation processes undertaken from scoping up to ESIA disclosure in line with BP's requirements, however ongoing engagement and participation at the local level is not evident/documented for review by IESC for the construction phase. Documentation to support these activities (ongoing stakeholder analysis and planning, ongoing disclosure, participatory processes, documentation of the grievance mechanism and ongoing reporting to Affected communities including targeted engagement with vulnerable groups) has not been provided for review.

The following table details the assessment against the ADB Public Communications Policy.

**Table 11.4 Assessment of ADB Public Communications Policy**

ADB Public Communications Policy	Site Findings	Compliance Category
<b>Borrowers and/or Client</b>		
129. For ADB projects, much of the responsibility for disclosing information will rest on the borrower and/or client. The borrower or client will work with staff from operations departments to provide focal points in project areas to provide information to and dialogue with affected people about the project (para. 47). Project focal points may use the ADB	<b>For determination by ADB</b> SD2 ESIA was disclosed at a number of venues in Baku, at the ST and in nearby communities, and on the internet, for a period of 60days. The ESIA is currently disclosed on the BP AGT website ( <a href="http://www.bp.com/content/dam/bp-country/en_az/pdf/ESIAs/SD2_ESIA_NTS.pdf">http://www.bp.com/content/dam/bp-country/en_az/pdf/ESIAs/SD2_ESIA_NTS.pdf</a> )	<b>N/A</b>



ADB Public Communications Policy	Site Findings	Compliance Category
<p>website to access project and country-related information, and to disclose such information to interested parties using locally and culturally appropriate delivery Mechanisms.</p>		
<p><b>Information to Affected People and Other Interested Stakeholders</b></p>		
<p>47. To facilitate dialogue with affected people and other interested stakeholders, including women, the poor, and other vulnerable groups, information about sovereign and non-sovereign projects and programs (including environmental and social issues) shall be made available to them in a manner, form, and language(s) understandable to them and in an accessible place. ADB shall work closely with the borrower or client to ensure that such information is provided and feedback on the proposed project design is sought, and that a project focal point is designated for regular contact with affected people and other interested stakeholders. This process will start early in the project preparation phase, allowing their views to be adequately considered in the project design, and continue at each stage of project or program preparation, processing, and implementation. ADB shall ensure that the project or program design allows for stakeholder feedback during implementation. ADB shall ensure that relevant information about major changes to project scope and likely impacts is also shared with affected people and other interested stakeholders.</p>	<p>The ESIA somewhat documents the stakeholder engagement and consultation processes undertaken from scoping up to ESIA disclosure, information which has been supplemented by Operator interviews. Analysis of stakeholders was reported to have been undertaken prior to scoping, disclosure of ESIA documents was carried out in line with BP's requirements however ongoing engagement and participation at the local level is not evident/documentated for review by IESC for the construction phase. The IESC notes that ongoing engagement activity is the responsibility of the SP team and CLOs at the village level, however documentation to support these activities (ongoing stakeholder analysis and planning, ongoing disclosure, participatory processes, documentation of the grievance mechanism and ongoing reporting to Affected communities including targeted engagement with vulnerable groups) has been provided for review but does not provide for disclosure of all MPs to enable affected people and other stakeholders to engage fully in the Project and its potential impacts and management.</p>	<p><b>Partial Compliance</b></p>

## **12. HIGH LEVEL COMPLIANCE ASSESSMENT OF ASSOCIATED INFRASTRUCTURE**

### **12.1 INTRODUCTION**

The SD2 Project associated facilities include the gas export pipeline projects: SCPx; the TANAP and the TAP. Separate ESIA reports were completed for these gas export pipeline projects including three ESIA documents for the TAP Project: TAP Albania, TAP Greece and TAP Italy. These ESIA reports have been subject to a high level review by the IESC against applicable international standards. The review methodology included the assessment of each ESIA report's:

- Table of Contents;
- Executive summary; and
- Methodology chapter.

As the scope of the IESC's review of the associated infrastructure ESIA reports called for a high level assessment, this section should be read within the following context:

- Findings are based on a sample of the available ESIA documentation. Whilst all efforts have been made by the IESC to establish compliance, the IESC recommends that further detailed assessment of associated infrastructure is conducted, including on-site verification.
- Due to the limited scope of the high level review, the findings produced are necessarily general. In order to establish a detailed understanding of the compliance of associated infrastructure ESIA reports, the IESC recommends further investigation.
- The TAP ESIA's (Greece, Albania, and Italy) were all conducted by ERM, utilising a common methodology and approach. The findings of the high level review for the TAP ESIA's are therefore highly consistent with each other with respect to compliance and gaps.

The review found all of the associated infrastructure ESIA reports to be completed in general alignment with the standards applied by EBRD, ADB and IFC. The results of a desktop review of the various ESIA reports for the gas export pipelines are provided below.

**Table 12.1 High Level Compliance Evaluation – Associated Infrastructure**

	SCPx	TANAP	TAP - Albania	TAP - Greece	TAP – Italy
<b>PS 1: Assessment and Management of Environmental and Social Risks and Impacts</b>					
Environmental and Social Assessment and Management Systems	<p>An ESIA and ESMS have been prepared for the SCPx by a third party. ESIA appears comprehensive, having been produced in line with the requirements of the SCP Host Government Agreement (aligned with International Standards). A number of activities in the ESIA were deemed yet to be finalised, including:</p> <p>Waste Disposal; Sourcing of aggregates and other construction materials; River crossing methodologies; Temporary access roads to the ROW. Documentary evidence as to progress / resolution of these issues is required for a complete review. There is a comprehensive Guide to Land Acquisition and Compensation that is stated to form the basis for the Land Acquisition and Compensation Framework. Further documentary evidence of the framework is required to assess adequacy.</p> <p>The emphasis of the ESIA is on the construction and less so on the operational and decommissioning phase.</p>	<p>All major components of an international standard ESIA are present. ESIA was conducted by relevant local and international third parties, in consultation with local authorities and appropriate engagement with stakeholders. The ESMS framework is clearly presented in the ESIA, as are the ESMPs (which are summarised in the ESIA and presented in detail as Appendices). The ESMPs are detailed for the construction phase of the Project and are proposed to be updated for the implementation and operations phase.</p> <p>It is noted that the third stage compressor stations will be subject to a separate ESIA process once the decision for their construction is made.</p>	<p>High level review indicates that all major components of an international standard ESIA are present. ESIA was conducted by relevant local and international third parties, in consultation with local authorities and appropriate engagement with stakeholders. The ESMS framework is clearly presented in the ESIA, as is the framework for each ESMP (the proposed contents for each ESMP is summarised in Section 9).</p>	See TAP Albania	See TAP Albania
Environmental and Social Policy	<p>An overarching Environmental and Social Policy is provided, stipulating environmental and social objectives and principles that guide the Project. There is no explicit commitment contained within the Policy to comply</p>	<p>Overarching policy is comprehensive, and consistent with the IFC PSs.</p>	<p>HSE policy framework is summarised, including basic objectives and content. Physical policy is not provided in the ESIA.</p>	See TAP Albania	See TAP Albania

	SCPx	TANAP	TAP - Albania	TAP - Greece	TAP – Italy
	with applicable laws and regulations of Azerbaijan, including obligations under international law, however, the Policy is broadly aligned with the key principles of the IFC Performance Standards in all other areas.				
Process for Identification of Risk and Impacts	A systematic methodology consistent with GIIP has been utilised. The SCPX ESIA refers to the SCP ESIA (2002) and the BTC ESIA (2002) but has followed the steps to produce an ESIA for a new development project - i.e. gap assessment of existing baseline studies and updating of baseline information where gaps existed and information was out of date.	Process for identification of risks and impacts appears robust, and consistent with the principle of GIIP. Environmental and social baseline appears sufficient in most areas. It is indicated that due to the vast geographical context and seasonal constraints, selective sampling for field data collection and impact assessment techniques were employed with the intent of focusing on key areas of concern/receptor sensitivity. The risks and impacts identification process considers the emissions of greenhouse gases, relevant risks associated with a changing climate, and potential trans-boundary and cumulative effects. Environmental and social risks and impacts are suitably identified within the Project area of influence	Process for identification of risks and impacts appears robust, and consistent with the principle of GIIP. Environmental and social baseline appears sufficient in all areas. The risks and impacts identification process considers the emissions of greenhouse gases, relevant risks associated with a changing climate, and potential trans-boundary and cumulative effects. Environmental and social risks and impacts are suitably identified within the Project area of influence	See TAP Albania	See TAP Albania
Establishment of Management Programs	Management programs have been developed for the construction of the Project (i.e. not for the operational phase of the Project). The management programs sufficiently describe mitigation and performance improvement measures and actions	The ESMS framework is clearly presented in the ESIA, as are the ESMPs (which are summarised in the ESIA and presented in detail as Appendices). The ESMPs are detailed for the construction	The ESMS framework is clearly presented in the ESIA, as is the framework for each ESMP (the proposed contents for each ESMP is summarised in Section 9). Review of completed ESMPs is required to assess adequacy.	See TAP Albania	See TAP Albania

	SCPx	TANAP	TAP - Albania	TAP - Greece	TAP – Italy
	that address the identified environmental and social risks. It is stated that operational phase management plans will be based on those developed for the construction phase and developed prior to operations commencing.	phase of the Project and are proposed to be updated for the implementation and operations phase.			
Establishment and Maintenance of Organisational Capacity and Competency (roles, responsibilities, and authority)	Roles, responsibilities and authorities are stipulated for the implementation of the construction phase ESMS. Clear lines of responsibilities are defined, including management representatives. Roles and responsibilities are also defined for contractors.	Roles responsibilities and authorities are clearly defined for the overall HSSE organisation of the Project.	Environmental and social organisational structure and management are defined in Section 9 ESMP. Roles and responsibilities are clearly outlined in Section 9 ESMP, including that of contractors with regard to environmental and social management.	See TAP Albania	See TAP Albania
Emergency Preparedness and Response	The ESIA states that the existing SCPx Emergency Response Plan (ERP) will be updated to integrate the SCPX and refers to updates that will be included in the SCPX ERP. The ERP for the SCPX is insufficiently described in the ESIA to assess its adequacy. Chapter 12 Hazard Analysis and Risk Assessment (Unplanned Events) comprehensively describes and assesses unplanned events and risks to public safety and harm to the environment including mitigation measures. However, emergency response preparedness systems are not adequately described in the ESIA.	Adequately detailed and presented in the ESIA for the construction phase of the Project.	An Emergency Response Plan framework and proposed contents is outlined in Section 9 ESMP. Further review once the finalised plan is available is required to assess adequacy.	See TAP Albania	See TAP Albania
Monitoring and Review	Chapter 13: Management and Monitoring adequately describes monitoring and review of the effectiveness of the management program, including legal compliance	Monitoring and review procedures are stipulated in detail for the construction phase, including specific monitoring guidance provided in	Environmental, social, and cultural monitoring procedures are proposed in Section 9 ESMP, including for pre-construction, construction, and operational	See TAP Albania	See TAP Albania

	SCPx	TANAP	TAP - Albania	TAP - Greece	TAP – Italy
	and contractual obligations.	the Construction Impacts MP (Appendix 5.1). Operations phase monitoring framework is provided and referred to in the above-mentioned Plan, however further detail is required to be added and reviewed upon entering the implementation and operations phase of the Project.	phase monitoring.		
Stakeholder Engagement (analysis, planning, disclosure, and consultation)	A Community Liaison Plan is defined within the ESIA that includes community relations training, establishment and maintenance of good community relations, and a grievance procedure. In addition there is a Public Consultation and Disclosure Plan that presents and describes the stakeholder disclosure and consultation procedures as part of the ESIA process. In sum, the plans are substantive. In relation to disclosure, the ESIA documentation was disseminated for public review and comment for a period of 60 days, including public meetings.	Extensive engagement (analysis, planning disclosure and consultation) is documented in the ESIA in Appendix 3, indicating that engagement was conducted in accordance with IFC Principles. Documentation includes the detailed SEP, stakeholder registers, Project brochures used for consultation, invitation lists for NGO meetings and forms, list of NGOs that received info packs, feedback forms, announcement/disclosure records, notification registers, complaints register.	Extensive engagement (analysis, planning disclosure and consultation) is documented in the ESIA in the following sections - Section 7 Stakeholder Engagement, Annex 7 Stakeholder Engagement Data, and Annex E ESIA Disclosure indicating that engagement was conducted in accordance with IFC principles. The documentation indicates that stakeholder analysis and engagement planning was conducted, that there was adequate disclosure of Project information, and that the principles of informed consultation and participation were adhered to. A grievance mechanism is documented Section 7 Stakeholder Engagement.	See TAP Albania	See TAP Albania
External Communication and Grievance Mechanism	The Community Liaison Plan and the Public Consultation and Disclosure Plan both adequately define procedures for external communications and the lodging and resolution of grievances.	Grievance mechanism is adequate in scale to the risk and impacts of the Project.	See above.	See TAP Albania	See TAP Albania
Ongoing Reporting to	Periodic reporting is adequately	Appendices indicate that	See above.	See TAP Albania	See TAP Albania

	SCPx	TANAP	TAP - Albania	TAP - Greece	TAP – Italy
Affected Communities	documented in the ESIA (i.e. of the ESIA itself), including evidence of reporting notifications and materials. In addition there is a commitment to periodic reporting to affected communities as the Project develops in both the Community Liaison Plan and the Public Consultation and Disclosure Plan.	ongoing reporting to affected communities is occurring in line with PS1. Chapter on Stakeholder Engagement in the ESIA provides detail on engagement and communications conducted up to the point of release of the ESIA, including tools used, frequency, and content of engagement and communications.			
<b>PS 2: Labour and Working Conditions</b>					
Working Conditions and Management of Worker Relationships	ESIA addresses the requirements for working conditions and management of worker relationships in the ESMMS Section 16: Local Recruitment and Training Plan which details the measures in place for recruitment and training management in line with PS2. Further verification through review and sighting of Labour, Health and Safety Management Plans, Programs, and HR Policies documentation is required.	ESIA sufficiently addresses the requirements for working conditions and management of worker relationships in Chapter 11 Environmental and Social MPs and in further detail in Appendix 5.4 Employment and Training Plan for the construction phase. Details are provided on the measures in place for recruitment and training management in line with PS2. Further verification through review and sighting of Labour, Health and Safety MPs, Programs, and HR Policies documentation is required.	ESIA sufficiently addresses the requirements for working conditions and management of worker relationships in Section 9 ESMP, including outlined the proposed content of the Workers MP. An overview is provided in the Workers MP on the measures in place for recruitment and training management in line with PS2 (including legal framework, worker health and safety, contractor management, worker grievance mechanism, and monitoring). Further verification through review and sighting of the completed Workers MP, and associated procedures, as well as HR Policies documentation is required to conduct a full review of adequacy.	See TAP Albania	See TAP Albania
Protecting the Work Force (Child Labour and Forced Labour)	See above.	See above.	Child labour, worker rights and forced labour are assessed in Section 8 Assessment of Impacts	See TAP Albania	See TAP Albania

