



**Revised (#2)
Environmental and Social Review Summary**

**LUKOIL Overseas Uzbekistan Ltd. (Khauzak-Shady Operation and Kandym
Group of Fields Development) Project - Uzbekistan**

This Environmental and Social Review Summary (ESRS) is prepared by MIGA staff and disclosed prior to the date on which MIGA's Board of Directors considers the proposed issuance of a Contract of Guarantee. Its purpose is to enhance the transparency of MIGA's activities. This document should not be construed as presuming the outcome of the decision by MIGA's Board of Directors. Board dates are estimates only.

Any documentation that is attached to this ESRS has been prepared by the project sponsor, and authorization has been given for public release. MIGA has reviewed the attached documentation as provided by the applicant, and considers it of adequate quality to be released to the public, but does not endorse the content.

Country: Uzbekistan
Sector: Oil and Gas
Project Enterprise: LUKOIL Uzbekistan Operating Company LLC (LUKOIL)
Environmental Category: A
Date Original ESRS Disclosed: May 18, 2011
Date Revised ESRS Disclosed: March 26, 2012 (revisions are: attachment of the Biodiversity Action Plan and update to the LUKOIL website)
Date Revised ESRS Disclosed: July 26, 2013 (revisions include the attachment of the Enhanced Biodiversity Monitoring Plan)
Date Revised ESRS Disclosed: November 15, 2013 (revisions include the attachment of the E&S documents for the construction of 8 wells in Dengizkul Field of Khauzak-Shady)
Status: Due Diligence

A. Project Description

MIGA has been asked to provide political risk coverage for Phase II (“the Project”) defined in the Production Sharing Agreement for the Kandym Field Group, Khauzak and Shady Blocks, and Kungrad Block between the Republic of Uzbekistan and consortium of investors consisting of the Open Joint Stock Company “Oil Company “LUKOIL” and the National Holding Company “Uzbekneftegaz”. The Project involves developing and operating the Khauzak-Shady-Kandym gas fields and processing facility in Uzbekistan¹. The Project area is located in the Bukhara-Khiva Region in the southwestern part of the central Uzbekistan close to the Turkmenistan boarder. LUKOIL Uzbekistan Operating Company LLC (LUKOIL) is the Operator for the Project.

The *Khauzak-Shady Block* is a 32,000 ha territory which combines two large gas condensate fields (Khauzak and Shady), with high sulfur content (approximately 4.25% concentration). It contains about 34.6 billion cubic meters (bcm) of gas reserves and became operational in 2007. Existing operations in this field will reach plateau production level of 4.0 billion cubic metres a

¹ Kungrad block is still at exploration phase and is not part of the scope of MIGA's coverage.

year in 2013 and will last for 9 years. Additional drilling in Shady has already commenced. Gas from Khauzak-Shady is transported from the well pads through subsurface pipelines. Gas from Khauzak is transported through eight intra-field pipelines to the gas gathering station and then 75 km further via the Mubarekneftegaz pipeline collection system to the Mubarek Gas Processing Plant. Gas from Shady is piped 25 km to the same gas processing plant.

The *Kandym Group of Fields* covers 114,000 ha and contains high sulfur content gas (concentration varies between 1.43 – 2.51%). The total gas reserves are estimated at 83.9 bcm. Kandym Group of Fields comprises of Kandym (the main field), and the satellite fields of Alat-Kuvachi, Akkum, Parsankul, Hodji, and West Hodi. The first gas production is scheduled for 2015 from Kandym field, and the plateau level of annual production of 8.1 bcm is expected to be reached by 2017 and last for 14 years. The Kandym Group of Fields will include several gas gathering stations and its own gas processing plant (scheduled to start construction in 2013) which will have a capacity of 8 billion m³/year of natural gas, more than 200 thousand tonne / year of gas condensate, and about 190 thousand tonne / year of sulfur). Saleable gas which has been dried and stripped at the Kandym Gas Processing Plant (KGPP) will be transported via a 85 km buried gas pipeline to the main gas pipeline system of Transgaz. The KGPP consists of liquid separation and three independent gas processing sections: 1) Amine treatment and cooling (removal of H₂S and CO₂), 2) Claus section (burning and converting of H₂S gas), and 3) Sulfur production. In addition to the construction and operation of the gas processing plant, Kandym includes construction of a 45 km railway spur, 300 km of electricity power transmission lines, and 600 km of paved roads. Initial drilling in the Kandym Field has commenced. Other fields within the Kandym Group of Fields are not planned for development until at least 2024 and are not part of MIGA's scope of environmental and social due diligence.

