



# SUSTAINABILITY

FUTURE GROWTH

**Client: Bank of China**

## Independent Environmental and Social Consultant's Monitoring Report for the Shah Deniz II – Gas Field Expansion Project

July 2017



## Report Details

Report prepared for: Bank of China (Intercreditor Agent)  
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## 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
BTC	Baku-Tbilisi-Ceyhan
CHSS	Community, Health, Safety, and Security
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
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
FFD	Full Field Development
FID	Final Investment Decision
FLMP	Fishing Livelihoods Management Plan
GHG	Greenhouse Gas
GIIP	Good International Industry Practice
H&S	Health and Safety
HR	Human Resource
HSES	Health, Safety, Environmental and Social
HSE	Health, Safety and Environmental
HWTF	Hazardous Waste Treatment Facility
ICA	Intercreditor Agency
IFC	International Finance Corporation
JV	Joint Venture
KPI	Key Performance Indicator
LARP	Land Acquisition and Resettlement Procedures
IESC	Lenders Independent Environmental and Social Consultant
LOMS	Local Operating Management System
LOSD	Lukoil Overseas Shah Deniz
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
OHS	Occupational, Health and Safety
OMS	Operating Management System
PIC	Project Information Centre
PPE	Personal Protective Equipment
PSA	Production Sharing Agreement
PS	Performance Standard

PR	Performance Requirement
RAP	Resettlement Action Plan
SCP	Southern Caucasus Pipeline
SCPx	SCP Expansion
SD	Shah Deniz
SD2	Shah Deniz Stage 2
SDB	SD Bravo
SDB-PR	SDB Production and Risers
SDB-QU	SDB Quarters and Utilities
SEP	Stakeholder Engagement Plan
SGC	Southern Gas Corridor CJSC
SMP	Social Management Plan
SOCAR	State Oil Company of the Azerbaijan Republic
SOP	Standard Operating Procedure
SPS	Safeguard Policy Statement
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

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## Executive Summary

Sustainability Pty Ltd (Sustainability), was appointed as the Lenders' Independent Environmental and Social Consultant (IESC) by the Bank of China, acting as Intercreditor Agency (ICA) for the Lender group financing Lukoil Overseas Shah Deniz (LOSD). This report provides the findings and recommendations of the second environmental and social monitoring review and audit for Shah Deniz II Gas Expansion Project (SD2 or the Project) in Azerbaijan. The Project, which is currently nearing the end of construction and is approximately 89% complete, involves all the aspects of the upstream Stage 2 operations, including two new bridge-linked offshore platforms being constructed in shipyards in Azerbaijan; 26 gas producing wells which are currently being drilled by the Heyder Aliyev and Istiglal semi-submersible rigs; 500km of subsea pipelines to link the wells with the onshore terminal; upgrades to the offshore construction vessels; and expansion of the Sangachal Terminal (ST) to accommodate the new gas processing and compression facilities. The Project is on target for first gas from SD2 in 2018. Project activities continue at all offshore and onshore construction sites within Azerbaijan including the ST expansion, the offshore SD2 subsea and well developments, the Amec-Tekfen-Azfen (ATA) yard near Baku, and the Baku Deepwater Jackets Factory (BDJF).

The Final Investment Decision (FID) for SD2 was made on 17 December 2013 (Stage 1 development/production is ongoing), and early works were commenced in 2014. 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 (SCPx), through Turkey using the Trans Anatolian Pipeline (TANAP) and through Greece and Albania and into Italy using the Trans Adriatic Pipeline (TAP).

The scope of the monitoring 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 monitoring findings discussed within the context of the intent or objective of the Lender Group requirements and policies.

This report summarises the IESC's second monitoring field visit since the initial environmental and social due diligence (ESDD) phase. The monitoring field visit took place in Azerbaijan from 05-07 April 2017 and included a follow up teleconference with the SD2 operator on 19 April 2017. It presents the IESC's understanding and assessment of compliance of the Project against Lender standards and provides a snapshot of the Project at the time of the meetings, based on information provided by the Project Operator before, during and after the visit. These observations and findings are made with the acknowledgement that LOSD, as the Borrower, is not the operator of the SD Project and therefore has no direct influence over the Project's environmental and social performance.

The IESC review found that the SD2 Project is continuing to effectively manage its key environmental and social risks during development and there were no high or medium level non-conformances against the applicable lender standards. The Project's performance in worker safety and environmental protection continues to be of an industry leading standard considering the significant risks associated with the construction phase of the Project. A summary of the key findings is presented below.

## Environment and Social Management

The IESC notes that the Project has various management plans (MPs) in place for its existing SD operations, and that these plans include measurable targets and indicators and assign clear roles and responsibilities for time-bound implementation. The social impact management planning for the Project relies on both SD2 construction/contractor management planning and BP's Regional Community and External Affairs team which implements on-going consultation with affected communities near the ST. The BP Regional consultation processes with potentially affected communities include scheduled and planned community meetings and informal communications through a network of community liaison officers located within these communities.

The IESC again notes that the environmental and social management plans documented for the SD2 construction phase have not been publicly disclosed during the SD2 ESIA process and are not currently available to the public which indicates a deficiency in conformance to Lender Group requirements. It is recommended that the SD2 Operator publicly disclose documented environmental and social management plans where these plans contain the details and commitments to manage or mitigate potentially significant environmental and social impacts of the Project. Further, verification on effectiveness of engagement and grievance management with key stakeholders such as community members and representatives, commercial fishers, and local government representatives is sought by the IESC for the next site visit.

The IESC took a special interest in human rights and transparency for the 2017 site visit, given the recent withdrawal of Azerbaijan from the Extractive Industries Transparency Initiative (EITI) after the EITI board suspended its membership on the 10th of March 2017. Suspension was based on Azerbaijan's lack of progress on implementation of recommended reforms in relation to human rights and civil society, specifically, the lack of an enabling environment for civil society, which is a violation of the initiative's requirements on multi-stakeholder engagement and of its Civil Society Protocol.<sup>1</sup> Subsequent to its withdrawal from the EITI, Azerbaijan established its own independent Extractive Industries Transparency Commission (EITC) on the 05th April 2017.<sup>2</sup> BP is a founding member of the EITI and has played an active role in the local Azerbaijani EITI process.<sup>3</sup> The IESC understands that BP will participate in the new EITC and continue its commitment to transparent reporting in Azerbaijan. There remains some concern about the potential lack of independent, global oversight of the newly established EITC process, and the ability for the EITC to choose its own reporting criteria which may exclude those areas for which Azerbaijan was suspended from the EITI. The IESC will follow this up at the next site visit, specifically looking at the BP's role in transparency reporting through the EITC process, and measures in place to ensure effective engagement with civil society stakeholders.

## Environment

Oil Spills and Spill Prevention: A key construction phase risk is the potential for spills to the environment resulting in soil and water contamination and discharge to the marine environment. There were 2 reportable spills during the monitoring period, between April 2016 and March 2017. All spills were investigated by the Project team and corrective and preventative actions identified and implemented. BP reported that in total across AGT, 49 oil spill response and equipment

<sup>1</sup> EITI Announcement, 2017. "Azerbaijan Withdraws from the EITI". <https://eiti.org/news/azerbaijan-withdraws-from-eiti>

<sup>2</sup> Correspondence with BP, and [http://www.oilfund.az/en\\_US/news/1261/100/Extractive-Industries-Transparency-Commission-held-first-meeting.asp](http://www.oilfund.az/en_US/news/1261/100/Extractive-Industries-Transparency-Commission-held-first-meeting.asp)

<sup>3</sup> BP Global Sustainability Report. 2016. <http://www.bp.com/content/dam/bp/en/corporate/pdf/sustainability-report/group-reports/bp-sustainability-report-2016.pdf>

deployment drills were conducted in 2016.<sup>4</sup> The IESC reviewed several onshore and offshore oil spill response exercise reports provided as evidence, and notes a comprehensive process in place, including clear delineation of roles and responsibilities, procedures, communication, training, and incorporation of lessons learned.<sup>5</sup>

**Waste Management:** The ATA topsides fabrication yard expansion included installation of a sewage treatment plant with a capacity of treating 300m<sup>3</sup> per day. Monitoring data indicates compliance with discharge water quality criteria. The SD2 temporary onshore construction workforce sewage treatment plant at ST was fully operational and permitted at the time of the site visit (it was not operational at the last monitoring visit).<sup>6</sup>

Wastes at the offshore fabrication yards ATA and BDJF are segregated on site prior to transport to a centralised waste accumulation centre. At the centre, a BP managed waste contractor transfers wastes to various waste treatment, recycling and disposal facilities. Approximately 500 tonnes of waste per month is generated at the ATA Yard, including hazardous wastes.

**Noise and Vibration:** Noise monitoring has been undertaken at the four communities near the ST, and shows regular noise levels above the daytime criteria of 65dB (LAeq). Elevated noise levels have been attributed to a range of contributing sources and have been reported back to the communities by the construction contractor. There have been no instances where the action triggers established in construction environmental management plans has been reached. BP advised the IESC that construction noise from SD2 activities has generally not been audible at monitoring locations during the surveys and that no noise complaints have been received through the formal grievance process since construction works commenced on SD2.<sup>7</sup>

**Biodiversity:** The SD2 Project construction at ST includes the pipelines from the beach crossing to the terminal which pass a coastal zone which includes wetlands (or wadi) located to the east of the SD2 expansion area. The works in this area are nearing completion and no further land disturbance is expected. There have been no reported incidents of impacts to wildlife or conservation values for the terrestrial or marine environments due to the construction operations at SD2 for the 2016-17 period. Pre-existing soil and water contamination was identified and reported in the initial ESIA baseline studies prior to civil works commencing for SD2, which identified possible sources of contamination from nearby pipelines and neighbouring land use. There was evidence of pre-existing free phase oil on water located in wetlands near to the neighbouring power station. The SD2 project maintains a monitoring programme to identify the cause of contamination at the wetlands area and monitor the ecological use of these wetlands by birds and other fauna. The results of ecological monitoring are reported annually to the Ministry for Environment.

## Health and Safety

In general, the IESC observed a strong Project health and safety culture. H&S management remains a priority at all sites, with very few incidents reported considering the number of man-hours worked, compared to industry benchmarks. The project has achieved a commendable rolling 12-month Recordable Injury Frequency Rate (RIF) of 0.05, and a total RIF of 0.05 since the commencement of construction. Key statistics show that there have been no fatalities on the

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<sup>4</sup> Full Lukoil Slidepack\_April 2017.

