

Chapter

9



Assessment of Impacts

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9.1 INTRODUCTION

The Project will impact upon many aspects of the economy and the social fabric of Sakhalin Island and regions of the Russian Far East. Implementation of the Phase 2 development will result in a number of impacts and benefits to not only the Russia Federation but also to Sakhalin Region, its communities and its citizens.

Through a series of scoping exercises and initial consultation efforts key issues were identified as described in Chapters 10-15. Each section includes a discussion of the issues, any relevant SEIC policy/procedure/or commitment, as well as proposed Contractor and SEIC actions. If applicable, any residual effects are discussed.

9.2 STEPS IN THE ASSESSMENT PROCESS

The steps taken in this assessment process are described below (Table 9-01).

TABLE 9-01: STEPS IN THE ASSESSMENT PROCESS

Step	Action	Process
1	Identify project elements; regulatory/design requirements	Define project facilities, infrastructure and resource requirements; evaluate regulatory basis.
2	Determine sources of change; assess generic impacts	Identify source/process resulting in change. Review of high-level generic impacts as first step to assess potential scope.
3	Identify and consult with potentially affected stakeholders	Develop consultation program to identify the range of potential stakeholders and most culturally appropriate method of consultation.
4	Consult	Identify and consult with potentially affected individuals/communities.
5	Assess interaction and identify impacts	Determine the impacts resulting for interactions between member stakeholders and project elements.
6	Assess likelihood, magnitude and importance of impact	Evaluation impact importance by virtue of its consequences for people, impacts on the project and impacts, and on public perceptions of the Project.
7	Identify mitigation strategies	The process of identifying measures that will mitigate any negative impacts and enhance the positive benefits.
8	Identify residual impacts	Defined as the impacts remaining after mitigation. Overarching residual impacts are described at the end of Chapters 10-15 as appropriate.

Some of these actions are discussed below.

9.2.1 Consideration of Generic Impacts

There are a number of generic impacts typical of oil and gas projects. Types and applicability of impact measures vary depending upon the Project, however, almost all have similar high-level impacts. These in turn are associated with a well-defined set of mitigation measures.

Generic impacts and evaluations were initially considered as part of the scoping effort using a selection of tables prepared by one of this document's key authors (International Oil and Gas Producers, n.d.).¹¹ This analysis was conducted prior to any actual field visits and the topics were reconsidered after an initial public consultation effort. These assessments were made based on the combined experience of the SA Group.

Many issues typical of the Caucasus¹² and sub-Saharan Africa are not relevant to this project due to environmental and cultural differences. Protections against other types of potential impacts (e.g., such as impacts on water quality, distance to settlements) are well-defined in Russian regulations. Hence, many mitigation measures require only adherence to already stated legal standards.

¹¹ Much of this section is excerpted from the forthcoming International Oil and Gas Producer's publication entitled *Key Questions In The Management Of Social And Economic Issues In Oil and Gas Development*, n.d., which was prepared by one of this report's author's.

¹² C.f., impacts and mitigations measures for the:

- Chad Development project at http://www.esso Chad.com/Chad/Chad_HomePage.asp, Volumes 1 for both Cameroon and Chad; Socio-Economic Tables; Volume 3 Chad, Compensation and Resettlement Plan, Cameroon Volume 3 Compensation Plan, etc., and
- See SIAs for a number of sub-component projects of the Caspian Development and Export project at: <http://www.caspiandevlopmentandexport.com/CAU/eng/cau.asp>.

9.2.2 Role of Public Consultation in Identification of Community Specific Impacts

As described in previous chapters, extensive public participatory consultation was undertaken during the course of this work. The consultation effort will not stop with this report. This assessment has considered a broad diversity of public opinion as to the most appropriate mitigation measures to be implemented. Opinions change over time as people consider new facts and circumstances. The public will continue to be involved at all stages of the ongoing assessment and decision-making process and right through implementation of mitigation measures.

The results of an assessment of potential impacts and benefits in Sakhalin Region reflect the current state of the economy after its collapse in the early to mid-1990s. Many residents of Sakhalin's small rural communities lost social benefits, as factories and businesses that employed them were closed.

Prior to 1990, up to 60% of the Sakhalin Regional budget was allocated to social and cultural programmes. From 1996 to the present, only up to about 30% of the budget goes to these kinds of programmes, and most of this money is spent on personnel.

As described in Chapter 5, State-supported soft and hard community infrastructures also began to decline in the 1990s. Communities became unsustainable and many were scheduled for closure. Rural residents (especially the young) began to migrate to the district centres and Yuzhno-Sakhalinsk in search of jobs.

As rural poverty has increased, subsistence fishing and gathering and to a much lesser extent hunting, have become increasingly important. This is particularly apparent in the communities in central and northern Sakhalin. Here fish caught (both legally and illegally) are used for household consumption. More importantly, the fish is processed and sold; the income being used to purchase less expensive foods and other necessary cash expenditures.

Early scoping and consultation conducted by the SA Group identified many general citizen concerns, which were often non-specific. After repeated consultations, people were more willing to express their concerns about the Project implementation, the local socio-economic situation and other less public issues. This consultation process has so far resulted in the adoption of a number of SEICs policies and requirements as described in Chapter 1.