Project Context:

Both Khauzak-Shady and Kandym blocks are in remote locations near the Turkmenistan border, and in arid settings with blowing and shifting sand and sparse vegetation. Drilling in the area was carried out during the late 1960s –1970s; however many wells were suspended and gas was not recovered at that time due to a lack of a financially viable recovery process. Some of these existing wells will be worked over and brought back into production as part of this Project. Khauzak-Shady and Kandym blocks are in the vicinity of operating gas concessions developed by other companies.

Given the remote locations, the Project requires on-site infrastructure, including workers' camps, water supply wells, electricity transmission lines, access roads, etc. Animal grazing occurs in the vicinity of these concessions and village-type settlements (kishlaks) of 50 to 1200 inhabitants are located in the Project area; however none are located within the footprint of current and planned Project activities at either Khauzak-Shady Block or Kandym Field.

Although on official government maps, the Kandym Group of Fields overlaps an area marked as "Potential Irrigated Area", LUKOIL has explained that there is no history of irrigation in the area. The principle desertification effects in this area consist of the prevalence of shifting or drifting sands where vegetation is insufficient to hold the sands in place. There are no surface water features within the Kandym Group of Fields. Soils are subject to salinization.

LUKOIL's Khauzak-Shady producing asset falls within a portion of Lake Dengizkul, a designated National Bird Preserve and Ramsar Site. This aspect is discussed under Performance Standard 6 later in this ESRS.

At the time MIGA became involved in the Project, the Khauzak-Shady field was already operational with more wells being drilled, and the Kandym Field of the Kandym Group of Fields was under development. The environmental permitting process is well underway for all works.

B. Environmental and Social Categorization

The project is a Category A under MIGA's Policy on Social and Environmental Sustainability. Key issues related to gas exploration, development, and processing include air quality, waste management (including industrial wastewater / process wastewater), biodiversity preservation, emergency response, and community and occupational health and safety.

C. Applicable Standards

While all Performance Standards are applicable to this investment, based on our current information indicates that the investment will have impacts which must be managed in a manner consistent with the following Performance Standards:

- PS1: Social and Environmental Assessment and Management Systems
- PS2: Labor and Working Conditions
- PS3: Pollution Prevention and Abatement
- PS4: Community Health, Safety & Security
- PS5: Land Acquisition & Involuntary Resettlement
- PS6: Biodiversity Conservation & Sustainable Natural Resource Management

Based on available information, there are no communities in the areas in which the Project operates that can be considered indigenous under PS 7 although various ethnic groups exist in the area. MIGA concludes that PS 8 is not applicable to this Project as the investment will have no significant adverse impact on cultural resources. Site surveys as part of Environmental Impact Assessment for Kandym Group of Fields and operating experience at the Khauzak-Shady Block indicated no cultural resources are within the Project's area of impact; however a 'chance finds' procedure is part of its operating procedures.

The World Bank Group General Environmental, Health and Safety Guidelines; Environmental, Health and Safety Guidelines for Onshore Oil and Gas Development; Environmental, Health and Safety Guidelines for Toll Roads; Environmental, Health and Safety Guidelines for Railways; and Environmental, Health and Safety Guidelines for Electric Power Transmission and Distribution are applicable to this project.