<sup>5</sup> Tekfen-Azfen Alliance Spill Emergency Exercise, Sangachal Terminal. July 2016; Saipem Offshore Construction Vessels Emergency Drill Report. May 2016; Briggs, Oil Spill Response Training and Exercise Summary Report. March 2016; Briggs, Oil Spill Response Training and Exercise Summary Report. August 2016.

<sup>6</sup> IESC Visit to Sangachal Terminal 06042017.

<sup>7</sup> Full Lukoil Slidepack\_April 2017.

Project to date; 2 high potential incidents, 3 injuries requiring a day away from work, and 14 reportable incidents (April 2016 – March 2017). The IESC notes the effective health and safety management structures and framework established between the Project Operator and key contractors who have all had past experience in working with BP in the Caspian region since the Azerbaijan-Georgia-Turkey (AGT) Project construction.<sup>8</sup>

## Social

**Labour:** No substantial deficiencies were identified as a part of this review against labour and working conditions criteria. The SD2 construction project has maintained an excellent safety record for the period from commencement of construction to the site visit in April 2017. The Project had amassed over 144. million man-hours, including both BP direct hire and contractors (Marine and Subsea, Offshore, Onshore, and SCPx), and has achieved a very low accident frequency rate when compared to relevant industry benchmarks.

At the time of the site visit there were a total of 16,187 contracted workers (at last monitoring visit the number was 18,976). Project de-manning is occurring at Project sites in response to completed work packages. The changes to Project labour requirements have been implemented through a de-manning strategy aimed at minimising the impacts of reduced employment as the Project moves towards completion. Labour Management Forums are in place to discuss and resolve key HR/IR issues relevant to contracts and BP personnel working on the SD2 construction, including grievances, and meeting records of which indicate no significant labour relations issues. The IESC commends the effectiveness of the Labour Management Forums in place to manage de-manning, including top-level management participation.<sup>9</sup> As noted in the previous monitoring report, there remains a potential for an increase in grievances as the de-manning process escalates and there are fewer future employment opportunities for particular skillsets. This will be followed up during the next site visit.

The IESC had the opportunity to visit the accommodation platform topside in April 2017, which is nearly complete and commissioning for which is currently underway, with the sail away planned to occur in the second / third quarters of 2017. The IESC notes that the facilities are appropriate, and exceed the requirements of good international industry practice (GIIP).<sup>10</sup>

**Community Health, Safety and Security:** The Operator has described the 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 SD2 Environmental and Social Management and Monitoring Plan, demonstrating an established system is in place for addressing emergencies.<sup>11</sup> As with other management plans, the specific documented plans have not been publicly disclosed, which is inconsistent with the requirements of the Lender Group policies. However, records of community engagement reviewed by the IESC included communications, via public meetings, provided to potentially impacted communities on the measures proposed in response to emergencies and specific mitigations taken to ensure community safety during construction and operations.<sup>12</sup>

The impact of population influx to local communities was scoped out at the ESIA Phase due to past Project experience and proven labour management practices. However, with a reduced construction workforce labour demand and fewer forward employment opportunities available in

<sup>8</sup> Full Lukoil Slidepack\_April 2017.

<sup>9</sup> *Ibid.*

<sup>10</sup> IESC Visit to ATA Yard 06042017.

<sup>11</sup> SD2 Environmental and Social Management and Monitoring Plan.

<sup>12</sup> IESC Interview with BP at Baku Headquarters, 05042017.

the current Azeri market, the mechanism for tracking potential impacts of the de-mobilised workforce on communities remains unclear. Furthermore, to enable independent verification of the available project data the IESC recommends that the next site visit include engagement with key external stakeholders regarding the potential for social impacts as a result of demobilised workforce.

Resettlement and Livelihood Restoration: The ESIA process identified that local commercial fishing in the Sangachal area would be subject to economic displacement during the period of enforcement of a marine exclusion zone around the gas export pipeline shore crossing. The Marine Exclusion Zone was a temporary measure during which all vessels would be excluded from entering a formally enforced zone. The Project had developed a Fishing Livelihoods Management Plan (FLMP) in 2015 as a framework for identification of impacted fishermen, determination of compensation; established a mechanism for engagement and a grievance process.

Since July 2015, an independent consultant (AECOM) has completed quarterly monitoring of the 48 eligible fishermen and the 3<sup>rd</sup> Household Monitoring Survey report was issued to BP in November 2016. The FLMP has been revised and updated based on ongoing monitoring of the compensated fishermen as reported in the Household Survey Reports.<sup>13</sup>

Household surveys identified claims that the new fishing areas used by affected fishermen were less viable than the area compensated for and that the time taken for one specific fisherman to travel to the new fishing areas had taken longer than expected and therefore costs had increased. This fisherman laid off 6 employees due to increased travel costs and declining catch. The affected fisherman requested an additional compensation payment for the increased travel costs above what was expected. This request was logged as a formal grievance. Further, the household survey found that the six fishermen who previously worked for the fishing captain were now unemployed. At the last site visit (May 2016), BP reported that they had provided the details of the unemployed fishermen to the Sangachal construction contractor (TKAZ) for consideration of eligibility for employment through vulnerable groups employment programmes. At the April 2017 site visit, BP reported that after consultation with the crew leaders, and exploration of financial and non-financial restoration measures, an additional livelihood payment was made in September 2016.

The latest livelihood monitoring (November 2016) indicates mixed, but generally improving over time, perceptions among participants on the level of success and satisfaction from the FLMP process to date (92% of fishermen considered BP communication and FLMP implementation effective). The majority (43 fisherman) reported either an improvement or no change in household living standards, and 5 fishermen reported a deterioration in household living standards since December 2014, due to declining fishing incomes, but all consider their crews' assets to have increased since December 2014. BP are currently reviewing why 5 fishermen have reported a deterioration. All the people who were subject to the FLMP continue to commercially fish in Sangachal Bay, and notably, the 6 fishermen who were unemployed (as discussed above) reported that they had resumed fishing.<sup>14</sup>

BP expects that a completion audit will be conducted to inform a close out report for the FLMP in the 3<sup>rd</sup> quarter of 2017. The IESC notes that there remain residual issues and grievances in relation to the FLMP, including ongoing investigations by BP (see above), and that the appropriate

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<sup>13</sup> Full Lukoil Slidepack\_April 2017.

<sup>14</sup> *Ibid.*

timing of the completion audit should be informed by the outcomes of any ongoing investigations / issues.<sup>15</sup>

Cultural Heritage: The SD2 construction at ST includes provision of ongoing monitoring of potential impacts to Cultural Heritage and a watching brief for works being undertaken outside of past detailed heritage surveys in line with the Project's cultural heritage plan commitments. Local experts have been undertaking the monitoring in consultation with the Ministry for Culture and Tourism as cultural heritage observers, and initial surveys were completed and submitted for approval to the Ministry of Environment. A range of isolated artefacts have been identified during the watching brief of construction at ST but no finds have been deemed to be of significant heritage value (13 finds have been recorded since the last monitoring visit in May 2016). The watching brief is expected to continue through to the end of Q2 2017 when site disturbance of greenfield areas will be complete and a close out report is proposed in Q3. The IESC will monitor the close-out of the Watching Brief during the next site visit.<sup>16</sup>

Vibration monitoring at the Sand Cave heritage site has been undertaken by the SD2 Project to protect the site from potential damage from Project related activities near the shore crossing and pipeline beach pull site. The action trigger was not reached during monitoring and no damage to the Sand Cave site was observed throughout the works.<sup>17</sup>

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<sup>15</sup>Full Lukoil Slidepack\_April 2017.

<sup>16</sup> *Ibid.*

<sup>17</sup> *Ibid.*

## 1. PROJECT SUMMARY

<b>PROJECT NAME</b>	Shah Deniz Stage 2 (SD2)
<b>PROJECT LOCATION</b>	Sangachal, Azerbaijan
<b>NATURE OF PROJECT</b>	Lukoil Overseas Shah Deniz (LOSD) investment into BP SD2 Project. The Project comprises upstream gas Stage 2 operations, including: <ul style="list-style-type: none"> <li>• Two new bridge-linked offshore platforms;</li> <li>• 26 gas producing wells;</li> <li>• 500km of subsea pipelines;</li> <li>• Upgrades to the offshore construction facilities;</li> <li>• Expansion of the Sangachal Terminal (ST).</li> </ul>
<b>PROJECT CAPACITY</b>	16 billion cubic meters per year (bcma) of gas production
<b>PROJECT KEY DATES</b>	Construction: 2014 - 2018 Target First Gas: 2018
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## 2. INTRODUCTION

### 2.1 Background

Sustainability Pty Ltd (Sustainability) was appointed as the Lenders' Independent Environmental and Social Consultant (IESC) by the Bank of China, acting as Inter-Creditor Agent (ICA) for the Lender group financing Lukoil Shah Deniz (LOSD).

The Shah Deniz (SD) gas field lies approximately 100km south east of Baku, within the Azerbaijani sector of the Caspian Sea. Development of the oil field is being pursued in stages under the terms of a Product Sharing Agreement (PSA) between the state Oil Company of the Azerbaijan Republic (SOCAR) and a consortium of foreign oil companies, including LOSD. LOSD is a 10% shareholder of BP Shah Deniz.

The SD Stage 1 (SD1) development commenced in 2006, while this environmental and social monitoring relates to the second stage of development of the Shah Deniz field, SD2. Lender involvement and financing of the SD2 development requires both pre-finance due diligence and post-finance project construction and operation assurance related to the various environmental, health, safety, and social performance standards relevant to the Project. After the Environmental and Social (E&S) due diligence completed in July 2015, Lenders require external and independent health, safety, environment, and community (HSEC) compliance monitoring of Project activities during construction and operations. The Lender group includes the European Bank for Reconstruction and Development (EBRD), the Asian Development Bank (ADB) and the Black Sea Trade and Development Bank.

This report details the IESC's second monitoring field visit which took place in Azerbaijan from 05-07 April 2017. It presents the IESC's understanding and assessment of the Project's compliance against Lender standards and provides the status of the Project's environmental and social performance at the time of the meetings, based on information provided by the Project Operator before, during, and after the visit.

### 2.2 Project Description

The SD2 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 located approximately 100km south east of Baku. Full Field Development (FFD) of the Shah Deniz Contract Area is being pursued in stages.