	SCPx	TANAP	TAP - Albania	TAP - Greece	TAP – Italy
			and Mitigation Measures. In addition these issues are considered in the Human Rights Impact Assessment. Section 9 ESMP indicates that provisions for protecting the work force will be put in place (including reference to specific documents such as tender documentation, supplier contracts, HR policy, etc.). Further validation of these documents is required to assess adequacy of measures.		
Occupational Health and Safety	General OHS programs and procedure are not included in the ESIA and therefore a full assessment is unable to be undertaken to determine compliance.	General OHS programs and procedures are not included in the ESIA and therefore a full assessment is unable to be undertaken to determine compliance.	H&S MP is provided in Section 9 ESMP that outlines aspects to be included in the Plan, including HSE Policy, H&S Organisation, H&S Standards, Accidents and Incidents, H&S Auditing. Further validation of the finalised Plan is required to assess adequacy.	See TAP Albania	See TAP Albania
Workers Engaged by Third Parties	ESIA addresses the requirements for workers engaged by third parties in the ESMMs Section 16: Local Requirement and Training Plan which details the measures in place for contractor's including hiring, training, etc., in line with PS2. This review is unable to verify whether monitoring is taking place, although it is stipulated in Section 16.	Appendix 5.4 Employment and Training Plan and Chapter 11 Environmental and Social MPs addresses contractor requirements in detail including the requirement of their ESMS, monitoring and management of contractors, requirements for contractor workers to have access to a grievance mechanism, etc.	See Working Conditions and Management of Worker Relationships response.	See TAP Albania	See TAP Albania
Supply Chain	The ESMMs Section 17 Procurement and Supply Chain provides detail to satisfy the requirements of PS 2, including provisions for contractor verification and monitoring of	Appendix 5.5. Procurement and Supply MP delineates supply chain management, including provisions to ensure child labour does not occur, provisions for	See above findings. In addition, the Local Content Plan also provides additional proposed management measures for a responsible supply chain in	See TAP Albania	See TAP Albania

	SCPx	TANAP	TAP - Albania	TAP - Greece	TAP – Italy
	suppliers throughout the supply chain.	contractor verification and monitoring.	compliance with good international industry practice.		
<b>PS 3: Resource Efficiency and Pollution Prevention</b>					
Resource Efficiency (in consumption of energy, water, and other resources and inputs based on principles of cleaner production)	High level review indicates that resources efficiency is sufficiently addressed in the ESIA. The ESMMP Section 11 Resources MP provides detailed information on the management of aggregates, water, energy efficiency and timber to sufficiently address the requirements of PS2. Chapter 10 Environmental and Social Impacts and Mitigations (Planned Activities) also provides detailed energy consumption, water and other resources and inputs, their impacts and mitigation measures. Alternatives are considered in Chapter 4: Project Development and Evaluation of Alternatives, with options assessed against environmental and social sensitivity indicators.	High level review indicates that resources efficiency is sufficiently addressed in the ESIA. Chapter 3 Impact Assessment Approach, Chapter 11 Environmental and Social MPs, and Appendix 5.6 Aggregate MP provide detailed information on the identifying risks and impacts and the management of aggregates, water, energy efficiency and timber to sufficiently address the requirements of PS2. Additionally, detail on energy consumption, water and other resources and inputs, their impacts and mitigation measures is provided. Alternatives are considered in Chapter 5 Reasons for Route Selection and Evaluation of Alternatives.	High level review indicates that resources efficiency is sufficiently addressed in the ESIA. Section 8 Assessment of Impacts and Mitigation Measures is comprehensive, including detailed assessment of onshore and offshore aspects. Section 9 ESMP provide a detailed overview of the proposed content for each MP, including plans for waste, water, hazardous material management, watercourse crossings, pollution prevention, landscape management, erosion and sediments control, and aggregates, among others, to sufficiently address the requirements of PS2. Alternatives are considered in Section 2 Project Justification.	See TAP Albania	See TAP Albania
Pollution Prevention (avoidance of release of pollutants to air, water, and land)	High level review indicates that pollution prevention is adequately addressed. Chapter 7 Environmental Baseline appears sufficiently detailed. Chapter 10 Environmental and Social Impacts and Mitigations (Planned Activities) includes sections on Air Quality and Greenhouse Gas Emissions and Pollutants and	See above. In addition, Chapter 3 Impact Assessment Approach indicates adequate level of detail to baseline, risk identification and impact assessment, including cumulative impacts in Chapter 10 Assessment of Cumulative and Global Impacts. Appendix 5.11 Waste MP is defined, including hazardous	See above.	See TAP Albania	See TAP Albania

	SCPx	TANAP	TAP - Albania	TAP - Greece	TAP – Italy
	<p>Greenhouse Gases in which key sensitivities are assessed, potential impacts described, mitigation measures provided, and residual impacts are calculated.</p> <p>The ESMMS Section 10 Pollution Prevention Plan (construction phase) suitably describes measures for pollution prevention in line with PS3, including, air, dust, wastewater, noise and vibration, light, oil and chemicals, hazardous and liquid wastes, spills, and contamination.</p> <p>Chapter 11 Cumulative and Trans-boundary Impacts, including that of other projects, assessment of potential additive impacts, assessment of potential in-combination impacts, and assessment of trans-boundary impacts.</p>	<p>materials management.</p> <p>Appendix 5.10 Pollution Prevention Plan has also been developed.</p>			
<b>PS4: Community Health, Safety, and Security</b>					
<p>Community Health and Safety (Infrastructure and Equipment Design and Safety, Hazardous Materials Management and Safety, Ecosystem Services, Community Exposure to Disease, Emergency Preparedness and Response)</p>	<p>Chapter 8 Socio-Economic Baseline does not appear to adequately assess security context of the Project (absence of security assessment), especially given the relatively large population of refugees and IDPs in the country and in Project area.</p> <p>Chapter 10 Environmental and Social Impacts and Mitigations (Planned Events) evaluates risks and impacts to health and safety of affected communities during construction and operation phases of the Project, and proposes mitigation measures.</p> <p>The Project's impacts on ecosystem services that may result in adverse</p>	<p>Socio-Economic Baseline appears to adequately assess the social context of the Project.</p> <p>Chapter 8 Impact Assessment of Activities in Scope of the Project and Measures to be Taken evaluates risks and impacts to health and safety of affected communities during all phases of the Project. Impacts and mitigation measures are summarised in Chapter Impact Assessment and Approach and mitigation measures listed in detail in Appendix 4.5. Impact Register.</p>	<p>Socio-Economic Baseline appears to adequately assess the social context of the Project.</p> <p>Section 8 Assessment of Impacts and Mitigations Measures evaluates risks and impacts to health and safety of affected communities during all phases of the Project.</p> <p>Section 9 ESMPs provides an outline of the proposed content for the Community Health MP (including Safety and Security). Ecosystem services are not explicitly discussed in the ESIA.</p>	See TAP Albania	See TAP Albania

	SCPx	TANAP	TAP - Albania	TAP - Greece	TAP – Italy
	<p>health and safety risks and impacts to affected communities are not investigated or assessed (ESIA conducted on pre-2012 IFC PSs). Construction Phase ESMMP provides Community Health, Safety and Security Plan, including measures that favour avoidance of risks and impacts over minimisation, and that appear to be commensurate with the nature and magnitude of risks and impacts. The ESIA states that the existing SCP Emergency Response Plan will be updated to integrate the SCPX and refers to updates that will be included in the SCPX ERP. The ERP for the SCPX is insufficiently described in the ESIA to assess its adequacy. Chapter 12 Hazard Analysis and Risk Assessment (Unplanned Events) comprehensively describes and assesses unplanned events and risks to public safety and harm to the environment including mitigation measures. However, emergency response preparedness systems are not adequately described.</p>	<p>Construction Phase ESMMPs provides Community Safety MP (Appendix 5.2), and Community Relations Plan (Appendix 5.3) and including measures that favour avoidance of risks and impacts over minimisation, and that appear to be commensurate with the nature and magnitude of risks and impacts. Adequate assessment of ecosystem services is conducted (summarised in Chapter 3).</p>			
Security Personnel	<p>Security Personnel are addressed as per the provisions of PS4. The impacts of security measures associated with pipelines on communities are discussed in Chapter 10 Environmental and Social Impacts and Mitigations (Planned Events). Management measures for community and security interactions are discussed in the ESMMP, and</p>	<p>Security Personnel are sufficiently addressed as per the provisions of PS4. Management measures for community and security interactions are discussed in the Appendix 5.2. Community Safety MP, and include provisions for due diligence of security providers, and training in Voluntary</p>	<p>Security Personnel are addressed as per the provisions of PS4. Section 8 Impacts Assessment and Mitigation Measures is comprehensive and includes a detailed assessment of security (including an HRIA). The Community Health MP includes provisions for due diligence of security providers, and training in</p>	See TAP Albania	See TAP Albania

	SCPx	TANAP	TAP - Albania	TAP - Greece	TAP – Italy
	include provisions for due diligence of security providers, and training in Voluntary Principles on Security and Human Rights, and performance monitoring of security providers. Community Grievance Mechanism is provided in The Community Liaison Plan and the Public Consultation and Disclosure Plan.	Principles on Security and Human Rights, and performance monitoring of security providers. Community Grievance Mechanism is provided in the SEP.	Voluntary Principles on Security and Human Rights, and performance monitoring of security providers. Community Grievance Mechanism is provided.		
<b>PS 5: Land Acquisition and Involuntary Resettlement</b>					
General (Project Design, Compensation and Benefits for Displaced Persons, Community Engagement, Grievance Mechanism, Resettlement and Livelihood Restoration Planning and Implementation)	Project design is detailed in Chapter 4 Project Development and Evaluation of Alternatives - including consideration of physical and economic displacement associated with options. Compensation and benefits appear to be compliant with IFC PS 5 principles. The Project has developed a comprehensive Guide to Land Acquisition and Compensation that forms the basis of the Land Acquisition and Compensation Framework. Further documentary evidence of the framework is required to assess adequacy. Community engagement on land issues is described adequately in the Public Consultation and Disclosure Plan, including description of community feedback and Project responses. Grievance mechanism appears established and publicised. Resettlement and livelihood restoration baseline appears to adequately define potential impacts on land users at specific locations, in	Social baseline report includes employment and livelihoods and land use and agriculture baseline - however the level of detail is not sufficient. It is stated that a detailed Resettlement Action Plan and associated studies will be conducted in parallel to the ESIA process. The RAP framework and objectives are outlined in Chapter 7.3.3 Assessment of Onshore Socio-Economic Environment. A Land Acquisition Plan, a Compensation Action Plan, and a Resettlement Action Plan are briefly outlined in Chapter 11. Further assessment once the Resettlement Action Plan is available for review is required to ascertain compliance with the PS. The SEP outlines grievance mechanism that is consistent with PS 1.	Social baseline report includes a detailed section on Land Use and Ownership. It is stated that a detailed Resettlement Action Plan and associated Livelihoods Restoration Framework and Plan will be established and a detailed summary of the contents and objectives are stipulated. In addition a Draft Entitlements Matrix is provided in the ESIA. Further assessment once the Resettlement Action Plan is available for review is required to ascertain compliance with the PS. The SEP outlines grievance mechanism that is consistent with PS 1.	See TAP Albania	See TAP Albania

	SCPx	TANAP	TAP - Albania	TAP - Greece	TAP – Italy
	order to determine eligibility for compensation and assistance. The ESMMP provides procedures for the monitoring and evaluation of the implementation of the Land MP and the Land Acquisition and Compensation Framework (pending its development).				
Displacement (Physical Displacement, Economic Displacement)	See above response. Additionally, the Guide to Land Acquisition and Compensation provides comprehensive guidance in line with PS 5 on land acquisition and resettlement.	See above. In addition, Chapter 7.3.3 Assessment of Onshore Socio-Economic Environment contains a section titled "Settlement Affected by the Project, Land Ownership Status", which provides a preliminary assessment of settlements and affected by the Project. Chapter 9 Assessment of Areas to be Given Up in the Project Area provides an assessment of the size of agricultural lands to be given up and land use capability, in addition to a section on land expropriation, however the information contained within is insufficient to serve as a complete Land Use Study or Resettlement Action Plan. The assessment and identification process appears partially complete at this point in time, and it is stated further surveys and assessment is required under the RAP framework. It is indicated in	See above.	See TAP Albania	See TAP Albania

	SCPx	TANAP	TAP - Albania	TAP - Greece	TAP – Italy
		Chapter 11 Environmental and Social MPs that a Compensation Action Plan will be developed according to the guidelines identified in the RAP.			
Private Sector Responsibilities Under Government Management Resettlement	The responsibilities of the Company and the Government in resettlement are clearly delineated, including that the State will take responsibility for land acquisition within the framework of the joint (i.e. State and Company) Land Acquisition Teams. The Guide to Land Acquisition and Compensation clearly outlines the process to be followed by all parties for all types of acquisition in line with PS 5.	See above.	See above.	See TAP Albania	See TAP Albania
<b>PS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources</b>					
General (Direct and indirect project-related impacts on biodiversity and ecosystem services)	Chapter 7 Environmental Baseline appears to contain adequate detail. Chapter 10 Environmental and Social Impacts and Mitigations (Planned Activities) also appears to address in sufficient detail the provisions of PS6.	Biodiversity and ecosystems services impacts appear well documented in Chapter 3 Impact Assessment Approach and Methodology, supported by Chapter 8.5 Impact Assessment of Activities in Scope of the Project and Measures to be Taken.	Biodiversity risk and impacts appear well documented for both offshore and onshore, including modified, natural and critical habitats. A Biodiversity Action Plan overview including all elements proposed for the Plan is provided (including a biodiversity offsets program).	See TAP Albania	See TAP Albania
Protection and Conservation of Biodiversity (Modified Habitat, Natural Habitat, Critical Habitat, Legally Protected and Internationally Recognised Areas, Invasive Alien Species)	See above.	Biorestorement is outlined in Appendix 5.9 Erosion, Reinstatement and Landscaping Plan. The Biological Impact Assessment, Protected Areas Section is missing from the Appendices so no assessment of completeness could be undertaken.	See above.	See TAP Albania	See TAP Albania

	SCPx	TANAP	TAP - Albania	TAP - Greece	TAP – Italy
Management of Ecosystem Services	Ecosystem services are not considered in the ESIA (pre-2012 version of IFC PSs used).	Ecosystem services are assessed in the baseline report, including in the sections on Employment and Livelihoods, Land Use and Agriculture, Flora (Terrestrial and Freshwater), and Fauna (Terrestrial and Freshwater). Furthermore, impacts are considered in Chapter 7 Assessment of Onshore Socio-Economic Environment.	Ecosystem services are not explicitly discussed in the ESIA.	See TAP Albania	See TAP Albania
Sustainable Management of Living Natural Resources	Not applicable.	Not applicable.	Not applicable.	See TAP Albania	See TAP Albania
Supply Chain	The ESMMS Section 17 Procurement and Supply Chain provides adequate detail to satisfy the requirements of PS 2, including provisions for contractor verification and monitoring of suppliers throughout the supply chain.	Appendix 5.5. Procurement and Supply MP delineates supply chain management, including provisions to ensure child labour does not occur, provisions for contractor verification and monitoring.	See Protecting the Work Force response. In addition, the Local Content Plan also provides additional proposed management measures for a responsible supply chain in compliance with good international industry practice.	See TAP Albania	See TAP Albania
<b>PS 7 Indigenous Peoples</b>					
General (Avoidance and Adverse Impacts, Participation and Consent)	Not applicable.	Not applicable.	Not applicable.	See TAP Albania	See TAP Albania
Circumstances Requiring Free, Prior and Informed Consent	Not applicable.	Not applicable.	Not applicable.	See TAP Albania	See TAP Albania
Mitigation and Development Benefits	Not applicable.	Not applicable.	Not applicable.	See TAP Albania	See TAP Albania
Private Sector Responsibilities Where Government is	Not applicable.	Not applicable.	Not applicable.	See TAP Albania	See TAP Albania

