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Principal objections

Analysis of the Sakhalin II oil and gas project's compliance with the Equator Principles



Fukuoka NGO Forum on ADB



Written by PLATFORM

Based on evaluation by Pacific Environment of Sakhalin II project compliance with World Bank Group standards

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Executive Summary

This report finds that the Sakhalin II integrated oil and gas project fails to comply with the Equator Principles on responsible lending.

The project is situated at Sakhalin Island in Russia's Far East, and is being developed by a consortium led by Shell. It will consist of three offshore platforms, offshore and onshore pipelines, an onshore processing facility, a liquefied natural gas (LNG) facility and oil and gas export terminal.

It will have severe environmental impacts, including threatening the critically endangered Western Gray Whale with extinction, damaging habitats of endangered bird and fish species, and polluting important fisheries. Experts have reported that the project design falls way short of industry best practice, and that its risk assessments are inadequate. As a result, the project risks causing a catastrophic oil spill, as well as major routine impacts.

Local and international environmental organisations have demanded substantial design changes, and Russian groups have initiated lawsuits against the project.

With a capital cost of at least \$12 billion, the project is expected to seek project financing later in 2004. This report recommends that commercial banks do not finance the project in its current form.

20 leading commercial banks have now adopted the Equator Principles, established in June 2003, which commit the banks to not financing projects that fail to meet their environmental and social guidelines.

While environmental organisations have welcomed the introduction of the Equator Principles, they expect the banks to apply these Principles in good faith by not supporting damaging projects. Banks must carry out rigorous due diligence on projects, and demonstrate transparency by publishing their assessments of compliance with the Equator Principles.

Non-compliance with Equator Principles

As currently designed, the Sakhalin II project fails to comply with the Equator Principles. The project's environmental impact assessment (EIA) is deficient on a number of counts. These include, *inter alia*:

- The environmental assessment fails to include key baseline data, including identification of specific information about endangered species that is prerequisite to adequate assessment of project impacts and to determination of necessary mitigation measures. These endangered species include the Western Gray Whale, Stellar's Sea Eagle, and Sakhalin taimen, masu salmon, and other wildlife species. Some of the baseline data conflicts with other expert reports (including on endangered birds and on significance to salmon of streams). (Breach of Equator Principle 3a).
- The EIA fails to evaluate conflicts between the project Production Sharing Agreement and Russian environmental law, does not address legal challenges to the project, and is unclear about environmental protection status of Aniva Bay. (Breach of Principle 3b).

- Key environmental impacts are omitted from the EIA, including the impacts on many wild salmon-bearing streams and the impact of oil spills. Other important impacts are inadequately analysed, such as those on the Western Gray Whale. Some mitigation measures are missing, flawed, or their effectiveness not substantiated, including mitigation of impacts on Western Gray Whale, and of seismic risks. (Breach of Principle 3d).
- Cumulative impacts with other oil and gas projects on Sakhalin Island are not considered. (Breach of Principle 3m).
- The EIA does not systematically compare the project with feasible alternatives. (Breach of IFC Safeguard Policy OP 4.01 (Environmental Assessment) – compliance with which is required under Principle 3).

The Equator Principles also require the EIA to assess the project's compliance with the World Bank's Pollution Prevention and Abatement Handbook (Principle 3). The EIA does not do this, nor does it provide sufficient information, in an appropriate form, for an external reviewer to assess compliance.

There are further problems in project design, which also constitute breaches of the Equator Principles:

- The siting of the offshore platforms and the routing of the offshore pipeline will degrade the Western Gray Whales' summer feeding ground, a critical natural habitat. (Breach of IFC Safeguard Policy OP 4.04 (Natural Habitats), and hence Equator Principle 3).
- The project fails to apply the precautionary principle in relation to Western Gray Whale feeding grounds, to watercourse crossings, or to dumping of wastes in Gulf of Aniva. (Breach of IFC Safeguard Policy OP 4.04 (Natural Habitats), and hence Principle 3).
- Consultation processes were flawed, the project failed to provide sufficient information to stakeholders, and did not take consultees views into account. (Breach of Principle 5).

The Equator Principles also require production of an Environmental Management Plan (Principle 4), which is yet to be published.