D. Key Documents and Scope of MIGA Review

As part of due diligence, MIGA's environmental specialist visited the Project site in December 2010. MIGA's due diligence of this Project also included review of environmental and social information submitted by LUKOIL. The objective of MIGA's due diligence was to review the social and environmental management capacity of the project enterprise to ensure that all operations are (and will be) carried out in compliance with MIGA's Performance Standards. The

Asian Development Bank (ADB) has disclosed this Project and a draft Environmental Impact Assessment for the Kandym Group of Fields on its website in June 2010. Key documents provided by LUKOIL for the environmental and social review by MIGA include:

- Kandym Gas Field Development Environmental Impact Assessment, prepared by LUKOIL (2011);
- Statement on Environmental Impact (SEI) for Development of the Shady Block of Dengizkul Field, prepared by LUKOIL (2011);
- Preliminary Environmental Impact Statement for Preliminary Feasibility Study Development of Kandym Field Group and Gas Processing Plant Construction, prepared by LUKOIL (2011);
- Environmental Impact Statement (EIS) Infrastructure Construction of Khauzak-Shady Areas of Dengizkul Field, prepared by OOO Ekotexproekt Engineering (2007);
- Environmental Audit of the Contracted Area that includes Khauzak-Shady, Kandym Field Group and Kungard Plots, prepared by LUKOIL (2005);
- Environmental, Health and Safety (EHS) policies and procedures for Khauzak-Shady, including risks registry, emergency prevention and response, training, EHS work plans and budgets for 2010, 2011 environmental monitoring program;
- Kandym Field 2011 environmental monitoring program;
- Independent audit and internal review of LUKOIL's integrated management system;
- UZB: Khauzak-Shady and Kandym Gas Field Development Resettlement Planning (March 2011);
- Khauzak-Shady-Kandym Gas Field Development (Uzbekistan) Independent Technical Project Audit prepared by SGS (January 2011);
- LUKOIL's HR Policy and Procedures; and
- LUKOIL's security contract.

MIGA's review of this project also comprised of environmental and social information submitted by the ADB, information related to raising project financing, and LUKOIL responses to queries posed by MIGA's environmental and social specialists.

The above documentation together with further documentation that will be developed and provided to MIGA, including a Biodiversity Action Plan, an Environmental and Social Management Plan for Construction and Operations of the Kandym Field, and additional EIAs (e.g., EIAs at the advanced design stage for the KGPP and related infrastructure), provide a sound basis for the proper mitigation of the E&S risks posed by this project.

E. Key Issues and Mitigation

Key environmental and social issues relating to the project are summarized below along with specific information on how potential impacts will be addressed by LUKOIL.

PS1: Social and Environmental Assessment and Management Systems

Social and Environmental Assessment: LUKOIL has adopted a corporate Environmental, Health, and Safety Policy approved by Director General of LUKOIL. LUKOIL has developed an integrated environmental, health, and safety management system to support the implementation of this policy. The management system is certified to ISO 14001 (environmental management) and to OHSAS 18001 (occupational health and safety management) and is applicable to all its

operations in Uzbekistan. The most recent independent audits of the integrated EHS management system were carried out in 2009.

Identification of environmental and social impacts and risks associated with LUKOIL's activities are an important component of its management system. Baseline environmental conditions were established in the Project area and detailed in the "Environmental Audit of the Contracted Area that includes Khauzak-Shady, Kandym Field Group and Kungrad Plot". Environmental impact assessments (EIAs) in accordance with national requirements have been carried out for various LUKOIL activities in the Khauzak-Shady and Kandym blocks, and additional EIAs are planned once engineering studies have been completed for several Project components such as the rail spur and gas processing plant. These studies will include more detailed mitigation measures as part of the ecological effect assessments. Copies of future EIAs and management plans will be submitted to MIGA. Detail regarding the permitting process is provided in Section F of this ESRS.

Management Program and Monitoring: Through LUKOIL's integrated management system, EHS roles and responsibilities are clearly identified and a reporting structure is defined. EHS policies and procedures for field work are developed, implemented, and monitored.

Compliance with LUKOIL's management system is routinely monitored internally to ensure implementation of standard operating procedures and compliance with regulatory requirements. The company develops annual EHS monitoring plans which include schedules, budgets, and responsible parties. Environmental monitoring plans cover air quality, surface and ground water quality, soil properties, radiation, and flora and fauna. Environmental monitoring is carried out by both LUKOIL and the State Committee for Nature Protection (SCNP).