The SD1 development is 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 the Sangachal Terminal (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 Baku-Tbilisi-Ceyhan (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 South Caucasus Pipeline (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 Shah Deniz Bravo (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) were completed at the ST in 2015, prior to installation of the SD2 onshore facilities, and included:

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

Associated Facilities include the Amec-Tekfen-Azfen (ATA) Yard, and the Baku Deepwater Jackets Facility (BDJF) where topsides and jackets are being constructed respectively; the Serenja Hazardous Waste Treatment Facility (HWTF); and gas export pipeline projects: South Caucasus Pipeline Expansion (SCPx); the Trans Anatolian Pipeline (TANAP) and the Trans Adriatic Pipeline (TAP).

### **2.3 Construction Status**

The SD2 Project construction was over 89% complete in terms of engineering, procurement, and construction at the time of the site assessment undertaken from 05-07th April 2017. The Project remains on target for offshore first gas from Shah Deniz Stage 2 in September 2018.

Project activity includes construction at all offshore and onshore sites and fabrication yards of the country including the ST, ATA yard near Baku, BDJF and along the pipeline route comprising the Southern Gas Corridor (SGC).

In September 2016, a significant milestone was achieved in the Project with the sail away of the jacket for one of the SD2 platforms from the BDJF yard for offshore installation. The transportation, launch, and positioning activities of the PR platform jacket structure were completed by the end of the third quarter 2016, while pile installation was completed in November 2016.

At the ATA yard, construction of both SD2 platform topsides is nearly complete and commissioning is underway. It is anticipated that the sail away date of these decks for offshore installation will occur in the second and third quarters of 2017.

Drilling in the SD2 well field is ahead of schedule with the Heyder-Aliyev semi-submersible rig having drilled 10 of the 26 proposed production wells and the Istiglal semi-submersible rig undertaken well completion and flow testing. There have been 3 production wells completed to date.

During 2016, at the peak of Project activities over 24,000 people were involved in construction works across all main contracts in Azerbaijan and over 80% of them were Azerbaijani nationals.

## **2.4 Applicable Project Standards**

As documented in the SD2 ESIA, the applicable project standards are based on:

- Standards agreed with the Azerbaijan Ministry of Ecology and Natural Resources and implemented at existing BP operational sites;
- BP corporate governance; and
- Applicable international and national standards.

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 mitigation measures. The basis for evaluating the Project in terms of Lender policies is defined as follows:

- Equator Principles III (2013);
- EBRD Performance Requirements, 2014;
- EBRD Environmental and Social Policy, 2014;
- Relevant EU Directives:
  - EU EIA Directive - 85/337/EEC Council Directive on the assessment of the effects of certain public and private projects on the environment (EIA Directive). The EIA Directive of 1985 has been amended three times, in 1997, in 2003 and in 2009 and is now codified by Directive 2011/92/EU of 13 December 2011.
  - 2009/147/EEC The Birds Directive; and
  - 92/43/EEC Council Directive on the conservation of natural habitats and of wild fauna and flora (the Habitats Directive).
- International Finance Corporation (IFC) Sustainability Framework (2012) including the Environmental and Social Performance Standards (PSs);
- IFC General Environmental Health and Safety (EHS) Guidelines;

- ADB Safeguards Policy Statement (SPS) and other social requirements (ADB Policy on Gender and Development (GAD), ADB's Policy on Incorporation of Social Dimensions into ADB Operations, and ADB's Public Communications Policy);
- The Project's Environmental and Social Management Plans (ESMPs); Environmental and Social Action Plan (ESAP) / Corrective Action Plan; Stakeholder Engagement Plans (SEPs) including internal and external grievance mechanisms; and health and safety provisions and records for the Project;
- Applicable national laws in Azerbaijan;
- Conformance with international environmental agreements and good international industry practice (GIIP); and
- Any other environmental or social regulation or standard as the Lender Group may indicate they expect to apply to the Project.

Project-specific standards include those required under the PSA between the Operator and the Government<sup>18</sup>. The detailed legal regime for the joint development and production sharing of the SD field is set out within the PSA signed by BP, its co-venturers, and 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".

## 2.5 Sources of Information

The IESC completed a site visit to assess compliance with the environmental and social audit criteria from 05-07 April 2017. The site visit included a focus on the status of construction activities for offshore facilities, being constructed at contracted shipyards located near Baku, and the SD2 onshore production facility at ST, also being constructed by a lead contractor, TKAZ. A follow up call was held to discuss the SD2 drilling campaign on 19 April 2017.

The review and audit was based on:

- Publicly available ESIA documentation;
- Information provided to the IESC site visits in 2014, 2015, 2016, and 2017;
- Information provided by BP in 2014, 2015, 2016, and 2017 in response to IESC information requests; and
- Interviews with key staff of the Operator and key contractors.

A full list of all documents used to prepare this Report is provided in Appendix A, while Appendix B provides a summary of the site visit.

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<sup>18</sup> Until such time that the SD specific Environmental Protection Standards (EPS) have been signed by all parties as required under Article 26.1 of the PSA, the standards set out in Part II of Appendix 9 to the PSA apply to production activities. The EPS was formally approved via signed Letters from SOCAR and the MENR in 2008. The protocol for their entrance into legal force has been signed by BP on behalf of the SD partners and SOCAR, but has yet to be signed by the MENR.

## 2.6 Report Organisation

Subsequent sections of this report are organised as follows:

- Section 4: Findings
- Section 5: Environmental and Social Management Capacity
- Section 6: Environment
- Section 7: Social
- Section 8: Cultural Heritage

## 2.7 Scope of this Review

The management of environmental aspects of the construction activities for SD2 were observed at the offshore facility fabrication yards, and at the onshore process facility site at ST. The social review focussed on fishing livelihoods, stakeholder engagement, human rights, and labour arrangements. The observations and interviews held during the site visit were aimed to determine if environmental and social aspects of construction are being managed in line with Lender standards, legislation, the ESIA commitments and good international industry practice. The IESC was not provided the opportunity to interview project-affected people living in communities near the Project sites or to visit offshore construction activities, The IESC has relied on the BP provided data, and information from the site visit and interviews with key personal to complete this review.

### 3. FINDINGS

#### 3.1 Description of Non-Conformances

This section tabulates a summary of the Action Items identified by the IESC, based on the outcomes of IESC site visits and reports. The table below includes newly open items, any follow-ups on issues identified in previous environmental and social monitoring. Any closed recommendations related to previously open issues are also included.

Items in the table are identified by number of the audit visit (X.Y), where Y is the related action item number. The text descriptor may be updated in subsequent visits to reflect current conditions however the item number will remain as this reflects the same broad issue and its evolution to closure. The relevant project standards and/or reference to the applicable Lender Environmental and Social Standards to which the issue refers are also included.

All issues are categorised as High, Medium, Low, or Observations, reflecting the level of non-conformance in terms of the magnitude and/or on time frame in which an impending risk might occur (short-term, medium-term, long-term). Descriptions of the categories are as follows:

- **High:** Level III critical non-conformance, typically including observed damage to or a reasonable expectation of impending damage or irreversible impact to an identified resource or community and/or a major breach to a commitment as defined in Project documents or the Applicable Lender Environmental and Social Standards. A level III non-conformance can also be based on repeated Level II non-conformances or intentional disregard of specific prohibitions or Project standards;
- **Medium:** Level II non-conformance representing a situation that has not yet resulted in clearly identified damage or irreversible impact to a sensitive or important resource or community, but requires expeditious corrective action and site-specific attention to prevent such effects. A Level II non-conformance can also represent a significant breach of a commitment, or a risk of a significant breach if not expeditiously addressed, requiring corrective action as defined in Project documents or applicable Lender Environmental and Social Standards. A Level II non-conformance can also be based on repeated Level I non-conformances;
- **Low:** Level I non-conformance not consistent with stated commitments as defined in Project documents, but not believed to represent an immediate threat or impact to an identified important resource or community. A Level I non-conformance can also represent a minor breach of a commitment requiring corrective action as defined in applicable Lender Environmental and Social Standards;
- **Observation:** A situation that could eventually become inconsistent with stated commitments as defined in Project documents and/or in the applicable Lender Environmental and Social Standards, and that could lead to non-conformance if not addressed.

#### 3.2 Summary Findings Table

The following table references both the non-conforming due diligence findings as well as new items identified in this monitoring visit.

Abbreviations on standards referenced in the table are as follows:

- IFC PS IFC Performance Standards
- IFC EHS IFC Environment, Health and Safety Guidelines
- EBRD PR EBRD Performance Requirements
- ADB SPS ADB Safeguards Policy Statement
- ESMP Specific Environmental and Social Management Plans

Visit / Issue #	Site Visit	Closing Date	Description	Non-conformance	Reference	Status	Comments / Report Reference
<b>Stakeholder Engagement and Grievance Management</b>							
1.1	Sep 15 May 16 Apr 17		Disclosure of the Project management plans	Low	IFC PS1 SEP  EBRD PR 10	Open	At the time of the due diligence, the FLMP remained the only ESMP publicly disclosed (on the ADB website only). The remaining ESMPs have not been publicly disclosed in line with Lender E&S Standards. In particular, the Stakeholder Engagement Plan (SEP) should be disclosed, to provide for communication of engagement with and participation of affected communities in the Project. This item remains outstanding as at the second monitoring visit (April 2017).
1.2	Sep 15 May 16 Apr 17		Consultation with affected communities, including communities in the areas of the associated facilities, and key stakeholder groups.	Observation	IFC PS1 SEP  EBRD PR10	Open	Summary evidence of the operator BP and contractor TKAZ stakeholder engagement at the construction phase does not provide sufficient details on responses to affected communities, summary feedback and adjustment to management plans as a result of consultations. Verification on effectiveness of engagement with key stakeholders such as community members and representatives, fisherfolk, and local government representatives is sought by the IESC for the next site visit. This item remains outstanding as at the second (April 2017) monitoring visit.
1.3	Sep 15 May 16 Apr 17		Procedure for external communications with external stakeholders	Observation	IFC PS1 SEP  EBRD PR10	Open	The procedure for external communications, including the methods for screening, tracking and the resulting response in the management system, has not been evidenced and could not be verified by the IESC with external stakeholders. This item remains outstanding as at the second monitoring visit (April 2017).
1.4	Sep 15 May 16 Apr 17		IESC unable to verify that the grievance mechanism is	Observation	IFC PS1 SEP EBRD PR10	Open	Project data has been provided on grievances however the IESC has been unable to verify this issue with any external stakeholders. This includes on

			operational and effective for affected communities				grievance mechanism operation and grievance summary feedback to affected communities This item remains outstanding as at the second monitoring visit (April 2017).
2.10	Apr 17		IESC verification required of independence of newly established EITC process, including reporting criteria, and ability of civil society to participate in the resource governance space (and by association, open and free engagement with the Operator).	<b>Observation</b>	IFC PS1 EBRD PR10	Open	Azerbaijan has recently withdrawn from the Extractive Industries Transparency Initiative (EITI) and established its own initiative, the Extractive Industries Transparency Commission (IETC). IESC is concerned about the potential lack of independent, global oversight of the newly established EITC process, and the ability for the EITC to choose its own reporting criteria which may exclude those areas for which Azerbaijan was suspended from the EITI.
<b>Community Health, Safety, and Security</b>							
1.7	Sep 15 Apr 17		No monitoring or management plan in place to determine or respond to potential impacts to communities in the Project area due to population influx. Verification sought with external stakeholders.	<b>Observation</b>	IFC PS4 IFC EHS 23	Open	Influx was scoped out at the ESIA Phase due to a closed camp, however with demobilisation ongoing of the construction workforce and fewer forward employment opportunities available in the current Azeri market, the mechanism for tracking potential impacts of the demanned workforce on communities (e.g. influx, antisocial behaviour) remains unclear. Verification with external stakeholders is additionally sought by the IESC. This item remains outstanding as at the second monitoring visit (April 2017).
<b>Resettlement and Livelihoods Improvement</b>							
1.8	Sep 15 May 16 Apr 17		Disclosure of the Fishing Livelihoods Management Plan (FLMP)	<b>Low</b>	ADB SPS IFC PS1 EBRD PR1	Open	The FLMP has been previously disclosed on the ADB website but not on the Operator's website, and is therefore non-compliant with Lender standards to provide for wider disclosure of a key Project document.