Recommendations

Based on these findings, we recommend that banks take the following action:

- **In the absence of fundamental changes to the project, adopting banks should refuse loans to the Sakhalin II project.**
- **Banks should carry out their own rigorous due diligence of the project, rather than relying on that of project sponsors or other financial institutions.**
- **In order to establish trust with civil society, and in the interests of transparency, banks should publish their analysis of project compliance with the Equator Principles.**

1 - Introduction

This report assesses the compliance of the Sakhalin II project with the Equator Principles on responsible lending. It cross-refers to data and analysis in a Preliminary Evaluation of Conformity of the project with the environmental standards of the World Bank, produced in January 2004 by Pacific Environment. The Pacific Environment evaluation is attached.

The Sakhalin II project

The Sakhalin II project is an integrated oil and gas development, designed to extract, and deliver for export, offshore oil and gas from the eastern coast of Sakhalin Island in Russia's far east. Phase 1 of the project, which has been implemented, consists of an off-shore oil platform, which began production in July 1999. The much larger Phase 2 of the project, which is currently under development, involves a second offshore oil and associated gas platform, an off-shore gas platform, offshore and onshore pipelines, an onshore processing facility, an LNG (liquefied natural gas) facility and an oil export terminal.

The project is being developed by Sakhalin Energy Investment Company (SEIC), a consortium operated by Shell and consisting of Shell, Mitsubishi and Mitsui.

With a cost of over \$11 bn, project sponsors claim that Sakhalin II is the largest single integrated oil and gas project ever undertaken. The project is to be financed on a 45-55 debt-equity basis, and is expected to seek project financing for the debt portion in 2004, aiming for financial close in October 2004. Credit Suisse First Boston is financial adviser to the consortium.

Environmental impacts of the project

The Sakhalin II project has been highly controversial. Environment groups are extremely concerned about the project's impacts on the critically endangered Western Gray Whale, which it threatens with potential extinction. The onshore pipeline will severely damage important wild salmon spawning streams, and the LNG and oil export terminals will pollute the fisheries-rich Aniva Bay. The project risks a catastrophic oil spill – caused either by a tanker accident or by an earthquake rupturing the pipeline – which is of

particular concern, given the ecological sensitivity of the area.

Experts have reported that in several key regards the project design falls way short of industry best practice, and that risk assessments are inadequate. Civil society groups accuse SEIC of not acting on their concerns.

The Equator Principles

The Equator Principles, established in June 2003, are a set of voluntary guidelines developed by leading private banks for managing social and environmental issues related to the financing of development projects. At the time of writing, the Principles have been adopted by 20 banks, accounting for over 74% of the project finance market.¹

The Equator Principles commit adopting banks to:

“undertake to review carefully all proposals for which our customers request project financing. We will not provide loans directly to projects where the borrower will not or is unable to comply with our environmental and social policies and processes”²

The Principles state clearly that adopting banks “will only provide loans to projects” that meet the nine principles.³



2 – Concerns over the Sakhalin II project

The Sakhalin II project has been the subject of considerable controversy, due to its severe environmental impacts.

NGOs and EBRD voice concerns; Russian court accepts lawsuit

In January 2003, a coalition of 50 Russian and international environmental non-governmental organisations published a set of common demands on the project – to which Shell and its partners have still not adequately responded.⁴ In December 2003, 32 Japanese organisations and 120 individuals wrote to financial institutions, to raise serious inadequacies in SEIC's handling of environmental and social issues.⁵ Concerns over the project have also been raised by international NGOs and parliamentarians in Europe and North America.

The EBRD has described the Sakhalin II EIA as "unfit for purpose" and has indicated that it will not provide financing unless and until Sakhalin Energy provides additional information that adequately addresses their concerns. EBRD's President publicly commented further that "We are not yet satisfied with the answers we have received and the present situation, and we have said so to the sponsors of the project."

On 1st March 2004, the Presnensky Court of Moscow agreed to review a lawsuit, brought by Russian environmental groups, seeking the discontinuance of the project.⁶ The suit alleges that the Sakhalin II project breaches Russian environmental law by threatening endangered species listed in the Red Book.

Western Gray Whale threatened with extinction

The east coast of Sakhalin Island is the only known summer feeding ground of one of the world's most endangered species of whale, the Western Gray Whale. With a population of just around 100 remaining, and fewer than 20 breeding females, the very survival of the species is threatened.⁷ The species is classified as Critically Endangered (extremely high risk of extinction) by the IUCN (World Conservation Union).