State regulations require that LUKOIL conduct an inventory of hazards and pollution sources of the Project area every three years in order to confirm if the environmental impacts identified in the EIA are still valid and applicable. This inventory is carried out by state appointed companies and involves reviewing documentation, observing operations and conditions, reviewing non compliance findings noted in management system audits, and interviewing staff. The inventory report is submitted to the SCNP for State Environmental Expertise and is used as the basis for issuing the ecological norms for the project valid for a three year period. As per ADB and MIGA requirements, an external expert will be hired to verify monitoring information for the Project.

All contracts include LUKOIL's EHS requirements as well as mechanisms for imposing penalties for violation of these requirements. Contractor EHS performance is routinely monitored by LUKOIL. LUKOIL follows a three-pronged approach to monitoring EHS performance of contractors: 1) onsite inspections carried out by contractor, 2) onsite inspections carried out by contractor and LUKOIL representative, and 3) site inspections carried out by a special LUKOIL committee.

As part of the company's commitment to corporate social responsibility, LUKOIL supports social development projects which meet the company's social policy principles. Examples of recent social development projects include donation of medical equipment and supplies, construction of playgrounds, and support of education programs by providing computers, books, specialized equipment, sports equipment, etc.

Organizational Capacity and Training: At a corporate level, OAO "LUKOIL" has extensive experience developing and operating gas fields in several countries. For this Project, LUKOIL has established an Environmental Protection Subcommittee consisting of appointed employees of

the Operator (i.e., LUKOIL) and representatives from state regulatory agencies of Uzbekistan. This Subcommittee meets at least four times a year to discuss and review EHS issues related to the Project.

The Director General is in charge for ensuring all specific measures for the Project are implemented. Planning, implementing and monitoring the integrated management system elements are carried out by the Industrial Safety and Occupational Health Department and the Environmental Department. These departments provide frequent (quarterly) EHS reporting to the Deputy Director General for Operations.

LUKOIL has an established program to provide necessary EHS training for all its employees. Hazardous risk assessments are carried out to define hazards and ensure appropriate controls and training are in place before commencing work. Training records are maintained and updated.

PS2: Labor and Working Conditions

LUKOIL follows the Republic of Uzbekistan labour regulations in recruiting, retaining and retiring its employees. LUKOIL's Human Resource Policy and procedures are generally consistent with PS 2 principles. LUKOIL's labour force consists of different ethnic groups and is a combination local workers and expatriates (of which no more than 20% of the labour force can be expatriates). To date, there are no cases of grievances registered by the labour force. LUKOIL has implemented a system to encourage workers to submit proposals which improve operations. Selected proposals may be awarded a prize and small monetary compensation.

Job vacancies are advertised in the media (e.g., television, radio, internet) and at technical colleges. All new hires are properly informed of labour conditions, benefits and remuneration as part of the recruitment and hiring process. Workers in the field rotate on a shift basis and are housed at workers' camps.

Workforce occupational health and safety (OHS) is another key component of LUKOIL's integrated management system. Potential OHS hazards identified include: fire and explosion, air quality, hazardous materials, well blowouts, emergency preparedness and response, and naturally occurring radioactive material. These hazards are mitigated through comprehensive OHS procedures in place and adequate personal protective equipment is available for employees. Routine OHS training programs include emergency response drills and refresher courses. Medical doctors are available at all times at both fields. Pre-placement and periodic medical exams are carried out for field workers. To date, accidents and incidents at LUKOIL's operations have been limited to minor events.

During peak of construction for Kandym Field (2014-2016), approximately 650 LUKOIL and 4000 civil works contractors per shift (two shifts per day) are expected. During operations, approximately 2000 LUKOIL permanent staff are expected to work on a rotational basis and will be accommodated onsite at the full service camp.

Khauzak-Shady employs approximately 200 workers who are housed at full service camps. Camp conditions are acceptable and are considered above national average.

PS3: Pollution Prevention and Abatement

During baseline studies for the Project area before commencement of Project activities, elevated concentrations were recorded for several parameters such as dust, NO_x, and H₂S. These

concentrations are attributed to natural processes such as sand storms, organic decay, water evaporation, and drainage patterns.

An overview of some of LUKOIL's proposed mitigation measures for preventing and abating pollution are summarized below.