							This item remains outstanding as at the second monitoring visit (April 2017).
2.9	May 16 Apr 17		Completion audit for fishing livelihoods	<b>Observation</b>	IFC PS5 ADB SPS EBRD PR5	Open	<p>In the May 2016 site visit, IESC noted that the Operator intended to undertake a completion audit in late 2016 and observed that this would likely be too soon to be able to clearly demonstrate that livelihoods have been sustainably restored. IESC noted that the Operator should be informed by the results of the next resettlement monitoring report to determine readiness for a Completion Audit in 2017.</p> <p>At the April 2017 IESC visit, the Operator advised that additional livelihood restoration measures had been undertaken in September 2016. A 3<sup>rd</sup> Household Monitoring Survey was completed in November 2016 which surveyed all 48 fishermen (5 of whom reported a deterioration in living standards). Operator is currently (April 2017) conducting additional engagement with these fishermen to further understand the reasons. The Operator should, again be informed by the results of this engagement to determine readiness for the Completion Audit planned for the 3<sup>rd</sup> quarter of 2017.</p>

### 3.3 Summary of Incidents of Violations and Non-Compliance

Issue	Summary Detail
Recorded dates and responsible agencies	No regulator action reported
Nature of non-conformance	
Violation or non-conformance based on what environmental standards and regulations	
Results of investigations and reviews	
Corrective actions, deadlines, identification of responsible parties; Short term remedial action; Long term preventative measures	

### 3.4 Summary of Incidents of Environmental, Health Concerns and Safety Accidents

Issue	Environment Incident Summary	OHS Incident Summary <sup>19</sup>
<b>Incident recorded dates and responsible agencies</b>	2 reportable incidents (environment): <ul style="list-style-type: none"> <li>Spill occurred on the PLBH Vessel on 13/04/2016: due to a broken pipe, approximately 50l of diesel fuel spilled from a diesel generator onto the main deck. Spill was fully contained on deck and cleaned up.</li> <li>Spill occurred on BOSSHELF on 26/09/2016: during a lifting operation, a forklift punctured an intermediate bulk container with one of the forks, resulting in approximately 450-500l of chemical spilled at the laydown area. Spill was cleaned up immediately.</li> </ul>	2 high potential incidents, 3 lost time Incidents requiring a day away from work, 10 reportable incidents (safety), 2 reportable incidents (health).
<b>Scale of damage / injury (if any)</b>	None	None reported
<b>Authorities in charge of investigation / recording</b>	Ministry of Environment and Natural Resources (MENR)	Ministry of Labour and Social Protection of the Population (MLSP)
<b>Results of investigations and reviews</b>	None reported	None reported
<b>Corrective actions, deadlines, identification of responsible parties Short term remedial action Long term preventative measures</b>	Offshore Oil Spill Contingency Plan	OHS Management Plan
<b>Other environmental, health and safety initiatives which have been planned or implemented</b>	Offshore Oil Spill Contingency Plan shared with MENR and accepted by the Ministry of Emergency Situations in 2015.	Ongoing campaigns targeting various issues, including: "Hand and Finger Injury" campaign. "No Last Dash" campaign planned.

<sup>19</sup> As reported to IESC in meetings held on 05-07 April 2017 and Full Lukoil Slidepack\_April 2017 provided to IESC.

## 4. ENVIRONMENTAL AND SOCIAL MANAGEMENT CAPACITY

### 4.1 Environmental and Social Management System

The site assessment confirmed the implementation of the SD2 environment, health and safety management system in line with BP's corporate Health, Safety, Security and Environment (HSSE) commitment statement Project policies. The contractor HSSE Plans are developed in alignment with BP's Project and Program HSSE Plans which provide a rigorous framework for ensuring the protection of worker safety, compliance with HSSE requirements, social responsibility, and protection of the environment. The construction activities reviewed demonstrated a clear commitment to HSSE policies and achieving leading practice performance objectives for prevention of accidents, prevention of pollution, management of waste and engagement with nearby communities. Competent teams of health, safety, environment, and social professionals who are effectively resourced and trained implement the health, safety, environment, and social management systems in place at the SD2 constructions sites.

The BP oversight of contractors to ensure compliance with HSSE requirements is clearly evident through a structured program of HSSE audits, contractor self-verification and BP HSSE oversight. The oversight process includes BP HSE personnel actively engaging with contractors during construction activities to observe safety behaviours and develop HSE leadership. BP's HSSE management systems being implemented for the SD2 Project are mature systems that have been effective in management of BP's operational HSSE risks in the Caspian region. The Operator enforces BP's 8 Golden Rules for safety for all Project-related activities undertaken by BP personnel, contractors, and sub-contractors. The ST and offshore facility construction contractor HSSE plans are aligned with these systems and include robust processes for: contractor and sub-contractor management; legal compliance; crisis and emergency management; reporting of performance; HSE Organisation; and, assurance planning.

The risk management tools employed for the SD2 Project construction are proven processes that have been effective for existing operations at SD and throughout BP's operations in the Caspian Region. The risk management processes include clear methods for identification of health, safety and environmental risks and include consideration of health, public safety, and security risks to communities. Risk assessments are undertaken through the ESIA, ENVID, HAZOP and HAZID processes with input from workers. Risk registers are maintained that prioritise significant risks and identify risk management controls that apply the mitigation hierarchy; whereby risks are avoided where possible or mitigated to ensure risks are acceptable where avoidance is not possible.

The SD2 HSSE risk register is maintained through the Project Management Control System (PMCS), an electronic tool to facilitate the capture, assessment, monitoring, controlling and communication of project risk. The construction facilities utilise clearly defined permit to work systems for hazardous activities such that safety controls are managed, communicated, and reviewed for each activity. Permit to work process provide effective controls for working at heights, access to confined spaces, electrical work, hot work and for working within excavations. The SD2 Project has implemented Risk – Talk – Check (RTC) processes which are designed to facilitate worker involvement with the risk management and hazard perception to ensure HSSE risks are understood and are being effectively implemented.

The communication of HSSE related issues and reporting of performance was evident during the site visit whereby regular formal meetings are scheduled and minutes recorded. Communications with Project workers include the opportunity for worker input to HSSE programmes and clear

authority for workers to stop work if unsafe practices are observed. HSSE reporting is a continuous process with various formats used to track construction HSSE performance against Project targets and statutory requirements.

BP's HSSE requirements include the requirement for contractor HSSE management systems be aligned with ISO standards: ISO14001 and OHSAS18001. The ATA and BOS Shelf contractors are externally certified to ISO standards and BP holds ISO14001 certification for its regional operations in the Caspian.<sup>20</sup>

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. The 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.

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. The ESMMP has recently (15/03/2017) undergone a significant update to include aspects on commissioning and transition to Operations. The Social Management Plans (SMPs) include the Employee Relations MP, the Archaeology and Cultural Heritage MP, the Stakeholder Engagement Plan (SEP), and the Fishing Livelihoods Management Plan.

Further, regarding transition from construction to operations, the Operator is currently developing a range of measures to ensure that the environmental and social aspects and impacts are effectively managed during the process of transition from contractor managed construction activities, through to commissioning and ultimately to the implementation of operations. These transitional measures are being developed and implemented in a staged manner as construction packages are being completed and include:

- Development and update of procedures;

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<sup>20</sup> Full Lukoil Slidepack April 2017; SD2 Environmental and Social Management and Monitoring Plan; IESC Visit to ATA Yard 06042017; and IESC Visit to Sangachal Terminal 06042017.

- Close-out and/or handover of ESIA and permit commitments:
  - Design and execute phase commitments close-out report;
  - Operations phase commitments agreed and transferred to regional compliance system with associated training;
  - Environmental asset assurance and design verification report based on design requirements.
- Fisherman livelihood management plans;
- Grievance and external stakeholder reports;
- Cultural heritage reports;
- Baseline survey, sampling, and monitoring reports. Update of Regional Sensitivity maps, GIS data and environmental monitoring programme to include new facilities;
- SD2 Lessons Learned.

Based on interviews with the Operator (05-07 April 2017), it is evident that a robust process is in place to ensure a managed transition to operations of the environmental and social management system. Specifically, at the ST the operations team has been set up and are working with the commissioning team developing the procedures and manuals for operations.<sup>21</sup> The Offshore operations team has commenced the development of systems, training, and preparation for offshore operational readiness onboard the production modules that are yet to be floated off from the ATA yard.

#### **4.2 Management Programs**

The SD2 Project and delivery teams are required to use the ESMMP 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. As noted above, a key focus of the SD2 HSEC management is on ensuring effective transition to operations, and specifically the close-out and/or handover of ESIA and permit commitments to the operational ESMMP. The IESC observed the transition of environment and H&S management requirements where the offshore operational team were present and active on the offshore production facility alongside the remaining construction team at the almost complete production and quarters modules at the ATA yard. Similarly, a phased commissioning and hand-over of advanced packages was observed at ST where physical colour coded barriers and entry controls are used to define those work areas which are controlled through BP operational controls from those areas which remain under the direct control of the EPC Construction Contractors.