Since 1999, scientists have reported seeing an increasing number of 'skinny' (under-nourished) whales – which reduces the population's chance of recovery. Although the cause of this under-nourishment is not known for certain, it has been observed since the Phase 1 Sakhalin II platform began operation.⁸

Yet the SEIC consortium plans to construct offshore pipelines on the seabed directly through the whales' benthic feeding ground. Since the whales feed by sucking up sediment from the seabed and filtering out benthos (small animals and plants that live there), it is feared that pipelines along the seabed will cause substantial disruption to feeding patterns, and further risk the population's viability.

There will also be major impacts on the whales from routine and accidental pollution from the oil and gas facilities, from sedimentation caused by construction activities, from potential collision with marine vehicles, and from constant operational noise. SEIC has failed to adequately assess these impacts, or to demonstrate that mitigation measures that it proposes are adequate to protect the Western Gray Whale from negative impacts.

Russian ichthyological expert ME Vinogradov has warned,

*"Without designing special measures for gray whale conservation, the continuation of the 'Sakhalin-II' project can lead to extinction of this unique population."*⁹

As a minimum, NGOs believe it is necessary to site the offshore platform, and route the pipeline, at safe distance away from the feeding ground.

Major impacts on endangered bird and fish species and on fisheries

The project also threatens a number of other endangered species, including 11 bird species listed in the Red Book of the IUCN, 22 listed in the Red Book of the Russian Federation and 39 species listed in the Red Book of the Sakhalin Region.

The planned 800-km onshore pipeline will threaten the several hundred streams it crosses – many of them important for spawning of wild

salmon and other salmonid species, including the goy (Sakhalin taimen), which is listed as endangered in the Red Book of the Russian Federation. Yet the SEIC consortium proposes to cross the vast majority of these streams by 'wet trenching' – excavating a trench straight through the stream, then backfilling it – a method which causes major silting and sedimentation, severely damaging the habitat. In virtually all cases the consortium has refused to use industry best practice methods such as horizontal directional drilling or aerial crossings. It also proposes in-stream crossings for most heavy construction machinery, causing further disturbance of the streambeds.

NGOs argue that more sensitive stream crossing methods must be used, rather than the outdated, high-impact approach.

In construction of the LNG terminal at the southern end of the pipeline, the project proposes dumping of 1 million cubic metres of dredging wastes, and 500,000 cubic metres of runoff wastes annually into the Gulf of Aniva, a crucial fishery which provides 25 % of the pink salmon catch on Sakhalin Island. This dumping may cause major disruption to the ecology of the area.

NGOs insist that if dumping is necessary, it must take place in the less ecologically delicate open sea rather than in the fisheries-rich Gulf.

Saffron cod and herring stocks are a key food source for the native Nivkh peoples. According to the *Wall Street Journal*, local fishermen report that:

*“In 1999, the first year of commercial oil production, herring by the thousands washed up dead on local beaches, and local schools of saffron cod have since shrunk dramatically.”*¹⁰

These collapses have particularly negative impacts on native inhabitants, who depend on fish as a basis of their economy and traditional culture.

Risk of spills not addressed

The Sakhalin II pipeline route in an area of very high earthquake activity. Following the devastating 7.6 Richter Scale Neftegorsk earthquake in 1996 (which destroyed the town), the seismicity rating for much of the pipeline route was raised from one magnitude 6-7 event every one thousand years to one magnitude 8-9 event every one thousand years.¹¹ A severe earthquake could cause a failure of the Sakhalin II pipelines, potentially creating a catastrophic oil spill that could harm or destroy terrestrial or aquatic habitats.

Yet SEIC has failed to apply an effective approach to managing that risk. According to a report by independent expert Richard Fineberg in February 2004,

*“SEIC’s presentation of information on these issues has frequently been fragmented, less than clear, internally contradictory, out of date, vague and lacking in clear links to the technical support or foundations for the company’s approach to important questions... We have been unable to locate substantive analytical supporting documentation for SEIC’s assertion that buried pipelines can be engineered and constructed in a manner that will effectively mitigate Sakhalin’s high seismic risks.”*¹²

Independent experts from Alaska and the Shetland Islands issued a report in 1999 called “Sakhalin's Oil: Doing It Right”,¹³ warning that the current oil spill prevention and response measures leave the coastlines of Sakhalin and Hokkaido vulnerable to a catastrophic spill from tanker traffic, or from extraction and transport operations. Oil spill risks under the second phase may be more severe including the risk of ruptures or leaks from off-shore and on-shore pipelines and facilities and the risk of catastrophic tanker spill in the accident-prone La Perouse Straights.