Air: During the construction phase of the upstream facilities, site preparation, earth moving, excavation, and vehicle traffic will generate dust particulates and emissions that could affect ambient air quality. LUKOIL will implement dust minimization measures which include watering road ways, improving access roads, and using erosion control measures where practical. Vehicles and equipment will be properly maintained.

Principle air emissions at LUKOIL's current and future operations are from flaring, the gas plant, boilers, the GPP power generators, plant loading, and fugitive emissions. Flaring volumes are minimal as flaring is only used for emergency blow-down and start-up following maintenance procedures.

Hydrogen sulfide (H₂S) concentrations are relatively high in the gas and are a key EHS concern. LUKOIL has a program in place to continuously monitor H₂S in the ambient environment, which may come from fugitive emissions and flares. The acid gas removal unit at the GPP will use chemical absorption to remove H₂S, carbon oxysulphide (COS), and carbon dioxide (CO₂). Recovered gases will be sent to the elemental sulfur production unit.

Wastes: Principle wastes generated by LUKOIL comprise: process waste water, drill cuttings and spent drilling fluids, sanitary waste, and general non-hazardous and hazardous waste materials. Disposal options include:

- Process waste water / produced water is collected in clay-lined disposal pits in the field. Residual oil is separated from the produced water prior to disposal. Treated water is used for dust suppression on the site. Treated industrial wastewater and chemically contaminated effluents (formation water, effluents of boiler-house and blowoff water of circulation system, etc.) will be disposed of by injection. Further details regarding re-injection will be provided to MIGA once technical and economic analysis are further advanced.
- Drill cuttings and spent water-based drilling fluids are disposed of in clay-lined pits alongside drilling locations. Drilling wastewater is treated by coagulation and flocculation. Drilling mud is solidified and used for strengthening transmission tower bases and road surfaces after it passes the prescribed TCLP (Toxicity Characteristics Leaching Procedures). Pits are remediated following the drilling program.
- Domestic wastewater is used after biological treatment at sewage treatment facilities for onsite irrigation and as production water.
- General waste is disposed of at approved landfill sites or returned to recyclers.
- Hazardous wastes (e.g., mercury lamps) are disposed of by third party government approved waste contractors at approved facilities. Chemical containers and oil drums are returned to the supplier for re-use.

Pre-existing soil contamination exists at some locations within the Kandym field. The contamination is primarily related to poor operating practices several decades ago. LUKOIL

bears no legal responsibility for this historical contamination; however it will remediate those areas located within its planned drilling program.

Terrestrial impacts and project footprint: Well pads, pipeline rights-of-way, access roads, and other infrastructure have been designed and located so as to minimize land requirements. Directional drilling techniques and cluster wells have been incorporated to minimize impacts to environmentally sensitive locations. The majority of project activities are located well outside of water protection zones in the Khauzak-Shady block. Government agencies reviewed the location and design of these structures and concluded that they will not be affected by flooding.

Shifting sand prevention measures will be applied to infrastructure areas and revegetation will be carried out. Revegetation uses native plants to rehabilitate disturbed sites. Hunting is strictly prohibited at LUKOIL sites. Potential biodiversity impacts are discussed under Performance Standard 6 of this ESRS.

Greenhouse gas emissions: Greenhouse gas (GHG) emissions at the Khauzak-Shady facility for 2010 (most recent calculation available) were calculated as 22.3 thousand tonnes CO₂ equivalent. Estimates for annual GHG emissions at the facilities of Kandym Group of Fields are approximately 1.1 million tonnes of CO₂ equivalent.

LUKOIL has implemented / is implementing reduction and control options to reduce GHG emissions. These options include minimizing gas volume which is flared, maximizing commercial sulfur recovery from gas production which reduces tail gas volume, and maintaining the equipment and protection systems to maximize performance. LUKOIL will include GHG emissions as part of their annual monitoring to MIGA.

Effluent / emission parameters: LUKOIL has committed to meet the more stringent emission / effluent parameters as determined under national standards and presented in WBG EHS guidelines. This commitment will be reflected in the integrated management system documentation, including future monitoring plans for the Project.