#### **4.3 Organisational Capacity and Competence**

It was observed during the site visit 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. The IESC notes the trend of decreasing contractor dedicated HSE personnel as construction packages are completed for

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<sup>21</sup> IESC Interview with BP at Baku Headquarters, 05042017.

hand-over to operations and as contractor personnel numbers decrease. SD2 Operator HSE personnel are now established to fulfil the organisational requirements for commissioning, hand-over and operations. The IESC reviewed organisational structures and key roles for the ST operator's team and confirmed that the HSE resource allocations are appropriate to implement the HSE programmes in place for construction and to further develop the commissioning and operational HSE programmes.

The SD2 Project continues to measure and review the effectiveness of its HSE management systems, including the capability and competence of personnel, through:

- BP Corporate HSE assurance audits, including compliance with operator requirements, commitments, and statutory obligations;
- BP Self verification and reporting against key HSE indicators and annual performance review or organisational HSE effectiveness and capability; and
- BP's HSE oversight of construction contractors through field observations; verification of HSE plan implementation and review of HSE improvement action outcomes and effectiveness.

Core HSE functions are supplemented by external contractors for waste management, via a centralised waste management service provider on construction sites and emergency response capability for fabrication and offshore activities where spills to the marine environment are a significant risk.

The SD2 onshore social impacts and community programmes are implemented between the contractor Community Liaison Officers and BP Regional community/social team personnel. The contractors are responsible for the day-to-day liaison and engagement with local communities relevant to construction activities and workforce, including management of community grievances relevant to construction environmental impacts, social issues, and employment. The BP Regional team provide oversight of the contractor social impact management processes and provide a broader social engagement function relevant to BP's activities in the Caspian, including all onshore and offshore activities, community development initiatives and implementation of strategic social programmes to fulfil socio-economic commitments and obligations of the SD2 Project.

#### **4.4 Emergency Preparedness and Response**

Emergencies are 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. 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.

Emergency response capability is maintained at all work areas including medical and first aid facilities, on site ambulances, incident management teams and rescue capability. The SD2

onshore project maintains a worker exclusion area where the construction project overlaps with the identified risk zone from the operating SD1 facilities.

The IESC observed the overlapping emergency response functions between the TKAZ construction contractors at the ST SD2 site with the operational BP emergency responsibilities for commissioning areas. A range of commissioning HSE plans have been established to ensure effective integration of emergency capabilities during the transitioning period at ST.

The IESC viewed several emergency response drill reports, all of which were sufficient in level of detail, scope and participation to demonstrate compliance (see also Section 7.2 on community health, safety, and security). It is noted that emergency drills conducted included notification and liaison with relevant public emergency authorities.<sup>22</sup>

The SD2 onshore 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. It is noted that in total across AGT, 49 Oil Spill Response and Equipment Deployment Drills were conducted by BP in 2016, and the total number of various oil spill response exercises scheduled for 2017 is 48.<sup>23</sup>

Emergency response capability was maintained at all work areas inspected in April 2017 by the IESC including medical and first aid facilities, on site ambulances, incident management teams and rescue capability. The SD2 onshore project maintains a worker exclusion area where the construction project overlaps with the identified risk zone from the operating SD1 facilities.

BP's emergency response capability includes global contracts with two well control providers with capability to deploy equipment, including cap and stack containment, and expertise to any of BP's operations throughout the world. It is noted that this equipment is located in the USA and there is no ready access to well control containment equipment for the Caspian drilling and operational activities.

#### **4.5 Stakeholder Engagement**

The Operator reports continued engagement with local communities near the onshore construction works at ST through meetings held by the construction contractor TKAZ, with BP attendance. Engagement activities include project/workforce updates, and Project Information Centres (PICs). Both BP and TKAZ employ community liaison offices in the local communities surrounding ST personnel. The community liaison offices provide a conduit for communications and engagement with local communities through provision of information and receiving grievances. TKAZ and BP have community engagement personnel within their teams at the SD2 onshore construction site at ST. BP-led meetings in these communities have been primarily aimed at fishing livelihoods management plan issues, although meetings have also been held regarding emergency response readiness, and in partnership with TKAZ regarding employment and de-manning initiatives and activities.<sup>24</sup>

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<sup>22</sup> Tekfen-Azfen Alliance Spill Emergency Exercise, Sangachal Terminal. July 2016; Saipem Offshore Construction Vessels Emergency Drill Report. May 2016; Briggs, Oil Spill Response Training and Exercise Summary Report. March 2016; Briggs, Oil Spill Response Training and Exercise Summary Report. August 2016.

<sup>23</sup> Full Lukoil Slidepack, April 2017.

<sup>24</sup> IESC Interview with BP at Baku Headquarters, 05042017.

At the request of the IESC for copies of stakeholder engagement logs, and meeting minutes, the Operator provided a summary of two meetings held in nearby communities. Meetings included information updates on ongoing activities, and updates on monitoring results including ambient air quality, surface & ground water quality, soil & vegetation, faunal survey - mammals, reptiles, amphibians, bird survey and ambient noise monitoring. Furthermore, community members appear comfortable raising concerns at the meetings, many of which are addressed immediately, while others are logged for follow-up with the individuals concerned. Most concerns in the meeting summaries provided were about unemployment of community members especially with construction ending in 2017. As a result, the current focus of community meetings is discussing the demobilisation process in place.<sup>25</sup>

The IESC notes that the summary of two meetings provided as evidence on stakeholder engagement in the project impacted communities for the period April 2016 – March 2017 (i.e. 12 months) is insufficient to ascertain whether engagement conducted in this period was adequate regarding frequency and number of engagement activities, type of engagement, stakeholders engaged (including vulnerable people), outcomes of engagement, etc. Evidence in the form of current stakeholder engagement action plans, engagement logs, and meeting minutes is strongly requested to be provided to the IESC at the next monitoring event, to allow a full assessment to be made. The IESC would also like to verify stakeholder engagement outcomes with affected community members in line with good international industry practice at the following site visit in 2018.

#### 4.5.1 Human Rights and Transparency

BP is currently in the process of aligning its business with the UN Guiding Principles on Business and Human Rights, using a risk-based approach. A human rights policy is in place, which sets out BP's commitments in relation to human rights, by implementing the relevant sections of the Guiding Principles and incorporating them into the processes and policies that govern its business activities. As discussed and reported to the IESC at the site visit, human rights principles are integrated into BP's existing practices, specifically in their code of conduct and values, as well as in operational requirements in the areas of recruitment, workforce welfare, and land acquisition and livelihoods, among others.<sup>26</sup>

A focus area of the IESC was in relation to human rights and transparency given the recent withdrawal of Azerbaijan from the Extractive Industries Transparency Initiative (EITI) after the EITI board suspended its membership on the 10<sup>th</sup> of March 2017. Suspension was based on Azerbaijan's lack of progress on implementation of recommended reforms in relation to human rights and civil society, specifically, the lack of an enabling environment for civil society, which is a violation of the initiative's requirements on multi-stakeholder engagement and of its Civil Society Protocol<sup>27</sup>. Subsequent to its withdrawal from the EITI, Azerbaijan established its own independent Extractive Industries Transparency Commission (EITC) on the 05<sup>th</sup> April 2017. The commission is headed by the executive director of SOFAZ (Azerbaijan's state oil fund) and includes deputy ministers from energy, tax, finance, economy, ecology, and natural resources ministries, as well as deputy head of the state statistical committee. The implementation of the secretary function of the commission is assumed by SOFAZ. The commission is to ensure transparency in extractive industries by setting up the process for reporting about state revenues

<sup>25</sup> SD2\_Lukoil Additional Documents Requested.

<sup>26</sup> BP Global Sustainability Report. 2016. <http://www.bp.com/content/dam/bp/en/corporate/pdf/sustainability-report/group-reports/bp-sustainability-report-2016.pdf>

<sup>27</sup> EITI Announcement, 2017. "Azerbaijan Withdraws from the EITI". <https://eiti.org/news/azerbaijan-withdraws-from-eiti>

from production of natural resources, similar to the EITI. The process intends to comply with relevant international requirements and obligations, and is planned to include involvement of relevant state institutions as well as the foreign companies working in Azerbaijan's extractive industries. The cabinet of ministries has been tasked to approve the terms of the reference of the new commission within a period of two months (by 05<sup>th</sup> June 2017).<sup>28</sup>

BP is a founding member of the EITI and has played an active role in the local Azerbaijani EITI process as a member of the multi-stakeholder steering group, and as a coordinator of the group of participating companies. The IESC understands that BP will participate in the new EITC and continue its commitment to transparency reporting in Azerbaijan. There remains concern, however, about the potential lack of independent global oversight of the newly established EITC process, and the ability for the EITC to select its own reporting criteria which may exclude those areas for which Azerbaijan was suspended from the EITI. The IESC is further concerned that the ability of civil society to freely participate in the resource governance space in Azerbaijan will continue to be impeded under the EITC and may also impact BPs ability to conduct effective engagement with these stakeholders. The IESC will follow this up at the next site visit, specifically looking at the BP's role in transparency reporting through the EITC process, and measures in place to ensure effective engagement with civil society stakeholders.

#### 4.6 Grievance Mechanism

The Operator reports that most of the grievances/requests received through engagement meetings and the PICs are regarding employment opportunities and demobilisation concerns. The contractor registers all grievances / requests and where possible closes them out immediately where possible by informing individuals of the recruitment/demobilisation process, or responds in a timely manner. Several grievances are reported to have been raised regarding dust and these have been addressed. Grievance data was provided by the Operator for March 2017 as follows<sup>29</sup>:

Table 1 Grievances (March 2017)

Community	Number of Complaints / Requests Logged	Description of Complaints	Status
Umid	18	Employment	Responded
Sahil	10	Employment	Responded
Sangachal	0	N/A	N/A

It has not been possible for IESC to verify any of the grievance management process with external stakeholders to confirm accessibility and understanding of the mechanism, including feedback from the mechanism owners in closing any grievances raised as well as reporting back to the community on the type and numbers of grievances, in line with good international industry practices. IESC hopes to be able to meet with external stakeholders at subsequent monitoring visits to verify satisfaction levels and obtain comments from grievance mechanism users, including reporting back to communities on grievance summary data and Operator responses.

<sup>28</sup> SOCAR EITC Statement. April 2016. [http://www.oilfund.az/en\\_US/news/1261/100/Extractive-Industries-Transparency-Commission-held-first-meeting.asp](http://www.oilfund.az/en_US/news/1261/100/Extractive-Industries-Transparency-Commission-held-first-meeting.asp)

<sup>29</sup> IESC Interview with BP at Baku Headquarters, 05042017.