	SCPx	TANAP	TAP - Albania	TAP - Greece	TAP – Italy
Responsible for Managing Indigenous Peoples Issues					
<b>PS 8: Cultural Heritage</b>					
Protection of Cultural Heritage in Project Design and Execution (Chance Find Procedures, Consultation, Community Access, Removal of Replicable Cultural Heritage, Removal of Non-Replicable Cultural Heritage)	Cultural heritage is comprehensively identified and documented in Chapter 7 Environmental Baseline Study. A through risk and impact assessment is conducted in Chapter 10 Environmental and Social Impacts and Mitigations (Planned Events), indicating the application of mitigation measures that favour avoidance. A Cultural Heritage Chance Finds Process is provided in the ESMMP. Baseline indicates that surveys and consultation was conducted, and additional consultation is delineated in the ESMMP for the purposes of identification and decision-making.	Cultural heritage baseline appears comprehensive. A chance finds procedure is in place. A CHMP appears thorough. The risks and impacts to Intangible cultural heritage are also assessed and included in the MP.	Cultural heritage baseline appears comprehensive. The risks and impacts to Intangible cultural heritage are also assessed in a comprehensive manner. A CHMP overview and proposed contents is defined (including a chance finds procedure).	See TAP Albania	See TAP Albania
Project's Use of Cultural Heritage	Not applicable.	Not applicable.	Not applicable.	See TAP Albania	See TAP Albania

## **APPENDIX A: DOCUMENT LIST**

- ASPROFOS Engineering S.A. (in association with Certified Greek Environmental experts), June 2013. Trans Adriatic Pipeline: Environmental and social impact assessment (ESIA) for Greece.
- Azerbaijan Environment and Technology Centre (June 2009), SDX-NF1 Drilling Programme: Environmental Technical Note (Reference No P1401153). Pp 1-120.
- Azerbaijan International Operating Company, February 2003. Community Investment Plan: Azeri, Chirag and Gunashli Full Field Development Phase 1BP Exploration Ltd, Shah Deniz 2 Project: 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 - Executive Summary and Stand-alone Regional Review. Pp 1-28.
- Azerbaijan International Operating Company, January 2002. Azeri, Chirag and Gunashli Full Field Development Phase 1: Public Consultation and Disclosure Plan. Pp 1-45.
- Azerbaijan International Operating Company, June 2003. Azeri, Chirag and Gunashli Full Field Development Phase 1: Environmental and Social Action Plan. Pp 1-80.
- Azerbaijan International Operating Company, May 2003. Azeri, Chirag and Gunashli Full Field Development Phase 1: Environmental and Social Action Plan Executive Summary Annex. Pp 1-24.
- Azerbaijan International Operating Company, May 2003. Community Investment Plan: Azeri, Chirag and Gunashli Full Field Development Phase 1. Pp 1-31.
- BP Exploration Ltd AGT Region and the Ministry of Environmental Situations of the Republic of Azerbaijan, Mutual Operating Plan for the Management of Emergency Situations. Pp 1-45.
- BP Exploration Ltd AGT Region, AGT Project Employee Relations Plan. Pp 1-23.
- BP Exploration Ltd AGT Region, Exercise DENIZ: Exercise Report (with SDA) (June 2013). Pp 1-21.
- BP Exploration Ltd AGT Region, IMT Emergency Response RESOURCES Guide AZSPU-HSSE-DOC-00104-2. Pp 1-28.
- BP Exploration Ltd AGT Region, Stakeholder Engagement Plan AZSPU-HSSE-DOC-00434-2 – Cover pages only. Pp 1-3.
- BP Exploration Ltd AGT Region: AGT Region Waste Manual. AZSPU-HSSE-DOC-00126-2. Pp 1-44.
- BP Exploration Ltd AGT Region: Indirect Thermal Desorption Environmental Statement AZSPU-HSSE-PMT-00130-2. Pp 1-80.
- BP Exploration Ltd AGT Region: Offshore Operations & Wells Waste Management Procedure. AZSPU-HSSE-DOC-00007-3. Pp 1-25.
- BP Exploration Ltd and Azerbaijan International Operating Company, Azerbaijan Development: Process Safety Strategy. Pp 1-31.
- BP Exploration Ltd and Briggs Environmental and Marine Services, Shah Deniz 2 Project: Oil Spill Response Training and Exercise Summary Report (11th June, 2014). Pp 1-14.
- BP Exploration Ltd and Eni Saipem Initial Incident Report: Anchorage Failure (30th September 2014). Pp 1-3.
- BP Exploration Ltd and Global Projects Organization, Shah Deniz 2 Project: SD2 HSSE Self-verification Checklist. Pp 1-11.

- BP Exploration Ltd, Email extract: HSSE Self-verification Checklist. Pp 1-3.
- BP Exploration Ltd, Fishing Livelihood Management Plan Entitlement Register / Payment Register. Pp 1-3.
- BP Exploration Ltd, Shah Deniz 2 Programme (Project and South Caucasus Pipeline Expansion Project): SD2 HSE Plan. Pp 1-56.
- BP Exploration Ltd, Shah Deniz 2 Project Approach: Emergency Response (Summary Slides). Pp 1-9.
- BP Exploration Ltd, Shah Deniz 2 Project: 2014 CDI Initiatives Flyer. Pp 1
- BP Exploration Ltd, Shah Deniz 2 Project: 3Q 2014 SD2 ESIA Compliance Report. Pp 1-2.
- BP Exploration Ltd, Shah Deniz 2 Project: BP Oversight Self-verification (SV) Record. Pp 1-2.
- BP Exploration Ltd, Shah Deniz 2 Project: BP's Interests in Azerbaijan-Georgia-Turkey Region. Pp 1-10.
- BP Exploration Ltd, Shah Deniz 2 Project: Class 3 Reference Case Energy VIP Report. Pp 1-5.
- BP Exploration Ltd, Shah Deniz 2 Project: Community Engagement and Nuisance Management and Monitoring Plan. Pp 1-37.
- BP Exploration Ltd, Shah Deniz 2 Project: Contaminated Land Risk Assessment for the SD2 Onshore Project Construction Phase. Pp 1-41.
- BP Exploration Ltd, Shah Deniz 2 Project: Cultural Heritage Management and Monitoring Plan. Pp 1-47.
- BP Exploration Ltd, Shah Deniz 2 Project: Ecological and Wildlife Management Plan. Pp 1-15.
- BP Exploration Ltd, Shah Deniz 2 Project: Environmental and Social Overview (November 2014). Pp 1-19.
- BP Exploration Ltd, Shah Deniz 2 Project: Environmental Basis of Design. Pp 1-30.
- BP Exploration Ltd, Shah Deniz 2 Project: ESIA Commitments Register (11th December, 2014). Pp 1-23.
- BP Exploration Ltd, Shah Deniz 2 Project: General Complaints Log. Pp 1-3.
- BP Exploration Ltd, Shah Deniz 2 Project: GWT-AGT Well HSE Performance Report. Pp 1.
- BP Exploration Ltd, Shah Deniz 2 Project: Health and Hygiene Management Plan (Select). Pp 1-16.
- BP Exploration Ltd, Shah Deniz 2 Project: HSE Q3 Report. Pp 1-7.
- BP Exploration Ltd, Shah Deniz 2 Project: HSE Team Organisational Chart. Pp 1.
- BP Exploration Ltd, Shah Deniz 2 Project: Inherently Safer Design Workshop for Selected Offshore Concept. Pp 1-18.
- BP Exploration Ltd, Shah Deniz 2 Project: Offshore Oil Spill Response Deployment with the Ministry of Environmental Situations - Post Exercise Report for Subsea Pipeline Release (16th May 2014). Pp 1-18.
- BP Exploration Ltd, Shah Deniz 2 Project: Offshore Process Safety Plan for Select and Define. Pp 1-20.
- BP Exploration Ltd, Shah Deniz 2 Project: Onshore Process Safety Plan. Pp 1-15.
- BP Exploration Ltd, Shah Deniz 2 Project: Pollution Prevention Management Plan. Pp 1-21.
- BP Exploration Ltd, Shah Deniz 2 Project: Programme Overview (LUKOIL/EBRD visit, 17th November 2014). Pp 1-16.
- BP Exploration Ltd, Shah Deniz 2 Project: Restoration and Landscape Management Plan. Pp 1-13.

- BP Exploration Ltd, Shah Deniz 2 Project: Risk Management Statement. Pp 1.
- BP Exploration Ltd, Shah Deniz 2 Project: Sangachal Terminal Baseline Noise Survey. Pp 1-9.
- BP Exploration Ltd, Shah Deniz 2 Project: SD2 Community Blast Distances. Pp 1.
- BP Exploration Ltd, Shah Deniz 2 Project: SD2 Construction Air Quality Management (Summary Slides). Pp 1-7.
- BP Exploration Ltd, Shah Deniz 2 Project: SD2 ENVIID Report and Register – Select stage. Pp 1-25.
- BP Exploration Ltd, Shah Deniz 2 Project: SD2 Environmental and Social Management and Monitoring Plan (ESMMP). Pp 1-61.
- BP Exploration Ltd, Shah Deniz 2 Project: SD2 Infrastructure Project ESIA Commitments Register (20th December, 2011). Pp 1-6.
- BP Exploration Ltd, Shah Deniz 2 Project: SD2 Livelihood Baseline Survey of Small-Scale Fishing Activities. Pp 1-7.
- BP Exploration Ltd, Shah Deniz 2 Project: SD2 Onshore Transport Management Internal Audit Report (November 2014). Pp 1-8.
- BP Exploration Ltd, Shah Deniz 2 Project: SD2 Predrill Commitments Register (current to May 2012). Pp 1-3.
- BP Exploration Ltd, Shah Deniz 2 Project: SD2 Programme HSSE Management Plan. Pp 1-46.
- BP Exploration Ltd, Shah Deniz 2 Project: SD2 Transportation Management Audit Notification. Pp 1.
- BP Exploration Ltd, Shah Deniz 2 Project: Security Arrangements for BP in Azerbaijan. Pp 1.
- BP Exploration Ltd, Shah Deniz 2 Project: Social Performance and Sustainable Development Initiatives Team Organisational Chart. Pp 1.
- BP Exploration Ltd, Shah Deniz 2 Project: Stakeholder Engagement Plan. Pp 1-33.
- BP Exploration Ltd, Shah Deniz 2 Project: Statistical Data Capture (including sub-contractors working on site). Pp 1-2.
- BP Exploration Ltd, Shah Deniz 2 Project: Transportation Audit Checklist. Pp 1-8.
- BP Exploration Ltd, Shah Deniz 2 Project: Waste Management and Minimisation Plan. Pp 1-18.
- BP Exploration Ltd, Shah Deniz 2 Project: WF1 Environmental Technical Note. Pp 1-5.
- BP Exploration Ltd, Shah Deniz 2 Project: WF1 Environmental Technical Note. Pp 1-5.
- BP Exploration Ltd, Shah Deniz 2 Project: WF1 Environmental Technical Notes Commitments Register (April 2011). Pp 1-3.
- BP Exploration Ltd, Shah Deniz 2 Projects (SD2): Employee Relationship Management (Summary Slides). Pp 1-7.
- BP Exploration Ltd, Shah Deniz Stage 2 Project: SD2 Subsea, Topsides and Onshore Interfaces – Overpressure Scenarios. Pp 1-8
- Environmental Resources Management (2014), EIA for the Installation and Operation of New TCC at Serenja Hazardous Waste Management Facility. Pp 1-139.

- Environmental Resources Management, 2013. Trans Adriatic Pipeline: Environmental and Social Impact Assessment - Albania.
- Environmental Resources Management, Italy, September 2013. Trans Adriatic Pipeline: Environmental and Social Impact Assessment – Italy.
- Planning and Resettling Solutions Pty Ltd, April 2003. Sangachal Terminal Extension and Offshore Works: Resettlement Action Plan. Pp 1-106.
- RSK Environmental Consultants, June 2014. South Caucasus Pipeline Expansion Project, Azerbaijan: Environmental and Social Impact Assessment Addendum – Non-technical Summary. Pp 1-17.
- RSK Environmental Consultants, March 2014. South Caucasus Pipeline Expansion Project, Azerbaijan: Environmental and Social Impact Assessment.
- Social and Resettlement Action Plan Expert Panel (SRAP Panel), Resettlement Action Plan Complete Audit Part Two: The Pastoral Farmers. Final Report (October 2010). Pp 1-29.
- Trans-Anatolian Natural Gas Pipeline (TANAP) Environmental and Social Impact Assessment (ESIA) – Turkey.
- URS Corporation Limited, Shah Deniz 2 Infrastructure Project: Environmental and Socio-Economic Impact Assessment. Pp 1-232.
- URS Corporation Limited, Shah Deniz 2 Pre-drilling Project: Environmental Technical Note (May 2012). Pp 1-508.
- URS Corporation Limited, Shah Deniz 2 Project: Environmental and Socio-Economic Impact Assessment. Pp 1-410.
- URS Corporation Limited: WF1 Environmental Technical Note, Appendix 1. Pp 1-186.
- WF1 Technical Note, Appendix 2A: Shah Deniz Production Sharing Agreement Extract. Pp 1-168.

**APPENDIX B: IFC EHS GUIDELINES COMPLIANCE ASSESSMENT TABLE**

<b>Demonstrates Compliance</b>	Item is considered in compliance with Local and/or International requirements/standards (based on IESC review of SD Phase 2 ESIA review)
<b>Compliance Anticipated</b>	Item is considered in compliance with Local and/or International requirements/standards (based on IESC site visit of existing facilities and Shah Deniz Phase 1 operational standards and existing construction phase Environment, Social and OHS documentation)
<b>Partial Compliance</b>	Project's progress and/or information/data available to date are partially adequate to fulfil Local and/or International requirements/standards, further work is needed to achieve compliance
<b>Not Applicable</b>	Item does not apply to this Project

General IFC EHS Guidelines Requirements	Compliance Category
<b>Environmental Protection</b>	
<b>1. Air Emissions and Ambient Air Quality</b>	
<b>Ambient Air Quality</b>	
1.1. Emissions do not result in pollutant concentrations that reach or exceed relevant ambient quality guidelines and standards by applying national legislated standards, or in their absence, the current WHO Air Quality Guidelines.	<b>Demonstrates Compliance</b>
1.2. Projects with significant sources of air emissions, and potential for significant impacts to ambient air quality, should prevent or minimize impacts by ensuring that: emissions do not contribute a significant portion to the attainment of relevant ambient air quality guidelines or standards. As a general rule, this Guideline suggests 25 percent of the applicable air quality standards to allow additional, future sustainable development in the same airshed.	<b>Demonstrates Compliance</b>
1.3. At facility level, impacts should be estimated through qualitative or quantitative assessments by the use of baseline air quality assessments and atmospheric dispersion models to assess potential ground level concentrations. Local atmospheric, climatic, and air quality data should be applied when modeling dispersion, protection against atmospheric downwash, wakes, or eddy effects of the source, nearby structures, and terrain features. The dispersion model applied should be internationally recognised, or comparable.	<b>Demonstrates Compliance</b>
1.4. Facilities or projects located within poor quality airsheds, and within or next to areas established as ecologically sensitive (e.g. national parks), should ensure that any increase in pollution levels is as small as feasible, and amounts to a fraction of the applicable short-term and annual average air quality guidelines or standards as established in the project-specific environmental assessment. Suitable mitigation measures should also include the relocation of significant sources of emissions outside the airshed in question, use of cleaner fuels or technologies, application of comprehensive pollution control measures, offset activities at installations controlled by the project sponsor or other facilities within the same airshed, and buy-down of emissions within the same airshed.	<b>Compliance Anticipated</b>
<b>Point Sources</b>	
1.5. The stack height for all point sources of emissions should be designed according to good international industry practice (GIIP).	<b>Demonstrates Compliance</b>
1.6. Emissions from small combustion process installations (3 MWth - 50 MWth), operated more than 500 hours per year, and those with an annual capacity utilisation of more than 30 percent should be in compliance with standards, recommended by General EHS guidelines of IFC.	<b>Not Applicable</b>
<b>Fugitive Sources</b>	
1.7. Volatile Organic Compounds (VOC) emissions associated with equipment leaks should be prevented and controlled by techniques including: · Equipment modifications; · Implementation a leak detection and repair (LDAR) program that controls fugitive emissions by regularly monitoring to detect leaks, and implementing repairs within a predefined time period;	<b>Demonstrates Compliance</b>