PS4: Community Health, Safety & Security

The majority of LUKOIL's activities are located in remote areas away from populated areas. Dengizkul community (the closest community) is located approximately 8 km from the perimeter of the Khauzak-Shady Block, and the nearest community to the Kandym Field is approximately 20 km. Potential community health and safety impacts are related to physical hazards (pipeline failures, well blowouts, etc.), release of H₂S, and during construction, increase in heavy truck traffic.

LUKOIL's standard operating procedures include ongoing scheduled maintenance and implementation of preventive measures to minimize adverse health and safety impacts. Examples of such measures include fitting flow lines with safety valves for protection against overpressure, shut-off valves, and flaring systems for blow-off in case of accumulation of liquid. Anti-corrosion coatings are used on pipelines and underground corrosion is minimized by continuous cathodic protection of equipment. H₂S monitoring programs are in place at key field installations and an emergency communication protocol has been established. Firefighting equipment is available on site. LUKOIL has carried out environmental awareness training with local communities to discuss and explain Project activities and associated hazards. Similar approaches will be followed for activities at Kandym.

Uzbekistan is subject to earthquakes. During the technical engineering stage, LUKOIL included (and will include) measures to design facilities appropriately. LUKOIL has installed a monitoring system to detect surface movements at existing operations and will also install systems at new locations as needed.

Several components of the Project are still at preliminary design stage; however the Project is committed to ensure that the final routing for the rail spur will avoid populated areas and that the Kandym Gas Processing Plant will adopt and implement modern technologies and other emission and pollution control measures to prevent and/or minimize adverse environmental, health and safety impacts, risks and hazards.

To date, LUKOIL has not experienced induced impacts related to influx management at its existing operations at Khauzak-Shady and does not anticipate induced populations as a result of developing the Kandym field. National legislation requires residents to register in a specific area of permanent residence. This registration requirement restricts the mobility of workers as it requires transferring registration from one permanent place of residence to another. LUKOIL's policies also restrict workers from bringing non-resident and non-worker personnel to the camps. Although induced population impacts are considered unlikely, LUKOIL will include this topic as part of ongoing consultation with nearby communities as well as monitor potential worker and community tensions.

Security Arrangements: Both blocks are located near the border and thus active patrols are carried out by the State. State border patrol camps and security check points are currently located on the Kandym block and will be relocated in the future.

LUKOIL contracts a private security company to provide security for LUKOIL's field operations. Security personnel do not carry firearms. Security cameras have been installed at specific field locations. All hazardous sites (e.g., substation, wastewater collection, gas processing, etc.) are fenced and access is restricted. LUKOIL reports that there have been no major security problems.

PS5: Land Acquisition & Involuntary Resettlement

Lands comprising the Kandym gas fields are classified as agricultural and forest lands. Prior to the project, these lands were, and at the present time, leased to Karakul Forestry Farm and Karakul Co-operative Farm. These lands are used for sand binding by sowing and planting grasses and shrubs and for pasture.

Governors (Khokims) of the province and districts have issued decrees for this Project to use the land and registration in the district cadastral service shall be done. The basis for determining compensation with the land user (if any), or with the State, are settlements approved by the same Decrees. Taxes and rent of the land are regulated by the applicable tax legislation and the Production Sharing Agreement. LUOC currently has provided compensation for much of the land required for Project activities and will continue to screen future land requirements for involuntary resettlement impacts as per PS 5 requirements. Land acquisition for the Khauzak-Shady block was similar to the above process.

Land used on a temporary basis is revegetated and returned to the respective land owners or land users. Documentation certifying the right to use the land as well as revegetation status and plans, post-construction survey drawings, and soil and water testing results is submitted to a commission appointed by the Khokim. After reviewing the documentation and examining the land, the

commission terminates LUKOIL's rights to use the land and records are updated at the district cadastral office.

LUKOIL represents that there have been no issues with land acquisition for either blocks. Although the Project Enterprise does not plan to resettle communities, LUKOIL prepared a Resettlement Framework which is generally consistent with MIGA requirements.