It has also led to the adoption of other strategies to address potential impacts and enhance benefits. These potential impacts, and the mitigation measures that SEIC considers the most appropriate at this stage in the consultation and Project implementation processes, are described below.

9.2.3 Types of Impacts

A **social impact** is a change that occurs as a consequence of an activity. The following information is adapted from the EIA in specific reference to potential social impacts on Sakhalin Island. This section describes types of impacts, which are referenced in the SIA in Table 9-02.

Impacts are described and assessed by major topic in the following chapters. A summary of residual impacts is included in each relevant chapters. Cumulative impacts that will result due to the development of other projects on Sakhalin are described in Chapter 15.

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TABLE 9-02: DEFINITIONS OF IMPACTS AND USE IN THE SIA

Term	Definition – Example/Application
Type of Impact	
Direct (or primary)	Impacts that are a direct result of project activities. A typical example is land needed for construction.
Indirect (or secondary)	Impacts that result from other developments or activities that would only occur as a result of the project, but are not the result of a direct project investment or activity. Examples include growth of supporting service and construction industries; changes in economic status of some households, enterprises, etc.
Cumulative	Impacts that act together to affect the same issue. Additive effects are the most important socio-economic effect. Additive effects will occur primarily due to development of other oil and gas projects on Sakhalin Island.
Non-normal	Impacts that result from non-normal events within the Project or in the external environment affecting the Project. This could occur due to events such as earthquakes, typhoons, oil spills, etc.
Residual Impacts	Impacts remaining after implementation of mitigation measures. May also include positive residual impacts for which not particular controls are in place or expected to be.
Desirability of Impacts	
Positive, Neutral, Negative	Self-explanatory. However, some impacts, e.g., use of access roads may be positive in some instances (e.g., use by locals to access berry fields), but negative in others (e.g., the environmental aspect of creating access to previously undisturbed areas).
ALARP	As low as reasonably possible. Is usually discussed in relation to a specific mitigation measure.
Probability of Impact	
Rare/Highly Unlikely	An event which would be highly unlikely to occur even once over the life of the Project.
Possible	An event which may occur several times over the life of the Project.
Probable/Certain	Events which are likely to occur at regular intervals.
Magnitude of Impact	
No Impact	People are not affected in any way by a particular activity.
Minor Impact	Requires no further Project action (the magnitude is low/or that adequate controls are already in place).
Moderate	Must demonstrate the impact has been reduced to a level that is As Low As Reasonably Practicable (ALARP).
Major	Always requires exploration of measures to minimise/reduce it to an acceptable level.
Duration of Impact	
Short-term; Temporary	Impacts that are predicted to last only for a limited period but will cease on completion of the activity, or as a result of mitigation/reinstatement measures and expected social equilibrium.
Long-term; Temporary	Impacts that will continue over an extended period. In the case of this Project these are considered to extend beyond the construction and commissioning period.
Permanent	Impacts that occur once on development of the project and cause a permanent change in the environment, on the social structure, or resource.
Numbers of Entities/ Geographical Scope	
Individual	Small number of individuals, households and/or individual enterprises. Refers to individuals, households, businesses, agricultural co-operatives, clan enterprises, etc.
Local	Small number of communities or administrative areas. Refers to settlements such as villages, towns, and Districts within the Sakhalin Oblast.
Regional	Regional scale as determined by administrative boundaries. Generally, regional level impacts refer to the Sakhalin Oblast, exclusive of the Kuril Islands.
National	Entire country. National level effects are primarily economic and refer to the Russian Federation.
Transboundary	Impacts experienced in one country as a result of activities in another. During construction these are primarily limited to local and regional effects in other countries as a result of procurement contracts. The SIA does not address potential transboundary effects.

Impacts will be considered significant where:

- They are non-compliant with the laws and regulations of the Russian Federation.
- It is not in keeping with the spirit of generally accepted international social and environmental standards.
- Adverse impacts on local infrastructure exacerbating already existing constraints on community soft and hard infrastructure (Chapter 5).
- Individuals, households, and communities consulted consider them significant.
- They will have a major temporary change on the livelihood of individual households that could impact on the health or stability of the household or community.
- They have a major permanent long-term affect, which can not be effectively mitigated.

9.2.4 Development and Implementation of Mitigation-of-Impact Measures

The purpose mitigation measures is to remove, minimise, and/or compensate for residual adverse effects to As Low As Reasonably Practicable (ALARP). Implementable mitigation measures will be developed to address potentially adverse impacts identified. Examples of types of measures and common mitigations include.

Type of Measure	Examples
Avoidance	Reroute around area of concern
Prevention	Vaccination programs
Impact reduction	Reduce size of construction footprint
Probability of occurrence	Upgrading road systems to reduce risk of accidents
Compensation	Individual/community compensation in cash or in-kind
Enhancement	Improvement of education system, public utilities

There are cases where significant adverse impacts may be identified for which no realistic and/or practicable impact mitigation measure exists. In some cases it may be possible to partially mitigate the scale or degree of the impact but a significant residual adverse impact will remain.

Where there is doubt regarding the impact, a risk-averse approach will be adopted and appropriate monitoring and contingency plans will be put in place.

In the following Chapters these measure will be discussed in light of information collected and impacts assessed after the community consultation program and development of mitigation of impact measures.