<ul style="list-style-type: none"> <li>· Substitution of less volatile substances;</li> <li>· Collection of vapours through air extractors and subsequent;</li> <li>· Treatment with destructive control devices;</li> <li>· Use of floating roofs on storage tanks.</li> </ul>	
<p>1.8. Dust control methods should be implemented to prevent particulate matter (dust) emissions including the following:</p> <ul style="list-style-type: none"> <li>· Covers, water suppression, or increased moisture content for open materials storage piles;</li> <li>· Use of water suppression for control of loose materials on paved or unpaved road surfaces.</li> </ul>	<b>Compliance Anticipated</b>
<p>1.9. Open burning of solid wastes, whether hazardous or nonhazardous, is not considered good practice and should be avoided.</p>	<b>Demonstrates Compliance</b>
<p>1.10. No new systems or processes should be installed using CFCs, halons, 1,1,1-trichloroethane, carbon tetrachloride, methyl bromide or HBFCs.</p>	<b>Compliance Anticipated</b>
<b>Mobile Sources – Land-based</b>	
<p>1.11 Emissions from on-road and off-road vehicles should comply with national or regional programs. In the absence of these, the following approach should be considered:</p> <ul style="list-style-type: none"> <li>· Implementation of the manufacturer recommended engine maintenance programs;</li> <li>· Drivers should be instructed on the benefits of driving practices that reduce both the risk of accidents and fuel consumption, including measured acceleration and driving within safe speed limits;</li> <li>· Operators with fleets of 120 or more units of heavy duty vehicles, or 540 or more light duty vehicles within an airshed should consider additional ways to reduce potential impacts including replacing older vehicles with newer, more fuel efficient alternatives; Converting high-use vehicles to cleaner fuels, where feasible;</li> <li>· Installing and maintaining emissions control devices, such as catalytic converters;</li> <li>· Implementing a regular vehicle maintenance and repair program.</li> </ul>	<b>Demonstrates Compliance</b>
<b>Greenhouse Gases (GHGs)</b>	
<p>1.12. The following measures should be implemented to reduce and control of greenhouse gases:</p> <ul style="list-style-type: none"> <li>· Carbon financing;</li> <li>· Protection and enhancement of sinks and reservoirs of greenhouse gases;</li> <li>· Carbon capture and storage technologies;</li> <li>· Limitation and / or reduction of methane emissions;</li> <li>· Enhancement of energy efficiency.</li> </ul>	<b>Demonstrates Compliance</b>
<b>Air quality monitoring</b>	
<p>1.13. Air quality monitoring program should be developed. The monitoring parameters selected should reflect the pollutants of concern associated with project processes. The air quality monitoring program should consider the following elements:</p> <ul style="list-style-type: none"> <li>· baseline calculations;</li> <li>· monitoring type and frequency (data on emissions and ambient air quality generated through the monitoring program should be representative of the emissions discharged by the project over time);</li> <li>· monitoring locations;</li> <li>· sampling and analysis methods (monitoring programs should apply national or international methods for sample collection and analysis).</li> </ul>	<b>Compliance Anticipated</b>
<p>1.14. Annual Stack Emission Testing of boilers with capacities between =3 MWth and &lt; 20 MWth should be carried out to control SO<sub>2</sub>, NO<sub>x</sub> and PM (for gaseous fuel- fired boilers, only NO<sub>x</sub>). SO<sub>2</sub> can be calculated based on fuel quality certification if no SO<sub>2</sub> control equipment is used.</p> <p>If Annual Stack Emission Testing demonstrates results consistently and significantly better than the required levels, frequency of Annual Stack Emission Testing can be reduced from annual to every two or three years.</p> <p>Annual Stack Emission Testing of boilers with capacities between =20 MWth and &lt; 50 MWth should be carried out to control SO<sub>2</sub>, NO<sub>x</sub> and PM (for gaseous fuel-fired boilers, only NO<sub>x</sub>).</p> <p>Emission Monitoring:</p> <ul style="list-style-type: none"> <li>· SO<sub>2</sub>. Plants with SO<sub>2</sub> control equipment: Continuous.</li> <li>· NO<sub>x</sub>: Continuous monitoring of either NO<sub>x</sub> emissions or indicative NO<sub>x</sub> emissions using combustion parameters.</li> <li>· PM: Continuous monitoring of either PM emissions, opacity, or indicative PM emissions using combustion parameters / visual monitoring.</li> </ul>	<b>Compliance Anticipated</b>
<p>1.15. Air quality monitoring for turbines should include:</p>	<b>Not Applicable</b>



<ul style="list-style-type: none"> <li>· Annual Stack Emission Testing: NOx and SO2 (NOx only for gaseous fuel-fired turbines).</li> <li>· If Annual Stack Emission Testing results show constantly (3 consecutive years) and significantly (e.g. less than 75 percent) better than the required levels, frequency of Annual Stack Emission Testing can be reduced from annual to every two or three years.</li> <li>· Emission Monitoring: NOx: Continuous monitoring of either NOx emissions or indicative NOx emissions using combustion parameters. SO2: Continuous monitoring if SO2 control equipment is used.</li> </ul>	
<p>1.16. Air quality monitoring for turbines should include:</p> <ul style="list-style-type: none"> <li>· Annual Stack Emission Testing: Nox, SO2 and PM (NOx only for gaseous fuel-fired diesel engines).</li> <li>· If Annual Stack Emission Testing results show constantly (3 consecutive years) and significantly (e.g. less than 75 percent) better than the required levels, frequency of Annual Stack Emission Testing can be reduced from annual to every two or three years.</li> <li>· Emission Monitoring: NOx: Continuous monitoring of either NOx emissions or indicative NOx emissions using combustion parameters. SO2: Continuous monitoring if SO2 control equipment is used. PM: Continuous monitoring of either PM emissions or indicative PM emissions using operating parameters.</li> </ul>	<b>Not Applicable</b>
<b>2. Energy Conservation</b>	
<u>Energy Management Programs</u>	
<p>2.1. Energy management programs should include the following elements:</p> <ul style="list-style-type: none"> <li>· Identification, and regular measurement and reporting of principal energy flows within a facility at unit process level;</li> <li>· Preparation of mass and energy balance;</li> <li>· Definition and regular review of energy performance targets, which are adjusted to account for changes in major influencing factors on energy use;</li> <li>· Regular comparison and monitoring of energy flows with performance targets to identify where action should be taken to reduce energy use;</li> <li>· Regular review of targets, which may include comparison with benchmark data, to confirm that targets are set at appropriate levels.</li> </ul>	<b>Compliance Anticipated</b>
<u>Energy Efficiency</u>	
<p>2.2. For any energy-using system, a systematic analysis of energy efficiency improvements and cost reduction opportunities should include a hierarchical examination of opportunities to:</p> <ul style="list-style-type: none"> <li>· Demand/Load Side Management by reducing loads on the energy system;</li> <li>· Supply Side Management by reduce losses in energy distribution; improve energy conversion efficiency; exploit energy purchasing opportunities; use lower- carbon fuels.</li> </ul>	<b>Demonstrates Compliance</b>
<p>2.3. In process heating systems, a system heat and mass balance should be developed for examination of savings opportunities.</p>	<b>Not Applicable</b>
<p>2.4. Special measures for heating load reduction should be used including the following:</p> <ul style="list-style-type: none"> <li>· Ensure adequate insulation to reduce heat losses through furnace/oven etc. structure;</li> <li>· Recover heat from hot process or exhaust streams to reduce system loads;</li> <li>· In intermittently-heated systems, consider use of low thermal mass insulation to reduce energy required to heat the system structure to operating temperature;</li> <li>· Control process temperature and other parameters accurately to avoid, for example, overheating or overdrying;</li> <li>· Examine opportunities to use low weight and/or low thermal mass product carriers, such as heated shapers, kiln cars etc.;</li> <li>· Review opportunities to schedule work flow to limit the need for process reheating between stages;</li> <li>· Operate furnaces/ovens at slight positive pressure, and maintain air seals to reduce air in-leakage into the heated system, thereby reducing the energy required to heat unnecessary air to system operating temperature;</li> <li>· Robust Scheduled maintenance programs.</li> </ul>	<b>Not Applicable</b>
<p>2.5. Losses in heat distribution systems should be reduced through the following actions:</p> <ul style="list-style-type: none"> <li>· Promptly repair distribution system leaks;</li> <li>· Regularly verify correct operation of steam traps in steam systems, and ensure that traps are not bypassed;</li> <li>· Insulate distribution system vessels, such as hot wells and de-aerators, in steam systems and thermal fluid or hot water storage tanks;</li> </ul>	<b>Compliance Anticipated</b>



<ul style="list-style-type: none"> <li>· In steam systems, return condensate to the boiler house for re-use, since condensate is expensive boiler-quality water and valuable beyond its heat content alone.</li> </ul>	
<p>2.6. The following efficiency opportunities should be examined for process furnaces or ovens, and utility systems, such as boilers and fluid heaters:</p> <ul style="list-style-type: none"> <li>· Regularly monitor CO, oxygen or CO<sub>2</sub> content of flue gases to verify that combustion systems are using the minimum practical excess air volumes;</li> <li>· Consider combustion automation using oxygen-trim controls;</li> <li>· Minimise the number of boilers or heaters used to meet loads;</li> <li>· Use flue dampers to eliminate ventilation losses from hot boilers held at standby;</li> <li>· Maintain clean heat transfer surfaces;</li> <li>· In steam boiler systems, use economisers to recover heat from flue gases to pre-heat boiler feed water or combustion air;</li> <li>· Adopt automatic (continuous) boiler blowdown;</li> <li>· Recover heat from blowdown systems through flash steam recovery or feed- water preheat;</li> <li>· With fired heaters, consider opportunities to recover heat to combustion air through the use of recuperative or regenerative burner systems;</li> <li>· Oxy Fuel burners;</li> <li>· Fuel quality control/fuel blending and etc.</li> </ul>	<b>Compliance Anticipated</b>
<p>2.7. Special measures to improve process cooling efficiency should be used including the following:</p> <ul style="list-style-type: none"> <li>· Ensure adequate insulation;</li> <li>· Control process temperature;</li> <li>· Operate cooling tunnels at slight positive pressure and maintain air seals to reduce air in-leakage into the cooled system;</li> <li>· Examine opportunities to pre-cool using heat recovery to a process stream requiring heating, or by using a higher temperature cooling utility;</li> <li>· In cold and chill stores, minimise heat gains to the cooled space by use of air curtains, entrance vestibules, or rapidly opening/closing doors;</li> <li>· Do not use refrigeration for auxiliary cooling duties, such as compressor cylinder head or oil cooling;</li> <li>· Use energy efficiency techniques in air conditioning applications.</li> </ul>	<b>Compliance Anticipated</b>
<p>2.8. The efficiency of cooling systems should be improved by effective refrigeration system design and increased refrigerant compression efficiency, as well as minimisation of the temperature difference through which the system works and of auxiliary loads used to operate the refrigeration system.</p>	<b>Compliance Anticipated</b>
<p>2.9. Refrigerant compression efficiency should be improved by avoiding operation of multiple compressors at part-load conditions; considering turndown efficiency when specifying chillers.</p>	<b>Compliance Anticipated</b>
<p>2.10. Energy use of refrigeration system auxiliaries (e.g. evaporator fans and chilled water pumps) should be reduced.</p>	<b>Compliance Anticipated</b>
<b>Compressed Air Systems</b>	
<p>2.11. Special energy conservation measures should be used including :</p> <ul style="list-style-type: none"> <li>· examination of each true user of compressed air to identify the air volume needed and the pressure at which this should be delivered;</li> <li>· air use reduction opportunities review.</li> </ul>	<b>Compliance Anticipated</b>
<p>2.12. Monitoring of pressure losses in filters should be provided. Adequately sized distribution pipework designed to minimise pressure losses should be used.</p>	<b>Compliance Anticipated</b>
<b>3. Wastewater and Ambient Water Quality</b>	
<u>General applicability and approach</u>	
<p>3.1. In the context of their overall ESHS management system, facilities should understand the quality, quantity, frequency and sources of liquid effluents in its installations.</p>	<b>Demonstrates Compliance</b>
<p>3.2. Segregation of liquid effluents principally along industrial, utility, sanitary, and rainwater categories should be planned and implemented, in order to limit the volume of water requiring specialised treatment.</p>	<b>Demonstrates Compliance</b>
<p>3.3. Opportunities should be identified to prevent or reduce wastewater pollution through such measures as recycle/reuse within their facility, input substitution, or process modification.</p>	<b>Demonstrates Compliance</b>
<p>3.4. Wastewater discharges should be compliant with the applicable: (i) discharge standard (if the wastewater is discharged to a surface water or sewer), and (ii) water quality standard</p>	<b>Demonstrates Compliance</b>



for a specific reuse.	
3.5. Water use efficiency should be provided to reduce the amount of wastewater generation.	<b>Demonstrates Compliance</b>
3.6. Process modification should be implemented, including waste minimisation, and reducing the use of hazardous materials to reduce the load of pollutants requiring treatment.	<b>Demonstrates Compliance</b>
3.7. When wastewater treatment is required prior to discharge, the level of treatment should be based on: <ul style="list-style-type: none"> <li>· National and local standards as reflected in permit requirements and sewer system capacity to convey and treat wastewater if discharge is to sanitary sewer;</li> <li>· Assimilative capacity of the receiving water for the load of contaminant being discharged wastewater if discharge is to surface water;</li> <li>· Intended use of the receiving water body;</li> <li>· Presence of sensitive receptors;</li> <li>· GIIP for the relevant industry sector.</li> </ul>	<b>Demonstrates Compliance</b>
<b>Liquid Effluent Quality</b>	
3.8. Discharges of process wastewater, sewage, wastewater from utility operations or rainwater to surface water should not result in contaminant concentrations in excess of local ambient water quality criteria or, in the absence of local criteria, other sources of ambient water quality. Receiving water use and assimilative capacity, taking other sources of discharges to the receiving water into consideration, should also influence the acceptable pollution loadings and effluent discharge quality. Temperature of wastewater prior to discharge should not result in an increase greater than 3°C of ambient temperature at the edge of a scientifically established mixing zone which takes into account ambient water quality, receiving water use and assimilative capacity among other considerations.	<b>Demonstrates Compliance</b>
3.9. Discharges of industrial wastewater, sewage, wastewater from utility operations or rainwater into public or private wastewater treatment systems should: <ul style="list-style-type: none"> <li>· Meet the pre-treatment and monitoring requirements of the sewer treatment system into which it discharges;</li> <li>· Not interfere, directly or indirectly, with the operation and maintenance of the collection and treatment systems, or pose a risk to worker health and safety, or adversely impact characteristics of residuals from wastewater treatment operations;</li> <li>· Be discharged into municipal or centralised wastewater treatment systems that have adequate capacity to meet local regulatory requirements for treatment of wastewater • Generated from the project. Pre-treatment of wastewater to meet regulatory requirements before discharge from the project site is required if the municipal or centralised wastewater treatment system receiving wastewater from the project does not have adequate capacity to maintain regulatory compliance.</li> </ul>	<b>Demonstrates Compliance</b>
3.10. The quality of treated process wastewater, wastewater from utility operations or rainwater discharged on land, including wetlands, should be established based on local regulatory requirements. Where land is used as part of the treatment system and the ultimate receptor is surface water, water quality guidelines for surface water discharges specific to the industry sector process should apply. Potential impact on soil, groundwater, and surface water, in the context of protection, conservation and long term sustainability of water and land resources should be assessed when land is used as part of any wastewater treatment system.	<b>Demonstrates Compliance</b>
3.11. Septic systems should be used for treatment and disposal of domestic sanitary sewage in areas with no sewerage collection networks. When septic systems are the selected form of wastewater disposal and treatment, they should be: <ul style="list-style-type: none"> <li>· Properly designed and installed in accordance with local regulations and guidance to prevent any hazard to public health or contamination of land, surface or groundwater.</li> <li>· Well maintained to allow effective operation.</li> <li>· Installed in areas with sufficient soil percolation for the design wastewater loading rate.</li> <li>· Installed in areas of stable soils that are nearly level, well drained, and permeable, with enough separation between the drain field and the groundwater table or other receiving waters.</li> </ul>	<b>Demonstrates Compliance</b>
3.12. Treatment technologies should be used to achieve the desired discharge quality for	<b>Demonstrates</b>