PS6: Biodiversity Conservation & Sustainable Natural Resource Management

LUKOIL's Khauzak-Shady producing asset falls within a portion of Lake Dengizkul, a designated National Bird Preserve and Ramsar Site. According to LUKOIL documentation, the Preserve's border passes along the lakeside. Lake Dengizkul's surface area and depth continually fluctuates depending on the amount of precipitation, surface water evaporation and volume of water fed by the collection-drainage water of the Bukhara region incoming via the Dengizkul Collector and water from Amu-Bukhara Channel. The Lake is considered globally significant in relation to the concentration and numbers of migratory birds that fly through the area. Additionally, the area adjacent to the Lake is of importance as huge crane flocks rest there during seasonal transigrations. Twenty-seven flora and fauna species listed in Uzbekistan's Red Book of which eight species are included in the IUCN Red List and twelve species are included in Annex 2 of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and twelve are endemic species. All species are highly sensitive to environmental changes

Gas extraction and related activities are permitted within the Preserve as per positive resolutions issued by the State Committee on Nature Protection (SCNP). LUKOIL has a limited amount of activities that will take place within a small percentage of the total protected area which falls within LUKOIL's concession (further detail will be provided as part of the biodiversity action plan). Project activities to be located within the preserve and water protection zone comprise of five horizontal wells which will extract gas approximately 2.5 km below surface, a subsurface pipeline 14 km crossing under the narrowest part of Lake Dengizkul (i.e., at the straits which is 260 m wide), and a 14 km access road constructed over the buried pipeline.

Through approval conditions stipulated by the SCNP and as reflected in LUKOIL's operating procedures, LUKOIL will consider the sensitivity of the area to migratory birds in its development planning and will include specific bird protection measures, in relation to its pollution prevention control procedures. LUKOIL also prohibits any interference of wildlife or hunting by the workforce and contractors. LUKOIL has committed to carrying out a biodiversity action plan to ensure that the Project will comply with all provisions of Performance Standard 6. Although the Biodiversity Action Plan (BAP) was planned to be disclosed prior to the Board, the time required for LUKOIL to engage qualified specialists and to prepare the BAP was longer than originally anticipated. MIGA engaged independent expertise to review the BAP. The BAP is being disclosed now as an attachment to this ESRS and by LUKOIL on its corporate website. This Plan is based on adaptive management principles and will be implemented by qualified specialists within and/or retained by LUKOIL. Based on field surveys and monitoring work carried out in 2012, an Enhanced Biodiversity Monitoring Plan has been developed and was submitted to MIGA in early 2013. This document is disclosed by MIGA (see Section G) and LUKOIL.

The Red Book of the Republic of Uzbekistan (2003) makes reference to potential occurrence of rare and endangered species living in the Bukhara region; according to LUKOIL's environmental experts and based on the initial flora and fauna assessment, there are no explicit records for

sensitive species or habitats for the entire Kandym field area. In order to sensitize and raise awareness of its employees, LUKOIL prepared a field handbook on red-listed species to act as a reference. As part of ongoing monitoring, LUKOIL will carry out monitoring related to potential biodiversity impacts and will implement mitigation and/or corrective actions if needed. LUKOIL will also continue to consider potential biodiversity impacts throughout the lifecycle of the Project.

F. Environmental Permitting Process and Community Engagement

As explained in LUKOIL's E&S documentation, requirements for the content, development procedure, and examination of Environmental Impact Assessment (EIA) documents are governed by several pieces of legislation of the Republic of Uzbekistan, including:

- Law of the Republic of Uzbekistan No 754-XII dated 09.12.1992 "On Environmental Protection"
- Law of the Republic of Uzbekistan No 73-II dated 25.05.2000 "On Environmental Audit"
- Regulation "On State Ecological Expertise in the Republic of Uzbekistan" approved by the Decree of the Cabinet of Ministers of the Republic of Uzbekistan No 491 dated 31.12.2001.

The EIA procedure consists of the following stages for Category II projects (of which this Project is):

Stage 1: Draft Environmental Impact Statement (EIS)

Stage 2: Environmental Impact Statement (referenced within this ESRS as the EIA)

Stage 3: Statement on Environmental Consequences (ECA).

Category II projects are approved by Glavgosexpertisa, SCNP's authority responsible for state environmental expert assessment. In accordance with the abovementioned legislation, SCNP's state environmental assessment bodies, depending on the specifics and complexity of a project under review, may hire individual experts or groups of experts and researchers, as well as foreign experts, if necessary, to develop recommendations for an Environmental Expert Assessment. This stage is the final stage of the EIA procedure and is performed during engineering design for the facilities.