As currently designed, the project thus stands to cause an ecological disaster.

3 - The importance of rigorous implementation of the Equator Principles

While civil society organisations have welcomed the commitments made in the Equator Principles, they have made it clear that they expect adopting banks to apply them rigorously, and in good faith, in their decisions on whether or not to finance specific projects.

When the Equator Principles were launched, non-governmental organisations (NGOs) warned that:

*“Whether or not the Equator Principles represent a major step or a negligible one will be demonstrated through banks’ commitment to ... implementation of the Principles”.*¹⁴

However, at the time of writing, ten months and several damaging projects¹⁵ after the signing of the Equator Principles, it appears difficult to see that the Principles are actually being applied in banks’ decisions on whether to finance projects, despite the commitment in the Principles that

*“We will not provide loans directly to projects where the borrower will not or is unable to comply with our environmental and social policies and processes”.*¹⁶

This perception is only amplified by banks’ refusal to publish their own (and their consultants’) analyses of projects’ compliance with the Principles.

As a result, scrutiny of banks’ lending decisions is increasing. Recently, international NGOs established the BankTrack network to coordinate their activities in this area.

Lessons of Baku-Tbilisi-Ceyhan pipeline

In the case of the Baku-Tbilisi-Ceyhan (BTC) oil pipeline, NGOs found numerous breaches of the Equator Principles and of International Finance Corporation (IFC) standards, and submitted analysis of these to participating banks.¹⁷ The banks hired consultants Mott MacDonald to assess compliance, and claimed that they found the project fully compliant, but refused to publish Mott MacDonald’s report.

Several NGOs were publicly critical of the banks’ decisions to finance BTC, without proper public justification for the decision.

WWF, for example, commented,

*“The Royal Bank of Scotland’s funding of this pipeline totally undermines its commitment, as a signatory of the Equator Principles, to responsible funding practices. As a test case, the BTC pipeline would seem to expose the signing of these banks to the Principles as a public relations exercise which allows them to continue with business as usual whatever the risks to people and nature.”*¹⁸

Friends of the Earth added,

*“Our organisations last year cautiously welcomed the Equator Principles as a first step towards environmentally and socially sound banking. However, since then we have seen already several occasions where these banks continued to finance controversial projects with vast consequences for the environment, BTC being only the last of them. The very credibility of the Equator Principles is at stake here”.*¹⁹

The banks also faced criticism in the media.²⁰

Since then, an investigation by the *Sunday Times* newspaper has found that faulty weld coatings are being applied to the pipeline, threatening its very integrity and safety – and that these defects were concealed from investors.²¹ As a result of the investigation, the pipeline consortium is under pressure to dig up sections of the pipeline which are already trenched, and re-do the welds – which could cause substantial delay and extra cost.

Meanwhile, NGOs have resorted to the courts to seek protection of human rights and environment.²²

Much of the reputational damage, and the uncertainty caused by legal challenges and technical failures, could have been avoided by investors, by engaging seriously in concerns raised about project non-compliance with the Equator Principles.

Due diligence cannot be deferred to others

The Equator Principles state that:

“The adopting institutions view these principles as a framework for developing individual, internal practices and policies.... Banks are adopting and implementing these principles voluntarily and independently, without reliance on or recourse to IFC or the World Bank.”²³

However, in practice some banks have privately admitted that the involvement of the IFC in a project, or of other public financial institutions such as export credit agencies, has reassured them that they need to be less rigorous in their due diligence, as the public body’s involvement endorses the project as having acceptable impact, and mitigates project risks.

This approach will prove increasingly difficult. NGOs will hold commercial banks accountable for their own decisions, and not accept simple deferral to public bodies. BankTrack – the network of NGOs focussing on the environmental and social impacts of project finance lending – has made a set of recommendations to banks on how to implement the Equator Principles, in its recent paper, ‘No U-turn allowed’. These include:

“Although the EPs refer to IFC standards and policies, banks should always conduct their own due diligence, and not just refer to assessments made by IFC or other borrowers.”²⁴

Furthermore, public financial institutions themselves will also require banks to do their own due diligence.