## 5. ENVIRONMENT

### 5.1 Pollution Prevention and Resource Efficiency

#### 5.1.1 Oil Spills and Protection

Environment spills during construction are identified as a key risk due to the potential for discharge to the marine environment and soil contamination. The SD2 Project reports all spills outside of containment that exceed 1L in volume, with the data being reported in BP's project performance reporting, including to government authorities, and in the BP public Sustainability Reports. There were 2 reportable spills between April 2016 and March 2017 (i.e. the monitoring period). All spills were investigated by the Project team and corrective and preventative actions identified and implemented. The first spill was due to a broken pipe, whereby approximately 50l of diesel fuel spilled from a generator onto the main deck. The spill was fully contained on deck and cleaned up. The second spill occurred during a lifting operation, whereby a forklift punctured an intermediate bulk container with one of the forks. As a result, approximately 450-500l of chemical spilled at the laydown area. The spill was cleaned up immediately. At this site visit, the IESC focused on oil spill response activities. BP reported that in total across AGT, 49 oil spill response and equipment deployment drills were conducted in 2016.

The development drilling campaign being completed by the Istiglal and Heydar Aliyev MODUs have had no significant well control or spill incidents during the campaign to date. The current drilling includes activities in the high-pressure zones within the well field, completion drilling and flow testing. A level 3 (lowest significance level) well control incident occurred on the Istiglal in August 2016 which resulted in an estimated 0.3 barrels of drill fluids being released. A total of 4 level 3 (lowest level) process safety incidents occurred during drilling in 2017 year to date. These events included minor loss of containment of hydraulic fluids, release of water based mud and brine contamination events. The safety performance during drilling has continued to be to a very high standard with only two first aid events being recorded during the 2016-2017 period.

The SD2 drilling program has implemented the Operator's well integrity standards including Blow Out Prevention (BOP) valve testing during drilling and BOP inspection at surface on a regular frequency. The BOP inspection program includes certified inspection by an external third party. The IESC notes the extensive mandatory well control training provided to BP Operational and contractors involved in SD2 drilling.

The total number of various oil spill response exercises scheduled for 2017 is 48. The IESC reviewed several onshore and offshore oil spill response exercise reports provided as evidence, and notes a comprehensive process in place including clear delineation of roles and responsibilities, procedures, communication, training, and incorporation of lessons learned. Adequate resources are available for oil spill response, evidenced in the drill reports sighted. It is also noted that in 2015, the Operator worked with the Ministry of Emergency Situations on BP oil spill desktop and field drills as well as BP participation in a major emergency response exercise organized by the Ministry.<sup>30</sup>

#### 5.1.2 Waste Management

A sewage treatment plant was installed as part of the expansion of the ATA yard for the SD2 construction work. The plant consists of 7 bioreactors with a total capacity to treat 300m<sup>3</sup> per day.

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<sup>30</sup> Full Lukoil Slidepack\_April 2017; Tekfen-Azfen Alliance Spill Emergency Exercise, Sangachal Terminal. July 2016; Saipem Offshore Construction Vessels Emergency Drill Report. May 2016; Briggs, Oil Spill Response Training and Exercise Summary Report. March 2016; Briggs, Oil Spill Response Training and Exercise Summary Report. August 2016.

Treated wastewater is monitored monthly and discharged to the sea, as per regulatory requirements, via an outfall or reused for dust suppression on site. The monitoring data to date indicates compliance with the discharge water quality criteria for the wastewater treatment plant.

The SD2 temporary onshore construction workforce sewage treatment plant at ST was fully operational and permitted at the time of the site visit. At the last site visit, it was not operational as the contractor, TKAZ, was seeking final approvals from various regulators. The delay in approvals meant that there was additional pressure on local roads through the regular transport of this wastewater.<sup>31</sup>

Wastes at the ATA and BDJF are segregated on site and taken to a centralised waste accumulation centre where a BP managed waste contractor transfers wastes to various waste treatment, recycling and disposal facilities. The waste contractor inspects wastes to ensure segregation is taking place at the construction yards and will return loads that are not appropriately segregated. A total of 500 tonnes per month of waste is generated at the ATA facility and includes biomedical wastes, chemical containers, and other hazardous wastes. Hazardous waste includes isocyanate wastes from the flow line pipe-coating process.

### 5.1.3 Air

The ATA facility manages dust emissions through regular watering of unsealed areas using treated water from the site sewage treatment plant. No regular dust and noise monitoring is undertaken surrounding the facility due to the lack of sensitive land use surrounding the ATA yard and the proximity of the Baku-Salyan Highway. IESC observed that the construction of the drainage system at ST is now complete, although there is still tarmacking of roads / laydown areas occurring on site.<sup>32</sup>

### 5.1.4 Noise and Vibration

Baseline noise at all four nearby communities, Azim Kend, Sangachal, Umid and Massiv 3, was completed and reported in the ESIA. Monitoring during construction and the baseline surveys show regular noise levels at nearby communities above the daytime criteria of 65 dB (LAeq). The cause of exceeding noise levels has been attributed to a range of contributing sources including highway traffic, power stations, existing ST operational noise and trains. The Sangachal village noise monitoring presented the highest noise levels recorded over the construction period, as this site is located closest to the Baku-Salyan Highway and the Sangachal Power Station. During SD2 construction 19 noise survey rounds have been completed and data is presented for the monitoring at nearby communities during community meetings. Several individual noise levels above the daytime criteria of 65dB were recorded. These were attributed to sources such as car horns and vehicles on the highway and passing trains. There have been no instances where the action trigger has been reached due to SD2 activities.

BP advises that construction noise from SD2 activities has generally not been audible at monitoring locations during the surveys. Noise from SD2 vehicle reversing alarms, intermittent hammering, on site engine/compressor noise and from vehicles undertaking pipeline installation activities was recorded, but noise levels from these sources were not recorded above the daytime criteria. With regard to night time noise monitoring, noise levels recorded were typically above the upper trigger level of 45 db, attributable to noise sources from the Gas Station at Massiv 3, ST and from Salyan highway. There have been no instances where the action trigger has been

<sup>31</sup> IESC Visit to Sangachal Terminal 06042017.

<sup>32</sup> IESC Visit to Sangachal Terminal 06042017.

reached due to SD2 activities. BP advised that there have been no noise complaints received from communities through the formal grievance process since construction works commenced on SD2.<sup>33</sup>

### **5.1.5 Water**

Produced Formation Water (PFW) from the SD2 operations has been subject to further investigation to ensure sufficient capacity, including contingency, for suitable disposal of the waste water produced during the processing of SD2 gas. The base case for PFW disposal for SD2 is to use the SD1 process water management system and to dispose of treated water through re-injection offshore to the AGC well field using existing infrastructure. The current PFW system at ST has capacity of 75,000 bls/day and is expected to substantially exceed the required volumes of both SD1 and SD2 PFW disposal requirements. However, the Operator is continuing to evaluate alternative PFW management options should the volumes of PFW exceed estimates or in the case that the re-injection at AGC is no longer available.

## **5.2 Biodiversity Conservation and Ecological Management**

### **5.2.1 Protection and Conservation of Biodiversity**

The SD2 Project construction at ST includes the pipelines from the beach crossing to the terminal which pass a coastal zone which includes wetlands (or wadi) located to the east of the SD2 expansion area. The works in this area are nearing completion and no further land disturbance is expected. There have been no reported incidents of impacts to wildlife or conservation values for the terrestrial or marine environments due to the construction operations at SD2 for the 2017-17 period. Pre-existing soil and water contamination was identified and reported in the initial ESIA baseline studies prior to civil works commencing for SD2, which identified possible sources of contamination from nearby pipelines and neighbouring land use. There was evidence of pre-existing free phase oil on water located in wetlands near to the neighbouring power station. The SD2 project maintains a monitoring programme to identify the cause of contamination at the wetlands area and monitor the ecological use of these wetlands by birds and other fauna. The results of ecological monitoring are reported annually to the Ministry for Environment.

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<sup>33</sup> Full Lukoil Slidepack\_April 2017.

## 6. SOCIAL

### 6.1 Labour Working Conditions

#### 6.1.1 'Worker and Sub-Contractor Management

The status of Project employment as of the end of March 2017 is provided in Table 2. The employment numbers peaked for the construction phase (in August 2016) and de-manning commenced in the third quarter of 2016 at Project sites in response to completed work packages. Between the last monitoring conducted (May 2016) and this monitoring visit (April 2017), employment numbers dropped from 18,976 to 16,187, respectively. The Project is implementing a de-manning strategy aimed at minimising the impacts of reduced employment as the Project moves towards completion. Workers are provided minimum of 1-month notice prior to redundancy taking affect. A completion payment is provided at the end of employment for workers who have been engaged for a minimum of 12 months. The completion payment exceeds the requirements of local labour laws and is made under Project employment conditions.

Other aspects of the de-manning strategy include ensuring the timing of redundancies avoids periods when large numbers of workers are released in any one time and maximising the potential for contract labour to move between work packages and contracts when the skills are requirements allow. It was reported anecdotally at the ATA Yard during the site visit that de-mobilised workers from the ATA Yard had been re-employed at another site, however this could not be verified.<sup>34</sup> It is also noted that BP community development projects in neighbouring communities include a skill training programme at Gobustan Regional Training Centre, and a CISCO certificated IT Essentials Course at Gafgaz University, both of which aim to increase the opportunities for broader income generation and employment. These community support projects are planned to continue throughout the upcoming year<sup>35</sup>.

Meetings with local communities are reported to include discussion of changes to contract labour requirements during the Project construction period (see Stakeholder Engagement section). The de-manning program is also discussed with SOCAR and Labour unions. Labour Management Forums are in place to discuss and resolve key HR/IR issues relevant to contracts and BP personnel working on the SD2 construction, including grievances, and meeting records of which indicate no significant labour relations issues. The IESC commends the effectivity of the Labour Management Forums in place to manage de-manning, including top-level management participation. As noted in the previous monitoring report, there remains a potential for an increase in grievances as the de-manning process escalates remain and there are fewer future employment opportunities for particular skillsets. The IESC would like to verify the Operator-reported data with key stakeholders at the next site visit, in line with good international industry practices.

Table 2 Manpower Status (March 2017)

SD2 Key Contractors Manpower Status		
Offshore Facilities		
Job Category	Nationals	Expats
ATA (Decks)		
Professional	1,499	164
Non-Professional	630	0
Total	2,129	164

<sup>34</sup> IESC Visit to ATA Yard 06042017

<sup>35</sup> SD2\_Lukoil Additional Documents Requested.