<p>process wastewater and to maintain consistent compliance with regulatory requirements. The design and operation of the selected wastewater treatment technologies should avoid uncontrolled air emissions of volatile chemicals from wastewaters. Residuals from industrial wastewater treatment operations should be disposed in compliance with local regulatory requirements. Recommended water management strategies for utility operations include:</p> <ul style="list-style-type: none"> <li>· Adoption of water conservation opportunities for facility cooling systems;</li> <li>· Use of heat recovery methods or other cooling methods to reduce the temperature of heated water prior to discharge to ensure the discharge water temperature does not result in an increase greater than 3°C of ambient temperature;</li> <li>· Minimising use of antifouling and corrosion inhibiting chemicals by ensuring appropriate depth of water intake and use of screens;</li> <li>· Testing for residual biocides and other pollutants of concern should be conducted to determine the need for dose adjustments or treatment of cooling water prior to discharge. Rainwater should be separated from process and sewage streams. Surface runoff from process areas or potential sources of contamination should be prevented. Runoff from process and storage areas should be segregated from potentially less contaminated runoff. Runoff from areas without potential sources of contamination should be minimised. Sludge from rainwater catchments or collection and treatment systems should be disposed in compliance with local regulatory requirements, in the absence of which disposal has to be consistent with protection of public health and safety, and conservation and long term sustainability of water and land resources.</li> </ul>	<b>Compliance</b>
<p>3.13. Recommended sewage management strategies include:</p> <ul style="list-style-type: none"> <li>· Segregation of wastewater streams to ensure compatibility with selected treatment option;</li> <li>· Segregation and pre-treatment of oil and grease containing effluents prior to discharge into sewer systems;</li> <li>· If sewage from the industrial facility is to be discharged to surface water, treatment to meet national or local standards for sewage discharges;</li> <li>· If sewage from the industrial facility is to be discharged to either a septic system, or where land is used as part of the treatment system, treatment to meet applicable national or local standards for sewage discharges is required;</li> <li>· Sludge from sewage treatment systems should be disposed in compliance with local regulatory requirements.</li> </ul>	<b>Demonstrates Compliance</b>
<p>3.14. A wastewater and water quality monitoring program with adequate resources and management oversight should be developed and implemented. The wastewater and water quality monitoring program should consider monitoring parameters, monitoring type and frequency, monitoring locations, data quality.</p>	<b>Compliance Anticipated</b>
<b>4. Water Conservation</b>	
<u>Water conservation program</u>	
<p>4.1. Water conservation programs should be implemented commensurate with the magnitude and cost of water use. These programs should promote the continuous reduction in water consumption and achieve savings in the water pumping, treatment and disposal costs.</p>	<b>Compliance Anticipated</b>
<p>4.2. The essential elements of a water management program should involve:</p> <ul style="list-style-type: none"> <li>· Identification, regular measurement, and recording of principal flows within a facility. <ul style="list-style-type: none"> <li>• Definition and regular review of performance targets, which are adjusted to account for changes in major factors affecting water use.</li> </ul> </li> <li>· Regular comparison of water flows with performance targets to identify where action should be taken to reduce water use.</li> </ul> <p>4.3. Water should be reused in multi-stage washing and rinsing processes or from one process for another with less exacting water quality requirements.</p>	<b>Compliance Anticipated</b>
<p>4.4. Measures for water saving should be implemented to reduce consumption of building and sanitary water, including:</p> <ul style="list-style-type: none"> <li>· Regularly maintain plumbing, and identify and repair leaks;</li> <li>· Install self-closing taps, automatic shut-off valves, spray nozzles, pressure reducing valves, and water conserving fixtures;</li> <li>· Operate dishwashers and laundries on full loads, and only when needed;</li> <li>· Install water-saving equipment in lavatories, such as lowflow toilets.</li> </ul>	<b>Demonstrates Compliance</b>
<p>4.5. Water conservation opportunities in cooling systems should include:</p> <ul style="list-style-type: none"> <li>· Use of closed circuit cooling systems with cooling towers rather than once-through cooling systems;</li> <li>· Limiting condenser or cooling tower blowdown to the minimum required to prevent</li> </ul>	<b>Not Applicable</b>



<ul style="list-style-type: none"> <li>· unacceptable accumulation of dissolved solids;</li> <li>· Use of air cooling rather than evaporative cooling;</li> <li>· Use of treated waste water for cooling towers;</li> <li>· Reusing/recycling cooling tower blowdown.</li> </ul>	
<p>4.6. Large quantities of water may be used by steam systems, and this should be reduced by the following measures:</p> <ul style="list-style-type: none"> <li>· Repair of steam and condensate leaks, and repair of all failed steam traps;</li> <li>· Return of condensate to the boilerhouse, and use of heat exchangers (with condensate return) rather than direct steam injection where process permits;</li> <li>· Flash steam recovery;</li> <li>· Minimising boiler blowdown consistent with maintaining acceptably low dissolved solids in boiler water;</li> <li>· Minimising deaerator heating.</li> </ul>	<b>Not Applicable</b>
<b>5. Hazardous Materials Management</b>	
<u>General Hazardous Materials Management</u>	
<p>5.1. The level of risk should be established through an on-going assessment process based on:</p> <ul style="list-style-type: none"> <li>· The types and amounts of hazardous materials present in the project.</li> <li>· Analysis of potential spill and release scenarios using available industry statistics on spills and accidents where available.</li> <li>· Analysis of the potential for uncontrolled reactions such as fire and explosions.</li> <li>· Analysis of potential consequences based on the physical geographical characteristics of the project site, including aspects such as its distance to settlements, water resources, and other environmentally sensitive areas.</li> </ul>	<b>Demonstrates Compliance</b>
<p>5.2. The management actions to be included in a Hazardous Materials Management Plan should be commensurate with the level of potential risks associated with the production, handling, storage, and use of hazardous materials.</p>	<b>Compliance Anticipated</b>
<p>5.3. Where there is risk of a spill of uncontrolled hazardous materials, facilities should prepare a spill control, prevention, and countermeasure plan as a specific component of their Emergency Preparedness and Response Plan.</p>	<b>Compliance Anticipated</b>
<p>5.4. The plan should be tailored to the hazards associated with the project, and include:</p> <ul style="list-style-type: none"> <li>· Training of Operators on release prevention, including drills specific to hazardous materials as part of emergency preparedness response training;</li> <li>· Implementation of inspection programs to maintain the mechanical integrity and operability of pressure vessels, tanks, piping systems, relief and vent valve systems, containment infrastructure, emergency shutdown systems, controls and pumps, and associated process equipment;</li> <li>· Preparation of written Standard Operating Procedures (SOPs) for filling USTs, ASTs or other containers or equipment as well as for transfer operations by personnel trained in the safe transfer and filling of the hazardous material, and in spill prevention and response;</li> <li>· SOPs for the management of secondary containment structures;</li> <li>· Identification of locations of hazardous materials and associated activities on an emergency plan site map;</li> <li>· Documentation of availability of specific personal protective equipment and training needed to respond to an emergency;</li> <li>· Documentation of availability of spill response equipment;</li> <li>· Description of response activities in the event of a spill, release, or other chemical emergency.</li> </ul>	<b>Compliance Anticipated</b>
<p>5.5. Recommended practices to prevent hazardous material releases from transfer processes include:</p> <ul style="list-style-type: none"> <li>· Use of transfer equipment that is compatible and suitable for the characteristics of the materials transferred and designed to ensure safe transfer;</li> <li>· Regular inspection, maintenance and repair of fittings, pipes and hoses;</li> <li>· Provision of secondary containment, drip trays or other overflow and drip containment measures, for hazardous materials containers at connection points or other possible overflow points.</li> </ul>	<b>Demonstrates Compliance</b>
<p>5.6. Special measures should be implemented to prevent overfills of vessels and tanks, including:</p> <ul style="list-style-type: none"> <li>· Prepare written procedures for transfer operations;</li> <li>· Installation of gauges on tanks to measure volume inside;</li> </ul>	<b>Compliance Anticipated</b>



<ul style="list-style-type: none"> <li>· Use of dripless hose connections for vehicle tank and fixed connections with storage tanks;</li> <li>· Provision of automatic fill shutoff valves on storage tanks to prevent overfilling;</li> <li>· Use of a catch basin around the fill pipe to collect spills;</li> <li>· Use of piping connections with automatic overfill protection;</li> <li>· Pumping less volume than available capacity into the tank or vessel by ordering less material than its available capacity;</li> <li>· Provision of overfill or over pressure vents that allow controlled release to a capture point.</li> </ul>	
<p>5.7. Special measures should be implemented to avoid uncontrolled reactions or conditions resulting in fire or explosion, including:</p> <ul style="list-style-type: none"> <li>· Storage of incompatible materials (acids, bases, flammables, oxidisers, reactive chemicals) in separate areas, and with containment facilities separating material storage areas;</li> <li>· Provision of material-specific storage for extremely hazardous or reactive materials;</li> <li>· Use of flame arresting devices on vents from flammable storage containers;</li> <li>· Provision of grounding and lightning protection for tank farms, transfer stations, and other equipment that handles flammable materials;</li> <li>· Selection of materials of construction compatible with products stored for all parts of storage and delivery systems, and avoiding reuse of tanks for different products without checking material compatibility;</li> <li>· Storage of hazardous materials in an area of the facility separated from the main production works. Where proximity is unavoidable, physical separation should be provided using structures designed to prevent fire, explosion, spill, and other emergency situations from affecting facility operations;</li> <li>· Prohibition of all sources of ignition from areas near flammable storage tanks.</li> </ul>	<p><b>Compliance Anticipated</b></p>
<p><b>Control Measures</b></p>	
<p>5.8. Secondary containment should be used to control accidental releases of liquid hazardous materials during storage and transfer. Secondary containment design and construction should hold released materials effectively until they can be detected and safely recovered. Appropriate secondary containment structures consist of berms, dikes, or walls capable of containing the larger of 110 percent of the largest tank or 25 percent of the combined tank volumes in areas with above-ground tanks with a total storage volume equal or greater than 1,000 liters.</p>	<p><b>Demonstrates Compliance</b></p>
<p>5.9. Transfer of hazardous materials from vehicle tanks to storage should be affected in areas with surfaces sufficiently impervious to avoid loss to the environment and sloped to a collection or a containment structure not connected to municipal wastewater / rainwater collection system.</p>	<p><b>Demonstrates Compliance</b></p>
<p>5.10. Where it is not practical to provide permanent, dedicated containment structures for transfer operations, one or more alternative forms of spill containment should be provided, such as portable drain covers, automatic shut-off valves on storm water basins, or shut off valves in drainage or sewer facilities, combined with oil-water separators.</p>	<p><b>Demonstrates Compliance</b></p>
<p>5.11. Storage of drummed hazardous materials with a total volume equal or greater than 1,000 liters should be affected in areas with impervious surfaces that are sloped or bermed to contain a minimum of 25 percent of the total storage volume.</p>	<p><b>Demonstrates Compliance</b></p>
<p>5.12. Double-walled, composite, or specially coated storage and piping systems should be used particularly for underground storage tanks (USTs) and underground piping. If double walled systems are used, they should provide a means of detecting leaks between the two walls.</p>	<p><b>Demonstrates Compliance</b></p>
<p>5.13. Leak detection may be used in conjunction with secondary containment, particularly in high-risk locations. Leak detection is especially important in situations where secondary containment is not feasible or practicable, such as in long pipe runs. Acceptable leak detection methods include:</p> <ul style="list-style-type: none"> <li>· Use of automatic pressure loss detectors on pressurised or long distance piping;</li> <li>· Use of approved or certified integrity testing methods on piping or tank systems, at regular intervals;</li> <li>· Considering the use of SCADA if financially feasible.</li> </ul>	<p><b>Demonstrates Compliance</b></p>
<p>5.14. Special measures should be implemented for underground storage of hazardous materials to manage the risks of fire or explosion, vapor losses into the atmosphere, leaks of hazardous materials, including:</p> <ul style="list-style-type: none"> <li>· Avoiding use of USTs for storage of highly soluble organic materials;</li> <li>· Assessing local soil corrosion potential, and installing and maintaining cathodic protection (or equivalent rust protection) for steel tanks;</li> <li>· For new installations, installing impermeable liners or structures under and around tanks</li> </ul>	<p><b>Demonstrates Compliance</b></p>



<p>and lines that direct any leaked product to monitoring ports at the lowest point of the liner or structure;</p> <ul style="list-style-type: none"> <li>· Monitoring the surface above any tank for indications of soil movement;</li> <li>· Reconciling tank contents by measuring the volume in store with the expected volume, given the stored quantity at last stocking, and deliveries to and withdrawals from the store;</li> <li>· Testing integrity by volumetric, vacuum, acoustic, tracers, or other means on all tanks at regular intervals;</li> <li>· Evaluating the risk of existing UST in newly acquired facilities to determine if upgrades are required for USTs that will be continued to be used, including replacement with new systems or permanent closure of abandoned USTs.</li> </ul>	
<p>5.15. Hazardous Materials Risk Management Plan should be prepared to prevent and control of catastrophic releases of toxic, reactive, flammable, or explosive chemicals that may result in toxic, fire, or explosion hazards.</p>	<b>Compliance Anticipated</b>
<p>5.16. An Emergency Preparedness and Response Plan incorporated into and consistent with, the facility's overall ES/OHS MS, should be prepared to cover the following:</p> <ul style="list-style-type: none"> <li>· Planning Coordination: Procedures should be prepared for informing the public and emergency response agencies; documenting first aid and emergency medical treatment; taking emergency response actions; reviewing and updating the emergency response plan to reflect changes, and ensuring that employees are informed of such changes;</li> <li>· Procedures should be prepared for using, inspecting, testing, and maintaining the emergency response equipment;</li> <li>· Employees and contractors should be trained on emergency response procedures.</li> </ul>	<b>Compliance Anticipated</b>
<p>5.17. When hazardous materials are in use above threshold quantities, the management plan should include a system for community awareness, notification and involvement that should be commensurate with the potential risks identified for the project during the hazard assessment studies (availability of general information to the potentially affected community on the nature and extent of project operations, and the prevention and control measures in place to ensure no effects to human health; the potential for off-site effects to human health or the environment following an accident at planned or existing hazardous installations; specific and timely information on appropriate behavior and safety measures to be adopted in the event of an accident including practice drills in locations with higher risks).</p>	<b>Partial Compliance</b>
<b>6. Waste Management</b>	
<b>General Waste Management</b>	
<p>6.1. Facilities that generate and store wastes should practice the following:</p> <ul style="list-style-type: none"> <li>· Establishing waste management priorities at the outset of activities based on an understanding of potential Environmental, Health, and Safety (EHS) risks and impacts and considering waste generation and its consequences;</li> <li>· Establishing a waste management hierarchy that considers prevention, reduction, reuse, recovery, recycling, removal and finally disposal of wastes;</li> <li>· Avoiding or minimising the generation waste materials, as far as practicable;</li> <li>· Where waste generation cannot be avoided but has been minimised, recovering and reusing waste;</li> <li>· Where waste cannot be recovered or reused, treating, destroying, and disposing of it in an environmentally sound manner.</li> </ul>	<b>Demonstrates Compliance</b>
<p>6.2. Effective planning and implementation of waste management strategies should include:</p> <ul style="list-style-type: none"> <li>· Review of new waste sources during planning, siting, and design activities, including during equipment modifications and process alterations, to identify expected waste generation, pollution prevention opportunities, and necessary treatment, storage, and disposal infrastructure;</li> <li>· Definition of opportunities for source reduction, as well as reuse and recycling;</li> <li>· Definition of procedures and operational controls for onsite storage;</li> <li>· Definition of options / procedures / operational controls for treatment and final disposal.</li> </ul>	<b>Demonstrates Compliance</b>
<p>6.3. Potential impacts and risks associated with the management of any generated hazardous waste should be assessed during its complete life cycle.</p>	<b>Demonstrates Compliance</b>
<p>6.4. It should be ensured that contractors handling, treating, and disposing of hazardous waste are reputable and legitimate enterprises, licensed by the relevant regulatory agencies and following good international industry practice for the waste being handled.</p>	<b>Demonstrates Compliance</b>
<p>6.5. Processes should be designed and operated to prevent, or minimise, the quantities of wastes generated and hazards associated with the wastes generated in accordance with the following strategy:</p>	<b>Demonstrates Compliance</b>