An Environmental Consequences Assessment (ECA) is to be carried out before a project commences operation. The ECA establishes the maximum allowed emissions of pollutants and the standards that will be required to be adopted by the project to ensure that the project operates within acceptable environmental parameters. The ECA stipulates the following:

- i) maximum allowed amount of air pollution;
- ii) maximum allowed amount of surface water pollution (O'zRH 84.3:2004 Methodological Guidance on Fixing Limits of Pollutant Discharges in Water Bodies and Terrain Taking into Account Technically Achievable Wastewater Treatment Indicators);
- iii) maximum allowed amount of wastes (RD 118.00277714.25-02 Nature Protection. Procedure of State Environmental Control of Household Solid Waste Landfills);
- iv) list of environmental actions which will be required to be followed by the project to meet existing regulations on impact on the environment; and
- v) general conclusions about possibility of project implementation.

At this point of the Project, LUKOIL is in compliance with the above requirements for the Project and continues to prepare and submit environmental documentation for various stages/components of the Project (e.g., railway spur, GPP) as required under the Republic of Uzbekistan. Project details are also refined during the permitting process.

LUKOIL is committed to disclosing Project information and maintaining open and proactive communications with all internal and external stakeholders. Community consultations were carried out and documented as part of the EIA process for the Kandym Field.

The most recent community consultations were held in March 2011 in Alat and Karakul districts of Bukhara Province². Representatives of mahallas, farmers, and local government participated in the meetings. LUKOIL provided information pertaining to its operations in Khauzak-Shady Block and its EHS performance, and development of the Kandym Field (including findings of the EIA), explained the grievance mechanism, provided details regarding employment opportunities, and highlighted the preliminary construction schedule. Community comments generally focused on employment and supply chain opportunities, environmental pollution, land use compensation, workforce lodging, impact of natural hazards on the project (i.e., earthquake) and solicitation for social program support (e.g., provision of computers for oil and gas college). Communities are generally supportive of this Project.

LUKOIL's ongoing community engagement activities include meetings with heads of local authorities, representatives of concerned organizations, and users of the land. LUKOIL disseminates Project information through various methods such as local and national newspapers, sector-specific journals, radio, and websites. Project-related EHS information will be posted on LUKOIL Uzbekistan's website (<http://www.lukoil-overseas.uz>)

Grievance procedures are in place to record and follow up on queries submitted to the company.

G. Availability of Documentation

The following documents are available electronically as PDF attachments to this ESRS at www.miga.org:

- Kandym Gas Field Development [Environmental Impact Assessment](#), prepared by LUKOIL (2011);
- [Statement on Environmental Impact \(SEI\)](#) for Development of the Shady Block of Dengizkul Field, prepared by LUKOIL (2011);
- [Environmental Impact Statement \(EIS\)](#) Infrastructure Construction of Khauzak-Shady Areas of Dengizkul Field, prepared by LUKOIL (2007); and
- Environmental Audit of the Contracted Area that includes Khauzak-Shady, Kandym Field Group and Kungard Plots, prepared by LUKOIL (2005). ([Book 1](#) and [Book 2](#)).

[The Biodiversity Action Plan \(BAP\)](#), dated March 2012 is available for disclosure as a PDF attachment to this ESRS at www.miga.org. [The Enhanced Biodiversity Monitoring Plan \(EBMP\)](#) dated May 2013, which complements the BAP, is available for disclosure as a PDF attachment to this ESRS at www.miga.org.

² An ADB representative attended these consultation meetings.

E&S documents for construction of eight (8) wells at Dengizkul Field of Khauzak-Shady:

- [Draft Environmental Impact Statement \(DEIS\) for construction of 8 new wells at Khauzak-Shady block of Dengizkul field \(2013\)](#), and
- [Cumulative Impact Assessment Section at Khauzak-Shady block of Dengizkul field \(2013\)](#).

These documents are also available locally at LUKOIL's office in Tashkent, with the majority available in Russian.