Grand Total: 2,293		
<b>BOS Shelf (Jackets)</b>		
Professional	2,096	549
Non-Professional	782	0
Total	2,878	540
Grand Total: 3,427		
<b>Marine and Subsea</b>		
Saipem (M&S)		
Professional	635	357
Non-Professional	75	0
Total	710	357
Grand Total: 1,067		
<b>Baku Shipyard and Keppel</b>		
Professional	788	87
Non-Professional	65	0
Total	853	87
Grand Total: 940		
<b>Bredero Shaw (CPC)</b>		
Professional	118	4
Non-Professional	70	0
Total	188	4
Grand Total: 192		
<b>Onshore Facilities</b>		
<b>TKAZ (Terminal)</b>		
Professional	5,785	1,037
Non-Professional	1,042	0
Total	6,827	1,037
Grand Total: 7,864		
Other		
<b>SWIFT MS</b>		
Professional	205	199
Non-Professional	0	0
Total	205	199
Grand Total: 404		
<b>TOTAL MANPOWER: 16,187</b>		

### 6.1.2 Worker Accommodation

The IESC had the opportunity to visit the accommodation platform topside in April 2017, which is nearly complete and commissioning for which is currently underway, with the sail away planned to occur in the second / third quarters of 2017. The IESC notes that the facilities are appropriate, and exceed the requirements of good international industry practice.<sup>36</sup>

### 6.1.3 Worker Grievances

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.

The Labour Management Forum reviews worker grievances such that there is BP oversight of grievances that are being managed by individual contractors. External grievances are predominantly regarding employment issues as evidenced through the community meeting

<sup>36</sup> EBRD/IFC Guidance Note "Workers' accommodation: processes and standards", 2009.

summaries provided by BP<sup>37</sup>. Given the size of the workforce, there are a low number of grievances registered, however, IESC would again prefer to see more detailed records on the contractor engagement activities including resolution processes for employment grievances.

There have been no significant labour or community disputes as a result of de-manning so far, which is indicative that the process in place is being managed effectively. However, IESC notes that the potential for an increase in grievances during the de-manning process remains high, given the fewer future employment opportunities for particular skillsets. This will again be followed up during the next site visit.

#### **6.1.4 Procurement and Supply Chain**

BP contractors and their employees are required to act consistently with the Company's code of conduct and human rights policy. The standard model contracts that BP procurement teams use when agreeing new contracts include requirements for suppliers to respect internationally recognized human rights in their work for BP, with a specific prohibition on the use of forced or trafficked labour. Working with industry peers, BP have developed a human rights due diligence process that can be used to screen suppliers in a consistent way anywhere in the world. This process has been piloted with potential suppliers in 2016 and is reported to be subject to wider use in 2017<sup>38</sup>. IESC will follow up at the next site visit as to the use of this tool for SD2.

It is also noted that BP procurement is largely from Azerbaijan by Azeri workers, which has facilitated close oversight of procurement and the supply chain and minimised the risks of child and forced labour. Further, IESC observes that procurement and supply chain risks will be somewhat reduced with the move from construction to operations and the corresponding decrease in the number of workers / contractors in the supply chain.

### **6.2 Land Acquisition, Resettlement, and Livelihoods Restoration**

#### **6.2.1 Land Access Agreements**

Although the midstream gas pipeline expansion project for the SCPX is not core to the scope of this review (as it is an associated facility), it is noted that significant land acquisition and compensation has been progressed and reported in the *BP Caspian 2015 Sustainability Report*<sup>39</sup>. The land acquisition process for the SCPX project include lease agreements and compensation payments to more than 950 land owners in the first 200km of the pipeline right of way. New agreements have been made with 3,200 landowners /users in the final 224km of pipeline right of way. The remaining land lease agreements and compensation payments are planned for completion in 2016. No involuntary resettlement has taken place as part of the SCPX project. The compensation process has followed BP's Guide to Land Acquisition and Compensation-Azerbaijan (2015) developed for the SCPX Project and which is generally aligned with IFC Performance Standards and guidance.

#### **6.2.2 Fishing Livelihoods**

The ESIA process identified that local commercial fishing in the Sangachal area would be subjected to economic displacement during the period of enforcement of a marine exclusion zone around the gas export pipeline shore crossing. The Marine Exclusion Zone was a temporary measure during which all vessels would be excluded from entering a formally enforced zone. The Project had developed a Fishing Livelihoods Management Plan (FLMP) in 2015 as a framework

<sup>37</sup> SD2\_Lukoil Additional Documents Request.

<sup>38</sup> BP Global Sustainability Report. 2016.

<sup>39</sup> At the time of this report, the *BP Caspian 2016 Sustainability Report* had not yet been released.

for identification of impacted fishermen, determination of compensation; established a mechanism for engagement and a grievance process. The SD2 Project FLMP states the commitment to “ensure that the livelihoods and living standards of small-scale fishing households affected by SD2 activities are restored to, or where possible, improved above pre-Project conditions” (FLMP 2015).

The initial compensation arrangements were put in place for 43 fishermen deemed eligible under the FLMP framework. However, the 1st Household Monitoring Survey undertaken in June 2015 resulted in reconsideration of eligibility and a further 5 fishermen were included in the compensation arrangements (as reported in the IESC July 2015 Report), (see Table 3).

Since July 2015, an independent consultant (AECOM) has completed quarterly monitoring of the 48 eligible fishermen and the 3<sup>rd</sup> Household Monitoring Survey report was issued to BP in November 2016. The FLMP has been revised and updated based on ongoing monitoring of the compensated fishermen as reported in the Household Survey Reports. The key issues from the household survey that have been considered in the review of the FLMP arrangements includes:

- The compensation payments had been established based on a marine exclusion zone being in place for a 9-month period. However, the exclusion zone was in place for 1.5 months longer than originally planned, resulting in a pro-rata increase in compensation to eligible fishermen in addition to the original compensation calculated based on a 9-month exclusion period.
- Household surveys held in March 2016 identified that there was ongoing disaffection and concern about the lack of compensation for net damage from a Project related incident when an unsecured buoy damaged fixed fishing nets. The contractor investigated the issue through its grievance management process with BP oversight. Replacement nets were bought for fisherman who provided evidence including damaged nets. The contractor rejected a second claim due to the lack of evidence provided. BP and the contractor revisited the complaint as additional evidence was provided and the contractor agreed to purchase nets for the individuals.
- Household surveys had identified claims that the new fishing areas used by affected fishermen were less viable than the area compensated for and that the time taken for one specific fisherman to travel to the new fishing areas had taken longer than expected and therefore costs had increased. This fisherman laid off 6 employees due to the increased travel costs and declining catch. The affected fisherman requested an additional compensation payment for the increased travel costs above what was expected. This request was logged as a formal grievance. Further, the household survey found that the six fishermen who previously worked for the fishing captain were now unemployed. At the last site visit, BP reported that they had provided the details of the unemployed fishermen to the Sangachal construction contractor (TKAZ) for consideration of eligibility for employment through vulnerable groups employment programmes. At the April 2016 site visit, BP reported that after consultation with the crew leaders, and exploration of financial and non-financial restoration measures, an additional livelihood payment was made in September 2016 (see Table 3).

Livelihood monitoring indicates mixed, but generally improving over time, perceptions among participants on the level of success and satisfaction from the FLMP process to date (92% of

fishermen considered BP communication and FLMP implementation effective). The majority (43 fisherman) reported either an improvement or no change in household living standards, and 5 fishermen reported a deterioration in household living standards since December 2014, due to declining fishing incomes, but all consider their crews' assets to have increased since December 2014. BP are currently reviewing why 5 fishermen have reported a deterioration. All the people who were subject to the FLMP continue to commercially fish in Sangachal Bay, and notably, the 6 fishermen who were unemployed (as discussed above) reported that they had resumed fishing.

The fishing livelihoods grievance register has been maintained with additional information entered from household surveys and other BP led meetings with affected fishing communities.

BP expects that a completion audit will be conducted to inform a close out report for the FLMP in the 3<sup>rd</sup> quarter of 2017. The IESC notes that there remain residual issues and grievances in relation to the FLMP, including ongoing investigations by BP (see above), and that the appropriate timing of the completion audit should be informed by the outcomes of any ongoing investigations / issues.

**Table 3 FLMP Compensation Payments**

<b>Date</b>	<b>Compensation</b>	<b>Value (AZN)</b>
March 2015	Loss/Relocation of fishing assets	88,425.00
March / July 2015	Compensation payments	119,204.00
December 2015	Extension of Marine Exclusion Zone and 10.5 months' compensation to 5 new claimants	34,005.85
September 2016	Additional livelihood compensation	88,071.25

### **6.3 Community Development**

BP supports a variety of community and sustainable development initiatives, including projects designed to improve local education, build community-based skills and capabilities, and provide training and finance to local enterprises. In 2015, BP conducted a community needs assessment to identify social investment projects for BP in Azerbaijan. This included reviewing environmental and social impact assessments undertaken by BP for its projects in Azerbaijan, interviews with key stakeholders and community group discussions in 44 project-affected communities. This work has fed into BP's community investment strategy, and in SD2 Project-impacted communities, social projects that BP is carrying include a skill training programme at Gobustan Regional Training Centre, and a CISCO certificated IT Essentials Course at Gafgaz University which aims to increase the opportunities for income generation and employment.<sup>40</sup>

The IESC notes the opportunity to link current and future community development initiatives more explicitly with the de-manning / demobilisation process (which may result in increased unemployment in neighbouring communities, influx issues, fewer supply chain / enterprise development opportunities, and a potential increase in social nuisance issues).

The IESC would like to interview those employees responsible for community development initiatives, as well as verify community development activities and outcomes with local communities and beneficiaries at the next visit.

<sup>40</sup> BP in Azerbaijan Sustainability Report. 2015.