<ul style="list-style-type: none"> <li>· Substituting raw materials or inputs with less hazardous or toxic materials, or with those where processing generates lower waste volumes;</li> <li>· Applying manufacturing process that convert materials efficiently;</li> <li>· Instituting good housekeeping and operating practices, including inventory control to reduce the amount of waste resulting from materials that are out-of- date, off-specification, contaminated, damaged, or excess to plant needs;</li> <li>· Instituting procurement measures that recognise opportunities to return usable materials such as containers and which prevents the over ordering of materials;</li> <li>· Minimising hazardous waste generation by implementing stringent waste segregation to prevent the commingling of non-hazardous and hazardous waste to be managed.</li> </ul>	
<p>6.6. Total amount of waste may be significantly reduced through the implementation of recycling plans, which should consider the following elements:</p> <ul style="list-style-type: none"> <li>· Identification and recycling of products that can be reintroduced into the manufacturing process or industry activity at the site;</li> <li>· Investigation of external markets for recycling by other industrial processing operations located in the neighbourhood or region of the facility;</li> <li>· Providing training and incentives to employees in order to meet objectives.</li> </ul>	<b>Demonstrates Compliance</b>
<p>6.7. If waste materials are still generated after the implementation of feasible waste prevention, reduction, reuse, recovery and recycling measures, waste materials should be treated and disposed of and all measures should be taken to avoid potential impacts to human health and the environment. Such measures should include the following:</p> <ul style="list-style-type: none"> <li>· On-site or off-site biological, chemical, or physical treatment of the waste material to render it nonhazardous prior to final disposal;</li> <li>· Treatment or disposal at permitted facilities specially designed to receive the waste.</li> </ul>	<b>Demonstrates Compliance</b>
<p>6.8. In the absence of qualified commercial or government-owned waste vendors and disposal Operators (taking into consideration proximity and transportation requirements), facilities generating waste should consider using:</p> <ul style="list-style-type: none"> <li>· Have the technical capability to manage the waste in a manner that reduces immediate and future impact to the environment;</li> <li>· Installing on-site waste treatment or recycling processes;</li> <li>· As a final option, constructing facilities that will provide for the environmental sound long-term storage of wastes on-site or at an alternative appropriate location up until external commercial options become available.</li> </ul>	<b>Demonstrates Compliance</b>
<b>Waste storage</b>	
<p>6.9. Wastes should be stored in a manner that prevents the commingling or contact between incompatible wastes.</p>	<b>Demonstrates Compliance</b>
<p>6.10. Different type of wastes should be stored in different closed containers away from direct sunlight, wind and rain.</p>	<b>Demonstrates Compliance</b>
<p>6.11. Periodic inspections of waste storage areas should be conducted with documenting the findings.</p>	<b>Demonstrates Compliance</b>
<p>6.12. Secondary containment should be included wherever liquid wastes are stored in volumes greater than 220 liters. The available volume of secondary containment should be at least 110 percent of the largest storage container, or 25 percent of the total storage capacity (whichever is greater), in that specific location.</p>	<b>Demonstrates Compliance</b>
<p>6.13. Adequate ventilation should be provided where volatile wastes are stored.</p>	<b>Demonstrates Compliance</b>
<p>6.14. Hazardous waste storage activities should also be subject to special management actions, conducted by employees who have received specific training in handling and storage of hazardous wastes:</p> <ul style="list-style-type: none"> <li>· Provision of readily available information on chemical compatibility to employees, including labelling each container to identify its contents;</li> <li>· Clearly identifying (label) and demarcating the area, including documentation of its location on a facility map or site plan;</li> <li>· Conducting periodic inspections of waste storage areas and documenting the findings;</li> <li>· Preparing and implementing spill response and emergency plans to address their accidental release;</li> <li>· Avoiding underground storage tanks and underground piping of hazardous waste.</li> </ul>	<b>Demonstrates Compliance</b>
<b>Transportation</b>	
<p>6.15. On-site and Off-site transportation of waste should be conducted so as to prevent or minimise spills, releases, and exposures to employees and the public.</p>	<b>Demonstrates Compliance</b>



All waste containers designated for off-site shipment should be secured and labeled with the contents and associated hazards, be properly loaded on the transport vehicles before leaving the site, and be accompanied by a shipping paper that describes the load and its associated hazards.	
<b>Monitoring</b>	
6.16. Monitoring activities associated with the management of hazardous and non-hazardous waste should include: <ul style="list-style-type: none"> <li>· Regular visual inspection of all waste storage collection and storage areas for evidence of accidental releases and to verify that wastes are properly labelled and stored.</li> <li>· Regular audits of waste segregation and collection practices;</li> <li>· Periodic auditing of third party treatment, and disposal services including re-use and recycling facilities when significant quantities of hazardous wastes are managed by third parties;</li> <li>· Regular monitoring of groundwater quality in cases of Hazardous Waste on site storage and/or pre-treatment and disposal.</li> </ul>	<b>Compliance Anticipated</b>
<b>7. Noise</b>	
<b>Prevention and Control</b>	
7.1. Noise impacts should not exceed the following levels: <ul style="list-style-type: none"> <li>· 55 One Hour LAeq (dBA) at daytime for residential; institutional; educational receptors;</li> <li>· 45 One Hour LAeq (dBA) at night time for residential; institutional; educational receptors;</li> <li>· 70 One Hour LAeq (dBA) at daytime and night time for industrial; commercial receptors.</li> </ul>	<b>Demonstrates Compliance</b>
7.2. Noise prevention and mitigation measures should be applied where predicted or measured noise impacts from a project facility or operations exceed the applicable noise level guideline at the most sensitive point of reception. Noise reduction options that should be considered include: <ul style="list-style-type: none"> <li>· Selecting equipment with lower sound power levels;</li> <li>· Installing silencers for fans;</li> <li>· Installing suitable mufflers on engine exhausts and compressor components;</li> <li>· Installing acoustic enclosures for equipment casing radiating noise;</li> <li>· Improving the acoustic performance of constructed buildings, apply sound insulation;</li> <li>· Limiting the hours of operation for specific pieces of equipment or operations, especially mobile sources operating through community areas;</li> <li>· Reducing project traffic routing through community areas wherever possible</li> <li>· Developing a mechanism to record and respond to complaints.</li> </ul>	<b>Demonstrates Compliance</b>
<b>Monitoring</b>	
7.3. Noise monitoring programs should be designed and conducted by trained specialists. Typical monitoring periods should be sufficient for statistical analysis.	<b>Demonstrates Compliance</b>
<b>8. Contaminated Land</b>	
<b>Prevention of land contamination</b>	
8.1. Contamination of land should be avoided by preventing or controlling the release of hazardous materials, hazardous wastes, or oil to the environment.	<b>Demonstrates Compliance</b>
8.2. When contamination of land is suspected or confirmed during any project phase, the cause of the uncontrolled release should be identified and corrected to avoid further releases and associated adverse impacts.	<b>Demonstrates Compliance</b>
8.3. Contaminated lands should be managed to avoid the risk to human health and ecological receptors.	<b>Demonstrates Compliance</b>
8.4. The preferred strategy for land decontamination is to reduce the level of contamination at the site while preventing the human exposure to contamination.	<b>Demonstrates Compliance</b>
<b>Risk assessment</b>	
8.5. Where there is potential evidence of contamination at a site, the following steps should be provided: <ul style="list-style-type: none"> <li>· Identification of the location of suspected highest level of contamination through a combination of visual and historical operational information;</li> <li>· Sampling and testing of the contaminated media (soils or water);</li> <li>· Evaluation of the analytical results against the local and national contaminated sites regulations;</li> <li>· Verification of the potential human and/or ecological receptors and exposure pathways relevant to the site in question.</li> </ul>	<b>Demonstrates Compliance</b>
8.6. Interim risk management actions should be implemented at any phase of the project life cycle if the presence of land contamination poses an "imminent hazard", i.e., representing	<b>Demonstrates Compliance</b>



an immediate risk to human health and the environment if contamination were allowed to continue, even a short period of time. Appropriate risk reduction should be implemented as soon as practicable to remove the condition posing the imminent hazard.	
8.7. If the presence of land contamination poses an "imminent hazard", a detailed site-specific, environmental risk assessment should be used to develop strategies that yield acceptable health risks, while achieving low level contamination on-site.	<b>Demonstrates Compliance</b>
8.8. The risk factors and conceptual site model within the contaminant risk approach described should also provide a basis to manage and mitigate environmental contaminant health risks.	<b>Demonstrates Compliance</b>
<b>Occupational Health and Safety</b>	
<b>9. General Facility Design and Operation</b>	
<u>Integrity of Workplace Structures</u>	
9.1. Permanent and recurrent places of work should be designed and equipped to protect OHS: · Surfaces, structures and installations should be easy to clean and maintain, and not allow for accumulation of hazardous compounds; · Buildings should be structurally safe, provide appropriate protection against the climate, and have acceptable light and noise conditions; · Fire resistant, noise-absorbing materials should, to the extent feasible, be used for cladding on ceilings and walls; · Floors should be level, even, and non- skid; · Heavy oscillating, rotating or alternating equipment should be located in dedicated buildings or structurally isolated sections.	<b>Demonstrates Compliance</b>
<u>Severe Weather and Facility Shutdown</u>	
9.2. Work place structures should be designed and constructed to withstand the expected elements for the region and have an area designated for safe refuge, if appropriate.	<b>Demonstrates Compliance</b>
9.3. Standard Operating Procedures (SOPs) should be developed for project or process shut-down, including an evacuation plan. Drills to practice the procedure and plan should also be undertaken annually.	<b>Compliance Anticipated</b>
<u>Workspace and Exit</u>	
9.4. The space provided for each worker, and in total, should be adequate for safe execution of all activities, including transport and interim storage of materials and products. Passages to emergency exits should be unobstructed at all times. Exits should be clearly marked to be visible in total darkness. The number and capacity of emergency exits should be sufficient for safe and orderly evacuation of the greatest number of people present at any time, and there should be a minimum two exits from any work area. Facilities also should be designed and built taking into account the needs of disabled persons.	<b>Compliance Anticipated</b>
<u>Fire Precautions</u>	
9.5. The workplace should be designed to prevent the start of fires through the implementation of fire codes applicable to industrial settings.	<b>Demonstrates Compliance</b>
9.6. Facilities should be equipped with fire detectors, alarm systems, and fire-fighting equipment. The equipment should be maintained in good working order and be readily accessible. It should be adequate for the dimensions and use of the premises, equipment installed, physical and chemical properties of substances present, and the maximum number of people present.	<b>Compliance Anticipated</b>
9.7. Fire and emergency alarm systems that are both audible and visible.	<b>Compliance Anticipated</b>
<u>Lavatories and Showers</u>	
9.8. Adequate lavatory facilities (toilets and washing areas) should be provided for the number of people expected to work in the facility and allowances made for segregated facilities, or for indicating whether the toilet facility is "In Use" or "Vacant". Toilet facilities should also be provided with adequate supplies of hot and cold running water, soap, and hand drying devices. Where workers may be exposed to substances poisonous by ingestion and skin contamination may occur, facilities for showering and changing into and out of street and work clothes should be provided.	<b>Compliance Anticipated</b>
9.9. Adequate supplies of potable drinking water should be provided from a fountain with an	<b>Compliance</b>

upward jet or with a sanitary means of collecting the water for the purposes of drinking. Water supplied to areas of food preparation or for the purpose of personal hygiene (washing or bathing) should meet drinking water quality standards.	<b>Anticipated</b>
9.10. Where there is potential for exposure to substances poisonous by ingestion, suitable arrangements are to be made for provision of clean eating areas where workers are not exposed to the hazardous or noxious substances.	<b>Compliance Anticipated</b>
<b>Safe Access</b>	
9.11. Passageways for pedestrians and vehicles within and outside buildings should be segregated and provide for easy, safe, and appropriate access.	<b>Compliance Anticipated</b>
9.12. Equipment and installations requiring servicing, inspection, and/or cleaning should have unobstructed, unrestricted, and ready access.	<b>Compliance Anticipated</b>
9.13. Hand, knee and foot railings should be installed on stairs, fixed ladders, platforms, permanent and interim floor openings, loading bays, ramps, etc.	<b>Compliance Anticipated</b>
9.14. Openings should be sealed by gates or removable chains.	<b>Compliance Anticipated</b>
9.15. Covers should, if feasible, be installed to protect against falling items.	<b>Compliance Anticipated</b>
9.16. Measures to prevent unauthorised access to dangerous areas should be in place.	<b>Compliance Anticipated</b>
<b>First Aid</b>	
9.17. The employer should ensure that qualified first-aid can be provided at all times. Appropriately equipped first-aid stations should be easily accessible throughout the place of work.	<b>Compliance Anticipated</b>
9.18. Eye-wash stations and/or emergency showers should be provided close to all workstations where immediate flushing with water is the recommended first-aid response.	<b>Compliance Anticipated</b>
9.19. Remote sites should have written emergency procedures in place for dealing with cases of trauma or serious illness up to the point at which patient care can be transferred to an appropriate medical facility.	<b>Compliance Anticipated</b>
<b>Air Supply</b>	
9.20. Sufficient fresh air should be supplied for indoor and confined work spaces. Factors to be considered in ventilation design include physical activity, substances in use, and process related emissions. Air distribution systems should be designed so as not to expose workers to draughts.	<b>Demonstrates Compliance</b>
9.21. Mechanical ventilation systems should be maintained in good working order. Point-source exhaust systems required for maintaining a safe ambient environment should have local indicators of correct functioning.	<b>Compliance Anticipated</b>
9.22. Re-circulation of contaminated air is not acceptable. Air inlet filters should be kept clean and free of dust and microorganisms. Heating, ventilation and air conditioning (HVAC) and industrial evaporative cooling systems should be equipped, maintained and operated so as to prevent growth and spreading of disease agents or breeding of vectors of public health concern.	<b>Compliance Anticipated</b>
<b>10. Communication and Training</b>	
<b>OHS Training</b>	
10.1. Provisions should be made to provide OHS orientation training to all new employees.	<b>Demonstrates Compliance</b>
10.2. Training should consist of basic hazard awareness, sites specific hazards, safe work practices, and emergency procedures for fire, evacuation, and natural disaster, as appropriate. Any site-specific hazard or color coding in use should be thoroughly reviewed as part of orientation training.	<b>Demonstrates Compliance</b>
10.3. If visitors to the site can gain access to areas where hazardous conditions or substances may be present, a visitor orientation and control program should be established to ensure visitors do not enter hazard areas unescorted.	<b>Demonstrates Compliance</b>
10.4. The employer should ensure that workers and contractors, prior to commencement of new assignments, have received adequate training and information enabling them to understand work hazards and to protect their health from hazardous ambient factors that may be present.	<b>Demonstrates Compliance</b>
10.5. A basic occupational training program and specialty courses should be provided, as needed, to ensure that workers are oriented. Workers with rescue and first-aid duties should receive dedicated training so as not to	<b>Demonstrates Compliance</b>



<p>inadvertently aggravate exposures and health hazards to themselves or their coworkers. Training would include the risks of becoming infected with blood-borne pathogens through contact with bodily fluids and tissue. Through appropriate contract specifications and monitoring, the employer should ensure that service providers, as well as contracted and subcontracted labor, are trained adequately before assignments begin.</p>	
<p><b>Area Signage, Labeling of Equipment, Communicate Hazard Codes</b></p>	
<p>10.6. Hazardous areas (electrical rooms, compressor rooms, etc.), installations, materials, safety measures, and emergency exits, etc. should be marked appropriately. Signage should be in accordance with international standards and be well known to, and easily understood by workers, visitors and the general public as appropriate.</p>	<p><b>Compliance Anticipated</b></p>
<p>10.7. All vessels that may contain substances that are hazardous as a result of chemical or toxicological properties, or temperature or pressure, should be labeled as to the contents and hazard, or appropriately color coded. Similarly, piping systems that contain hazardous substances should be labeled with the direction of flow and contents of the pipe, or color coded whenever the pipe passing through a wall or floor is interrupted by a valve or junction device.</p>	<p><b>Compliance Anticipated</b></p>
<p>10.8. Copies of the hazard coding system should be posted outside the facility at emergency entrance doors and fire emergency connection systems.</p>	<p><b>Compliance Anticipated</b></p>
<p>10.9. Information regarding the types of hazardous materials stored, handled or used at the facility, including typical maximum inventories and storage locations, should be shared proactively with emergency services and security personnel to expedite emergency response when needed.</p>	<p><b>Partial Compliance</b></p>
<p>10.10. Representatives of local emergency and security services should be invited to participate in periodic (annual) orientation tours and site inspections to ensure familiarity with potential hazards present.</p>	<p><b>Partial Compliance</b></p>
<p><b>11. Physical Hazards</b></p>	
<p><b>Rotating and Moving Equipment</b></p>	
<p>11.1. Machines design should eliminate trap hazards and ensuring that extremities are kept out of harm's way under normal operating conditions. Where a machine or equipment has an exposed moving part or exposed pinch point that may endanger the safety of any worker, the machine or equipment should be equipped with, and protected by, a guard or other device that prevents access to the moving part or pinch point. Guards should be designed and installed in conformance with appropriate machine safety standards.</p>	<p><b>Demonstrates Compliance</b></p>
<p>11.2. Turning off, disconnecting, isolating, and de-energising machinery with exposed or guarded moving parts, or in which energy can be stored (e.g. compressed air, electrical components) during servicing or maintenance, in conformance with a standard such as c.</p>	<p><b>Compliance Anticipated</b></p>
<p>11.3. Designing and installing equipment, where feasible, to enable routine service, such as lubrication, without removal of the guarding devices or mechanisms.</p>	<p><b>Compliance Anticipated</b></p>
<p><b>Noise</b></p>	
<p>11.4. No employee should be exposed to a noise level greater than 85 dB(A) for a duration of more than 8 hours per day without hearing protection. In addition, no unprotected ear should be exposed to a peak sound pressure level (instantaneous) of more than 140 dB(C).</p>	<p><b>Demonstrates Compliance</b></p>
<p>11.5. The use of hearing protection should be enforced actively when the equivalent sound level over 8 hours reaches 85 dB(A), the peak sound levels reach 140 dB(C), or the average maximum sound level reaches 110dB(A). Hearing protective devices provided should be capable of reducing sound levels at the ear to at least 85 dB(A).</p>	<p><b>Demonstrates Compliance</b></p>
<p>11.6. For every 3 dB(A) increase in sound levels, the 'allowed' exposure period or duration should be reduced by 50 percent.</p>	<p><b>Demonstrates Compliance</b></p>
<p>11.7. Prior to the issuance of hearing protective devices as the final control mechanism, use of acoustic insulating materials, isolation of the noise source, and other engineering controls should be investigated and implemented.</p>	<p><b>Demonstrates Compliance</b></p>
<p>11.8. Periodic medical hearing checks should be performed on workers exposed to high noise levels.</p>	<p><b>Demonstrates Compliance</b></p>
<p><b>Vibration</b></p>	
<p>11.9. Exposure to hand-arm vibration from equipment such as hand and power tools, or whole-body vibrations from surfaces on which the worker stands or sits, should be controlled through choice of equipment, installation of vibration dampening pads or devices, and limiting the duration of exposure. Exposure levels should be checked on the basis of daily exposure time and data provided by equipment manufacturers.</p>	<p><b>Demonstrates Compliance</b></p>



<u>Electrical</u>	
11.10. All energised electrical devices and lines should be marked with warning signs.	<b>Compliance Anticipated</b>
11.11. Devices should be locked out (de- charging and leaving open with a controlled locking device) and tagged-out (warning sign placed on the lock) during service or maintenance.	<b>Compliance Anticipated</b>
11.12. All electrical cords, cables, and hand power tools should be checked for frayed or exposed cords. Manufacturer recommendations for maximum permitted operating voltage of the portable hand tools should be followed.	<b>Compliance Anticipated</b>
11.13. Double insulating / grounding should be applied for all electrical equipment used in environments that are, or may become, wet; using equipment with ground fault interrupter (GFI) protected circuits.	<b>Compliance Anticipated</b>
11.14. Power cords and extension cords should be protected against damage from traffic by shielding or suspending above traffic areas.	<b>Compliance Anticipated</b>
11.15. Use of appropriate labeling of service rooms housing high voltage equipment ('electrical hazard') and where entry is controlled or prohibited.	<b>Compliance Anticipated</b>
11.16. "No Approach" zones should be established around or under high voltage power lines.	<b>Compliance Anticipated</b>
11.17. Rubber tired construction or other vehicles that come into direct contact with, or arcing between, high voltage wires may need to be taken out of service for periods of 48 hours and have the tires replaced to prevent catastrophic tire and wheel assembly failure, potentially causing serious injury or death.	<b>Compliance Anticipated</b>
11.18. Conduct detailed identification and marking of all buried electrical wiring prior to any excavation work.	<b>Compliance Anticipated</b>
<u>Eye Hazards</u>	
11.19. Use of machine guards or splash shields and/or face and eye protection devices, such as safety glasses with side shields, goggles, and/or a full face shield. Machine and equipment guarding should conform to standards published by organisations such as CSA, ANSI and ISO.	<b>Compliance Anticipated</b>
11.20. Moving areas where the discharge of solid fragments, liquid, or gaseous emissions can reasonably be predicted away from places expected to be occupied or transited by workers or visitors. Where machine or work fragments could present a hazard to transient workers or passers-by, extra area guarding or proximity restricting systems should be implemented, or PPE required for transients and visitors.	<b>Compliance Anticipated</b>
11.21. Provisions should be made for persons who have to wear prescription glasses either through the use over glasses or prescription hardened glasses.	<b>Compliance Anticipated</b>
<u>Welding / Hot Work</u>	
11.22. Provision of proper eye protection such as welder goggles and/or a full-face eye shield for all personnel involved in, or assisting, welding operations. Additional methods may include the use of welding barrier screens around the specific work station (a solid piece of light metal, canvas, or plywood designed to block welding light from others). Devices to extract and remove noxious fumes at the source may also be required.	<b>Compliance Anticipated</b>
11.23. Special hot work and fire prevention precautions and Standard Operating Procedures (SOPs) should be implemented if welding or hot cutting is undertaken outside established welding work stations, including 'Hot Work Permits, stand-by fire extinguishers, stand-by fire watch, and maintaining the fire watch for up to one hour after welding or hot cutting has terminated. Special procedures are required for hot work on tanks or vessels that have contained flammable materials.	<b>Compliance Anticipated</b>
<u>Industrial Vehicle Driving and Site Traffic</u>	
11.24. Provide training and licensing industrial vehicle Operators in the safe operation of specialised vehicles such as forklifts, including safe loading/unloading, load limits.	<b>Compliance Anticipated</b>
11.25. Ensure moving equipment with restricted rear visibility is outfitted with audible back-up alarms.	<b>Compliance Anticipated</b>
11.26. Establish rights-of-way, site speed limits, vehicle inspection requirements, operating rules and procedures, and control of traffic patterns or direction. Restrict the circulation of delivery and private vehicles to defined routes and areas, giving preference to 'one-way' circulation, where appropriate.	<b>Compliance Anticipated</b>
<u>Working Environment Temperature</u>	
11.27. Extreme temperatures in permanent work environments should be avoided through implementation of engineering controls and ventilation.	<b>Demonstrates Compliance</b>

11.28. Monitor weather forecasts for outdoor work to provide advance warning of extreme weather and scheduling work accordingly. Provide temporary shelters to protect against the elements during working activities or for use as rest areas.	<b>Compliance Anticipated</b>
11.29. Adjustment of work and rest periods should be regulated according to temperature stress management procedures provided by ACGIH67, depending on the temperature and workloads.	<b>Compliance Anticipated</b>
11.30. Personnel should be provided with protective clothing and access to adequate hydration such as drinking water or electrolyte drinks. Consumption of alcoholic beverages should be avoided.	<b>Compliance Anticipated</b>
<b>Ergonomics, Repetitive Motion, Manual Handling</b>	
11.31. Use of mechanical assists to eliminate or reduce exertions required to lift materials, hold tools and work objects, and requiring multi-person lifts if weights exceed thresholds.	<b>Compliance Anticipated</b>
11.32. Selecting and designing tools that reduce force requirements and holding times, and improve postures.	<b>Compliance Anticipated</b>
11.33. Provide user with adjustable work stations.	<b>Compliance Anticipated</b>
11.34. Incorporating rest and stretch breaks into work processes, and conducting job rotation.	<b>Compliance Anticipated</b>
11.35. Implement quality control and maintenance programs that reduce unnecessary forces and exertions.	<b>Compliance Anticipated</b>
11.36. Take into consideration additional special conditions such as left handed persons.	<b>Compliance Anticipated</b>
<b>Working at Heights</b>	
11.37. Provide installation of guardrails with mid-rails and toe boards at the edge of any fall hazard area.	<b>Compliance Anticipated</b>
11.38. Ladders and scaffolds should be properly used by trained employees.	<b>Compliance Anticipated</b>
11.39. Use of fall prevention devices, including safety belt and lanyard travel limiting devices to prevent access to fall hazard area, or fall protection devices such as full body harnesses used in conjunction with shock absorbing lanyards or self-retracting inertial fall arrest devices attached to fixed anchor point or horizontal life-lines.	<b>Compliance Anticipated</b>
11.40. Provide personnel with appropriate training in use, serviceability, and integrity of the necessary PPE.	<b>Compliance Anticipated</b>
11.41. Inclusion of rescue and/or recovery plans, and equipment to respond to workers after an arrested fall.	<b>Compliance Anticipated</b>
<b>Illumination</b>	
11.42. Work area light intensity should be adequate for the general purpose of the location and type of activity, and should be supplemented with dedicated work station illumination, as needed.	<b>Compliance Anticipated</b>
11.43. Emergency lightening should be provided in case of tripping the main light source.	<b>Compliance Anticipated</b>
<b>12. Chemical Hazards</b>	
<b>Air Quality</b>	
12.1. Maintain levels of contaminant dusts, vapors and gases in the work environment at concentrations below those recommended by the ACGIH as TWA-TLV's (threshold limit value)—concentrations to which most workers can be exposed repeatedly (8 hours/day, 40 hrs/week, week-after week), without sustaining adverse health effects.	<b>Demonstrates Compliance</b>
12.2. Developing and implementing work practices to minimise release of contaminants into the work environment.	<b>Demonstrates Compliance</b>
12.3. Where ambient air contains several materials that have similar effects on the same body organs (additive effects), taking into account combined exposures using calculations recommended by the ACGIH. Where work shifts extend beyond eight (8) hours, calculating adjusted workplace exposure criteria recommended by the ACGIH.	<b>Demonstrates Compliance</b>
<b>Fire and Explosions</b>	
12.4. Flammables should be stored away from ignition sources and oxidising materials. Further, flammables storage area should be: · Remote from entry and exit points into buildings; · Away from facility ventilation intakes or vents;	<b>Compliance Anticipated</b>



<ul style="list-style-type: none"> <li>· Have natural or passive floor and ceiling level ventilation and explosion venting;</li> <li>· Use spark-proof fixtures;</li> <li>· Be equipped with fire extinguishing devices and self-closing doors.</li> </ul>	
12.5. Provide bonding and grounding of, and between, containers and additional mechanical floor level ventilation if materials are being, or could be, dispensed in the storage area.	<b>Compliance Anticipated</b>
12.6. Where the flammable material is mainly comprised of dust, provide electrical grounding, spark detection, and, if needed, quenching systems.	<b>Compliance Anticipated</b>
12.7. Define and label fire hazards areas to warn of special rules (e.g. prohibition in use of smoking materials, cellular phones, or other potential spark generating equipment).	<b>Compliance Anticipated</b>
12.8. Provide specific worker training in handling of flammable materials, and in fire prevention or suppression.	<b>Compliance Anticipated</b>
<b>Corrosive, oxidising, and reactive chemicals</b>	
12.9. Corrosive, oxidising and reactive chemicals should be segregated from flammable materials and from other chemicals of incompatible class (acids vs. bases, oxidisers vs. reducers, water sensitive vs. water based, etc.), stored in ventilated areas and in containers with appropriate secondary containment to minimise intermixing during spills. Workers who are required to handle corrosive, oxidising, or reactive chemicals should be provided with specialised training and provided with, and wear, appropriate PPE (gloves, apron, splash suits, face shield or goggles, etc.).	<b>Compliance Anticipated</b>
<b>Asbestos Containing Materials (ACM)</b>	
12.10. The use of asbestos containing materials (ACM) should be avoided in new buildings or as a new material in remodeling or renovation activities. Existing facilities with ACM should develop an asbestos management plan which clearly identifies the locations where the ACM is present, its condition, procedures for monitoring its condition, procedures to access the locations where ACM is present to avoid damage, and training of staff who can potentially come into contact with the material. The plan should be made available to all persons involved in operations and maintenance activities. Repair or removal and disposal of existing ACM in buildings should only be performed by specially trained personnel following host country requirements, or in their absence, internationally recognised procedures.	<b>Compliance Anticipated</b>
<b>13. Biological Hazards</b>	
<b>Measures to prevent biological hazards</b>	
13.1. If the nature of the activity permits, use of any harmful biological agents should be avoided and replaced with an agent that, under normal conditions of use, is not dangerous or less dangerous to workers. If use of harmful agents cannot be avoided, precautions should be taken to keep the risk of exposure as low as possible and maintained below internationally established and recognised exposure limits.	<b>Demonstrates Compliance</b>
13.2. Work processes, engineering, and administrative controls should be designed, maintained, and operated to avoid or minimise release of biological agents into the working environment. The number of employees exposed or likely to become exposed should be kept at a minimum.	<b>Demonstrates Compliance</b>
13.3. The employer should review and assess known and suspected presence of biological agents at the place of work and implement appropriate safety measures, monitoring, training, and training verification programs.	<b>Compliance Anticipated</b>
13.4. Measures to eliminate and control hazards from known and suspected biological agents at the place of work should be designed, implemented and maintained in close co-operation with the local health authorities and according to recognised international standards.	<b>Compliance Anticipated</b>
13.5. Work involving agents in Groups 3 and 4 should be restricted only to those persons who have received specific verifiable training in working with and controlling such materials. Areas used for the handling of Groups 3 and 4 biological agents should be designed to enable their full segregation and isolation in emergency circumstances, include independent ventilation systems, and be subject to SOPs requiring routine disinfection and sterilisation of the work surfaces.	<b>Compliance Anticipated</b>
<b>14. Radiological Hazards</b>	
<b>Acceptable effective dose limits for workplace radiological hazards</b>	
14.1. Places of work involving occupational and/or natural exposure to ionising radiation should be established and operated in accordance with recognised international safety standards and guidelines. The acceptable effective dose limits appear: <ul style="list-style-type: none"> <li>· Five consecutive year average – effective dose– 20 mSv/year for workers (min. 19 years of age);</li> <li>· Single year exposure– effective dose– 50 mSv/year for workers (min. 19 years of age);</li> </ul>	<b>Not Applicable</b>