## 7. HEALTH AND SAFETY

### 7.1 Worker Health and Safety

The SD2 construction project had maintained an excellent safety record for the period from commencement of construction to the site visit in April 2017. The Project had amassed over 144 million man-hours, including both BP direct hire and contractors, and achieved an overall rolling 12-month Recordable Injury Frequency Rate (RIF) of 0.05 and a total RIF of 0.05, since the commencement of construction. This includes the activities for marine and subsea, onshore construction, offshore construction and SCPX. As a comparison, the relevant industry standards for RIF established by the International Association of Oil and Gas Producers (IOGP) is 0.56 and International Pipeline and Offshore Contractors Association (IPLOCA) is 0.24 (IOGP and IPLOCA data have been normalised to 200,00 as per BP practice). There have been no fatalities on the Project to date; and between April 2016 and March 2017, 2 high potential incidents, 3 injuries requiring a day away from work, and 14 recordable injuries.<sup>41</sup>

The IESC focused specifically on the offshore drilling HSE performance at this site visit. There are currently 2 drilling rigs operating. The Istiglal rig is conducting completions drilling, which is a high risk activity as there is flaring associated with it. The IESC was informed that drilling is currently progressing ahead of schedule (with 26 wells planned to be drilled in 2017, with 3 of the completions done). Significantly, there have been no HIPOs or major incident announcements associated with drilling in 2016 / 2017 (up to the site visit). There was 1 Level 3 well control incident reported (with Level 3 being the least significant on a scale of 1 to 3) in 2016 / 2017. The IESC notes the effective reporting of near misses. BOP testing is completed every 5 years, as per the schedule. There are global contracts in place with 2 well control providers who can mobilise to site immediately to provide assistance. Further, BP requires all employees to attend well control training every 2 years. It was also noted that drilling contractors are requiring their employees to attend well control training on the off-year (i.e. employees are attending well control training every year).<sup>42</sup>

The site visit observed a strong safety culture at all construction sites and an established relationship between BP and the contractors who have all had experience in working with BP since the AGT Project construction. Observations included the use of PPE, dual language safety signs, barriers to prevent access to unsafe areas, permits to work, safety inductions for visitors and the availability of medical treatment and emergency response facilities/capability onsite.<sup>43</sup>

139 million km of road travel had been undertaken for the Project to date without a serious project related traffic accident. Traffic use on the Baku-Salyan Highway poses significant risk to Project workers as this is the main route taken for workers who commute daily to the offshore construction facility yards and the onshore construction site at ST. Traffic management to reduce risk includes the use of busses for workers and strict enforcement of Project defined speed limits.

Working at heights, lifting, use of ladders, confined space entry and hazards from dropped objects were all key HSE focus areas for the offshore constructions yards. The contractors and BP had increased verification and oversight of these focus areas to ensure safety controls remain in place and effective. THE IESC observed effective controls in place in the commissioning area at ST, requiring separate entry and separate induction. Further, the IESC noted a high profile

<sup>41</sup> Full Lukoil Slidepack\_April 2017.

<sup>42</sup> Istiglal and Maersk Explorer HSE Performance Report.

<sup>43</sup> IESC Visit to ATA Yard 06042017; and IESC Visit to Sangachal Terminal 06042017.

behavioural safety initiative in place at the ST and BDJF site visits, which BP and contractors had developed to address hand injuries.<sup>44</sup>

Safety observations are formalised through a behavioural observation safety program that requires workers to document safe work observations undertaken during normal work activities. Specialist contractor HSE personnel support the program.

The offshore construction process includes a change register for any changes that occur to the original design which had been subjected to a comprehensive risk assessment. The change register provides a record of variation in design and any additional risk management controls that may be required

It was noted that BP had commenced some nightwork at the ST in the lead up to the transition to operations in 2018. It is noted that there has been no increase in safety incidents as a result of nightwork, and this is to be commended. BP advised that there are several high risk activities that do not take place at night

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

In relation to community safety, BP reported in the site visit meetings that, where appropriate, local communities are involved in scenario planning for emergency response. BP also advised that drills involve internal and external communications with various community members through the existing community engagement process (contractor and BP led processes). Furthermore, it is not clear to the IESC (from the records reviewed of community meetings) whether community meetings include debriefing / awareness processes with neighbouring communities. The IESC would like to verify the emergency response measures in place, particularly those related to community communications and involvement, at the next site visit.<sup>45</sup>

Noise monitoring is undertaken at SD2 onshore construction site at the nearby communities to ST to verify compliance with agreed noise criteria and determine if Project construction activities are significantly contributing to breach of noise criteria. The Project specified noise criteria have been derived from British Standard, BS5228-1:2009. An action trigger occurs when criteria are exceeded on three sequential occasions during the same monitoring round due to Project activities.

Baseline noise at all four nearby communities, Azim Kend, Sangachal, Umid and Massiv 3, was completed and reported in the ESIA. Monitoring during construction and the baseline surveys show regular noise levels at nearby communities above the daytime criteria of 65 dB (LAeq). The cause of exceeding noise levels has been attributed to a range of contributing sources including highway traffic, power stations, existing ST operational noise and trains. The Sangachal village noise monitoring presented the highest noise levels recorded over the construction period, as this site is located closest to the Baku-Salyan Highway and the Sangachal Power Station. During SD2 construction 19 noise survey rounds have been completed and data is presented for the monitoring at nearby communities during community meetings. A number of individual noise levels above the daytime criteria of 65dB were recorded. These were attributed to sources such as car horns and vehicles on the highway and passing trains. There have been no instances where the action trigger has been reached due to SD2 activities.

BP advises that construction noise from SD2 activities has generally not been audible at monitoring locations during the surveys. Noise from SD2 vehicle reversing alarms, intermittent

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<sup>44</sup> *Ibid.*

<sup>45</sup> IESC Interview with BP at Baku Headquarters, 05042017.

hammering, on site engine/compressor noise and from vehicles undertaking pipeline installation activities was recorded, but noise levels from these sources were not recorded above the daytime criteria. Regarding night time noise monitoring, noise levels recorded were typically above the upper trigger level of 45 db, attributable to noise sources from the Gas Station at Massiv 3, ST and from Salyan highway. There have been no instances where the action trigger has been reached due to SD2 activities. BP advised that there have been no noise complaints received from communities through the formal grievance process since construction works commenced on SD2.<sup>46</sup>

The Project potential for influx was scoped out at the time the ESIA was prepared on the grounds that the camp is closed. However, during this period of de-manning there is no evidence of a system for monitoring potential influx (e.g. coordination with local government agencies or other organisations), particularly as the economic environment in Azerbaijan into which this workforce will be laid off will be more challenging in finding future work opportunities. Discussion with BP during the site visit indicated that there have so far, been no community-reported grievances in relation to influx, or any other nuisance issues related to the de-manning that has already occurred. The IESC looks forward discussing this aspect at the next site visit, including verification with local communities.

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<sup>46</sup> Full Lukoil Slidepack\_April 2017.

## 8. CULTURAL HERITAGE

### 8.1 Protection of Cultural Heritage

The SD2 construction at ST includes provision of ongoing monitoring of potential impacts to Cultural Heritage and a watching brief for works being undertaken outside of past detailed heritage surveys. Monitoring was being undertaken by local experts in consultation with the Ministry for Culture and Tourism. The initial surveys were completed as part of the investigations undertaken for the Early Infrastructure Works (EIW) EIA prepared and submitted for approval to the Ministry of Environment. The EIW EIA included details of the Cultural Heritage Monitoring and Management Plan and the Chance Find Protocol to be implemented during construction. These surveys were originally completed in 2011 and identified the two most significant heritage sites being a nearby Caravanserai and Sand Cave site located nearby to the pipeline shore crossing. Both sites are protected under cultural heritage laws but have been considered to have low national significance. The Project's cultural heritage plan commits to maintaining a watching brief during earthworks to identify any potential cultural heritage aspects or finds during excavations and land disturbance. A range of isolated artefacts has been identified during the watching brief of construction at ST but no finds have been deemed to be of significant heritage value (13 finds have been recorded since the last monitoring visit in March 2016). The watching brief is expected to continue through to the end of Q2 2017 when site disturbance of Greenfield areas will be complete and a close out report is proposed. The results of monitoring for cultural heritage during the watching brief phase are reported weekly and monthly to the SD2 Project team.

Monitoring of vibration near the Sand Cave heritage site has been undertaken by the SD2 Project to protect the site from potential damage from Project related activities near the shore crossing and pipeline beach pull site where water winning ponds were constructed approximately 100m from the Sand Cave site. The vibration monitoring was designed to confirm if vibration from construction activities were below criteria that would have potential to damage the site, which is a State protected monument and considered fragile. Site specific criteria for vibration, including both continuous intermittent criteria, was developed by SD2 based on Codes of Practice, heritage protection advice and baseline vibration monitoring results and action triggers were developed. 11 rounds of vibration monitoring were completed at the Sand Cave during the pipeline landfall construction activities that included rock breaking, piling and pile removal. Monitoring results show that 89% of vibration levels (10 monitoring results) were recorded below the continuous criteria and 1 result was recorded above the intermittent criteria. The action trigger was not reached, but the Project did amend the piling technique to reduce vibration in response to the monitoring results. No damage to the Sand Cave site was observed throughout the works.<sup>47</sup>

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<sup>47</sup> Ibid.

## **Appendix A Document List**

## 2017 Evidence List

File or Information Title	Contents
Shah Deniz 2 Project Monthly Reports (May 2016 – February 2017)	Monthly Project Updates
Full Lukoil Slidepack_April 2017	SD2 HSSE update presentation to IESC by BP
SD2_Lukoil Additional Documents Requested	Additional info requested by IESC and provided by BP, including Oil Spill Response activities, community engagement; grievance management, and fishing livelihoods management.
Tekfen-Azfen Alliance Spill Emergency Exercise, Sangachal Terminal. July 2016.	Spill response exercise report.
Saipem Offshore Construction Vessels Emergency Drill Report. May 2016.	Emergency Drill Report.
Briggs, Oil Spill Response Training and Exercise Summary Report. March 2016.	Oil Spill Response Drill. Report.
Briggs, Oil Spill Response Training and Exercise Summary Report. August 2016.	Oil Spill Response Drill Report.
SD2 Environmental and Social Management and Monitoring Plan.	Updated with commissioning and transition to operations aspects.
Istiglal and Maersk Explorer HSE Performance Report	Drilling rigs HSE performance report and data.
SOCAR EITC Statement. April 2016.	Extractive Industries Transparency Commission summary and links.
BP Global Sustainability Report. 2016.	Global business performance during 2015 (publicly available report).
IESC Visit to ATA Yard 06042017.	Offshore delivery progress and activities at ATA Year, HSE performance; project progress.
IESC Visit to Sangachal Terminal 06042017.	ST development progress; activities at ST; HSE performance.
BP in Azerbaijan Sustainability Report. 2015.	Provides a range of information on business performance in Azerbaijan during 2015 (publicly available report).
IESC Interview with BP at Baku Headquarters, 05042017.	

## **Appendix B Site Visit Summary**

**Trip Summary, April 2017**

<b>Date</b>	<b>Summary of Activity</b>
Wednesday 05 April	IESC, BP (Operator) meetings at BP headquarters in Baku
Thursday 06 April	IESC, BP (Operator) visit to ST and ATA Yard
Friday 07 April	IESC, BP (Operator) close-out meeting at BP headquarters in Baku