<p>6 mSv/year for apprentices and students (16-18 years of age);</p> <ul style="list-style-type: none"> <li>· Equivalent dose to the lens of the eye –150 mSv/year for workers (min. 19 years of age); 50 mSv/year for apprentices and students (16-18 years of age);</li> <li>· Equivalent dose to the extremities (hands, feet) or the skin – 500 mSv/year for workers (min. 19 years of age); 150 mSv/year for apprentices and students (16-18 years of age).</li> </ul>	
<p>14.2. Exposure to non-ionising radiation (including static magnetic fields; sub-radio frequency magnetic fields; static electric fields; radio frequency and microwave radiation; light and near-infrared radiation; and ultraviolet radiation) should be controlled to internationally recommended limits.</p>	<b>Not Applicable</b>
<p>14.3. In the case of both ionising and non- ionising radiation, the preferred method for controlling exposure is shielding and limiting the radiation source. Personal protective equipment is supplemental only or for emergency use. Personal protective equipment for near-infrared, visible and ultraviolet range radiation can include appropriate sun block creams, with or without appropriate screening clothing.</p>	<b>Not Applicable</b>
<b>15. Personal Protective Equipment (PPE)</b>	
<u>Providing Personal Protective Equipment (PPE) for workers additional protection</u>	
<p>15.1. Worker, co-workers, and occasional visitors should be provided with appropriate PPE that offers adequate protection.</p>	<b>Compliance Anticipated</b>
<p>15.2. Proper maintenance of PPE should include cleaning when dirty and replacement when damaged or worn out. Proper use of PPE should be part of the recurrent training programs for employees.</p>	<b>Compliance Anticipated</b>
<p>15.3. Selection of PPE should be based on the hazard and risk ranking and selected according to criteria on performance and testing established.</p>	<b>Compliance Anticipated</b>
<b>16. Special Hazard Environments</b>	
<u>Confined Space</u>	
<p>16.1. Engineering measures should be implemented to eliminate, to the degree feasible, the existence and adverse character of confined spaces.</p>	<b>Demonstrates Compliance</b>
<p>16.2. Permit-required confined spaces should be provided with permanent safety measures for venting, monitoring, and rescue operations, to the extent possible. The area adjoining an access to a confined space should provide ample room for emergency and rescue operations. 16.3. Access hatches should accommodate 90% of the worker population with adjustments for tools and protective clothing.</p>	<b>Demonstrates Compliance</b>
<p>16.4. Prior to entry into a permit-required confined space:</p> <ul style="list-style-type: none"> <li>· Process or feed lines into the space should be disconnected or drained, and blanked and locked-out;</li> <li>· Mechanical equipment in the space should be disconnected, de-energised, locked-out, and braced, as appropriate;</li> <li>· The atmosphere within the confined space should be tested to assure the oxygen content is between 19.5 percent and 23 percent, and that the presence of any flammable gas or vapour does not exceed 25 percent of its respective Lower Explosive Limit (LEL);</li> <li>· If the atmospheric conditions are not met, the confined space should be ventilated until the target safe atmosphere is achieved, or entry is only to be undertaken with appropriate and additional PPE.</li> </ul>	<b>Compliance Anticipated</b>
<p>16.5. Safety precautions should include Self Contained Breathing Apparatus (SCBA), life lines, and safety watch workers stationed outside the confined space, with rescue and first aid equipment readily available.</p>	<b>Compliance Anticipated</b>
<p>16.6. Before workers are required to enter a permit-required confined space, adequate and appropriate training in confined space hazard control, atmospheric testing, use of the necessary PPE, as well as the serviceability and integrity of the PPE should be verified. Further, adequate and appropriate rescue and / or recovery plans and equipment should be in place before the worker enters the confined space.</p>	<b>Compliance Anticipated</b>
<u>Lone and Isolated Workers</u>	
<p>16.7. Where workers may be required to perform work under lone or isolated circumstances, Standard Operating Procedures (SOPs) should be developed and implemented to ensure all PPE and safety measures are in place before the worker starts work. SOPs should establish, at a minimum, verbal contact with the worker at least once every hour, and ensure the worker has a capability for summoning emergency aid.</p>	<b>Compliance Anticipated</b>
<p>16.8. If the worker is potentially exposed to highly toxic or corrosive chemicals, emergency eye-wash and shower facilities should be equipped with audible and visible alarms to summon aid whenever the eye- wash or shower is activated by the worker and without</p>	<b>Compliance Anticipated</b>



intervention by the worker.	
<b>17. Monitoring</b>	
<u>Occupational health and safety monitoring program</u>	
17.1. The occupational health and safety monitoring program should be developed. It should include the following: <ul style="list-style-type: none"> <li>· regular inspection and testing of all safety features and hazard control measures;</li> <li>· surveillance of the working environment: Employers should document compliance using an appropriate combination of portable and stationary sampling and monitoring instruments;</li> <li>· surveillance of workers health;</li> <li>· training activities for employees and visitors should be adequately monitored and documented.</li> </ul>	<b>Compliance Anticipated</b>
<u>Accidents and Diseases monitoring</u>	
17.2. The employer should establish procedures and systems for reporting and recording: <ul style="list-style-type: none"> <li>· Occupational accidents and diseases;</li> <li>· Dangerous occurrences and incidents.</li> </ul> These systems should enable workers to report immediately to their immediate supervisor any situation they believe presents a serious danger to life or health. The systems and the employer should further enable and encourage workers to report to management all: <ul style="list-style-type: none"> <li>· Occupational injuries and near misses;</li> <li>· Suspected cases of occupational disease;</li> <li>· Dangerous occurrences and incidents.</li> </ul>	<b>Compliance Anticipated</b>
17.3. All reported occupational accidents, occupational diseases, dangerous occurrences, and incidents together with near misses should be investigated with the assistance of a person knowledgeable/competent in occupational safety.	<b>Compliance Anticipated</b>
<b>Community Health and Safety</b>	
<u>18. Water Quality and Availability</u>	
18.1. Project activities involving wastewater discharges, water extraction, diversion or impoundment should prevent adverse impacts to the quality and availability of groundwater and surface water resources.	<b>Demonstrates Compliance</b>
18.2. Drinking water sources, whether public or private, should at all times be protected so that they meet or exceed applicable national acceptability standards or in their absence the current edition of WHO Guidelines for Drinking-Water Quality.	<b>Demonstrates Compliance</b>
18.3. The potential effect of groundwater or surface water abstraction for project activities should be properly assessed through a combination of field testing and modeling techniques, accounting for seasonal variability and projected changes in demand in the project area.	<b>Demonstrates Compliance</b>
18.4. Project activities should not compromise the availability of water for personal hygiene needs and should take account of potential future increases in demand.	<b>Demonstrates Compliance</b>
<u>19. Structural Safety of Project Infrastructure</u>	
19.1. The following issues should be considered and incorporated as appropriate into the planning, siting, and design phases of a project: <ul style="list-style-type: none"> <li>· Inclusion of buffer strips or other methods of physical separation around project sites to protect the public from major hazards associated with hazardous materials incidents or process failure, as well as nuisance issues related to noise, odours, or other emissions;</li> <li>· Incorporation of siting and safety engineering criteria to prevent failures due to natural risks posed by earthquakes, tsunamis, wind, flooding, landslides and fire. To this end, all project structures should be designed in accordance with engineering and design criteria mandated by site-specific risks, including but not limited to seismic activity, slope stability, wind loading, and other dynamic loads.</li> </ul>	<b>Demonstrates Compliance</b>
<b>20. Life and Fire Safety</b>	
20.1. All new buildings should be designed, constructed, and operated in full compliance with local building codes, local fire department regulations, local legal/insurance requirements.	<b>Demonstrates Compliance</b>
<b>21. Traffic Safety</b>	
21.1. Traffic safety should be promoted by all project personnel during displacement to and from the workplace, and during operation of project equipment on private or public roads.	<b>Compliance Anticipated</b>
21.2. Road safety initiatives proportional to the scope and nature of project activities should include: <ul style="list-style-type: none"> <li>· Adoption of best transport safety practices across all aspects of project operations with the goal of preventing traffic accidents and minimising injuries suffered by project personnel and the public;</li> </ul>	<b>Compliance Anticipated</b>



<ul style="list-style-type: none"> <li>Regular maintenance of vehicles and use of manufacturer approved parts to minimise potentially serious accidents caused by equipment malfunction or premature failure.</li> </ul> <p>Where the project may contribute to a significant increase in traffic along existing roads, or where road transport is a significant component of a project, recommended measures include:</p> <ul style="list-style-type: none"> <li>Minimising pedestrian interaction with construction vehicles;</li> <li>Collaboration with local communities and responsible authorities to improve signage, visibility and overall safety of roads;</li> <li>Coordination with emergency responders to ensure that appropriate first aid is provided in the event of accidents;</li> <li>Using locally sourced materials, whenever possible, to minimise transport distances;</li> <li>Employing safe traffic control measures.</li> </ul>	
<p><b>22. Transport of Hazardous Materials</b></p>	
<p>22.1. The procedures for transportation of hazardous materials (Hazmats) should include:</p> <ul style="list-style-type: none"> <li>Proper labelling of containers, including the identify and quantity of the contents, hazards, and shipper contact information;</li> <li>Ensuring that the volume, nature, integrity and protection of packaging and containers used for transport are appropriate for the type and quantity of hazardous material and modes of transport involved;</li> <li>Ensuring adequate transport vehicle specifications;</li> <li>Training employees involved in the transportation of hazardous materials regarding proper shipping procedures and emergency procedures;</li> <li>Providing the necessary means for emergency response on call 24 hours/day.</li> </ul>	<p><b>Compliance Anticipated</b></p>
<p>22.2. Guidance related to major transportation hazards should be implemented in addition to measures presented in the preceding section for preventing or minimising the consequences of catastrophic releases of hazardous materials, which may result in toxic, fire, explosion, or other hazards during transportation.</p> <p>Projects which transport hazardous materials at or above the threshold quantities should prepare a Hazardous Materials Transportation Plan.</p>	<p><b>Compliance Anticipated</b></p>
<p>22.3. Procedures and practices for the handling of hazardous materials and Emergency Preparedness and Response Plan should be developed for quick and efficient responses to accidents that may result in injury or environmental damage.</p>	<p><b>Compliance Anticipated</b></p>
<p><b>23. Disease Prevention</b></p>	
<p><u>Communicable Diseases</u></p>	
<p>23.1. Recommended interventions at the project level include:</p> <ul style="list-style-type: none"> <li>Providing surveillance and active screening and treatment of workers;</li> <li>Undertaking health awareness and education initiatives, for example, by implementing an information strategy to reinforce person-to-person counselling addressing systemic factors that can influence individual behaviour as well as promoting individual protection, and protecting others from infection, by encouraging condom use;</li> <li>Training health workers in disease treatment;</li> <li>Conducting immunisation programs for workers in local communities to improve health and guard against infection;</li> <li>Providing treatment through standard case management in on-site or community health care facilities;</li> <li>Promoting collaboration with local authorities to enhance access of workers families and the community to public health services and promote immunisation.</li> </ul>	<p><b>Partial Compliance</b></p>
<p><u>Vector-Borne Diseases</u></p>	
<p>23.2. Client in close collaboration with community health authorities, can implement an integrated control strategy for mosquito and other arthropod-borne diseases that might involve:</p> <ul style="list-style-type: none"> <li>Prevention of larval and adult propagation through sanitary improvements and elimination of breeding habitats close to human settlements;</li> <li>Elimination of unusable impounded water;</li> <li>Increase in water velocity in natural and artificial channels;</li> <li>Considering the application of residual insecticide to dormitory walls;</li> <li>Promoting use of repellents, clothing, netting, and other barriers to prevent insect bites, and other measures.</li> </ul>	<p>Not Applicable</p>
<p><b>24. Emergency Preparedness and Response</b></p>	
<p><u>Communication Systems</u></p>	



24.1. Alarm bells, visual alarms, or other forms of communication should be used to reliably alert workers to an emergency.	<b>Compliance Anticipated</b>
24.2. Testing warning systems at least annually (fire alarms monthly), and more frequently if required by local regulations, equipment, or other considerations.	<b>Compliance Anticipated</b>
24.3. Installing a back-up system for communications on-site with off-site resources, in the event that normal communication methods may be inoperable during an emergency.	<b>Partial Compliance Anticipated</b>
24.4. If a local community may be at risk from a potential emergency arising at the facility, the company should implement communication measures to alert the community.	<b>Partial Compliance Anticipated</b>
24.5. Emergency information should be communicated to the media through: <ul style="list-style-type: none"> <li>· A trained, local spokesperson able to interact with relevant stakeholders, and offer guidance to the company for speaking to the media, government, and other agencies;</li> <li>· Written press releases with accurate information, appropriate level of detail for the emergency, and for which accuracy can be guaranteed.</li> </ul>	<b>Partial Compliance Anticipated</b>
<b>Emergency Resources</b>	
24.6. A mechanism should be provided for funding emergency activities.	<b>Demonstrates Compliance</b>
24.7. The company should consider the level of local fire fighting capacity and whether equipment is available for use at the facility in the event of a major emergency or natural disaster. If insufficient capacity is available, firefighting capacity should be acquired that may include pumps, water supplies, trucks, and training for personnel.	<b>Demonstrates Compliance</b>
24.8. The company should provide first aid attendants for the facility as well as medical equipment suitable for the personnel, type of operation, and the degree of treatment likely to be required prior to transportation to hospital.	<b>Demonstrates Compliance</b>
24.9. Appropriate measures for managing the availability of resources in case of an emergency should include: <ul style="list-style-type: none"> <li>· Maintaining a list of external equipment, personnel, facilities, funding, expert knowledge, and materials that may be required to respond to emergencies;</li> <li>· Providing personnel who can readily call up resources, as required;</li> <li>· Tracking and managing the costs associated with emergency resources;</li> <li>· Considering the quantity, response time, capability, limitations, and cost of these resources, for both site-specific emergencies, and community or regional emergencies;</li> <li>· Considering if external resources are unable to provide sufficient capacity during a regional emergency and whether additional resources may need to be maintained on-site.</li> </ul>	<b>Demonstrates Compliance</b>
24.10. Where appropriate, mutual aid agreements should be maintained with other organisations to allow for sharing of personnel and specialised equipment.	<b>Demonstrates Compliance</b>
24.11. The company should develop a list of contact information for all internal and external resources and personnel. The list should be maintained annually.	<b>Demonstrates Compliance</b>
<b>25. Training and Updating</b>	
25.1. Training programs and practice exercises should be provided for testing systems to ensure an adequate level of emergency preparedness.	<b>Demonstrates Compliance</b>
25.2. Training should be conducted annually and perhaps more frequently, when the response includes specialised equipment, procedures, or hazards, or when otherwise mandated.	<b>Demonstrates Compliance</b>
25.3. Provide training exercises to allow personnel the opportunity to test emergency preparedness.	<b>Demonstrates Compliance</b>
<b>26. Business Continuity and Contingency</b>	
26.1. Measures to address business continuity and contingency should include the following: <ul style="list-style-type: none"> <li>· Identifying replacement supplies or facilities to allow business continuity following an emergency;</li> <li>· Using redundant or duplicate supply systems as part of facility operations to increase the likelihood of business continuity;</li> <li>· Maintaining back-ups of critical information in a secure location to expedite the return to normal operations following an emergency.</li> </ul>	<b>Demonstrates Compliance</b>