The case of the Dabhol power plant in India is a good illustration. Three banks, Standard Chartered, ABN Amro and ANZ, provided loans to the project in the 1990s, and obtained guarantees from the UK’s Export Credit Guarantees Department (ECGD) and other export credit agencies. However, the project was mired in controversy over allegations of corruption and human rights abuses, and collapsed in 2001 over a payments dispute. The banks made insurance claims to ECGD, which ECGD appears to be resisting – and this may be over the banks own failures to assess the project properly.²⁵

Indeed, NGOs have argued,

“We believe that, in examining the claims made by the three banks, the ECGD should give serious consideration to whether the banks concerned conducted adequate due diligence before investing in what was clearly at the time an extremely risky project and whether the ECGD would be rewarding poor investment decisions by paying such a claim.”²⁶

In the case of Sakhalin II, the IFC is not participating, so banks will need to make their own judgements on the project’s compliance with the Equator Principles and with IFC Safeguard Policies.

Furthermore, as one of the largest project financings ever, and with a financing decision due over a year after the introduction of the Equator Principles (by which time banks will be expected to have fully developed their management systems, training etc), the project will provide a key test of banks’ genuine commitment to implementing the Principles.

4 – Evaluation of project compliance with Equator Principles

The Equator Principles state clearly that adopting banks “will only provide loans to projects” that meet the nine principles.²⁷ The Sakhalin II project’s compliance with the Principles is evaluated below.

Principle 1 – Categorisation

Principle 1 states that projects should be classified according to their impacts.²⁸

This is elaborated in Exhibit 1:

“A proposed project is classified as Category A if it is likely to have significant adverse environmental impacts that are sensitive, diverse, or unprecedented. A potential impact is considered “sensitive” if it may be irreversible (e.g., lead to loss of a major natural habitat) or affect vulnerable groups or ethnic minorities.”²⁹

From this definition, it is clear that Sakhalin II should be classified as category A.

Principle 2 – Environmental assessment

As required by the Equator Principles, SEIC has prepared an environmental, social and health impact assessment (ESHIA), published in September 2003. This comprises three elements – an environmental impact assessment (EIA), a social impact assessment (SIA) and a health impact assessment (HIA).

However, Principle 2 further requires that the assessment

*“addresses to our satisfaction key environmental and social issues identified during the categorisation process”.*³⁰

There are strong indications that the assessment falls a long way short of international best practice. This is examined in detail under Principle 3, below.

Although compliance with Principle 2 rests on lending banks’ judgement of what constitutes addressing to their satisfaction, banks should be cautious about accepting low standards as

satisfactory. The Equator Principles were designed to help operationalise best practice, and their credibility would be fatally undermined if they were seen to do the opposite.

Principle 3 (i) – Content of environmental assessment

Principle 3 gives a list of seventeen elements that an environmental impact assessment (EIA) is required to address.³¹

At least eight of these elements are not adequately addressed in the EIA, as shown below in Table 1. These include:

- Major elements of the biological baseline (including key information about endangered species and their specific habitats) and geophysical baseline (including seismic behaviour at pipeline crossings) are not assessed in the EIA, giving rise to a risk of unpredicted and potentially severe impacts.
- Regulatory and legal issues are not fully assessed – which may cause unforeseen litigative holdups to the project, or requirements for major redesign.
- Several environmental impacts are either unassessed (eg impact on Makarovski Preserve, impact of tanker accidents) or only partially and inadequately assessed (eg impacts on Western Gray Whale).
- Some mitigation measures are missing, flawed, or their effectiveness not substantiated, including mitigation of impacts on Western Gray Whale, fish and wildlife, of design of watercourse crossings, of seismic risks.

The project proponents will need to do considerable work to bring the EIA up to standards acceptable under the Equator Principles.

Table 1 – Content of Sakhalin II EIA – compliance with Equator Principles requirements (Principle 3)

Equator Principles requirement³²	Assessment of compliance <i>(see section of Pacific Environment (PE) evaluation for more information)</i>
a) assessment of the baseline environmental and social conditions	<p>Elements of assessment omitted:</p> <ul style="list-style-type: none"> • No base line data on status of rare and endangered species in the OPF area, habitat needs, identified sensitive sites, and site specific mitigation measures <i>(PE section 5b)</i>; • Evaluation of impacts on salmon based on commercial species only <i>(PE section 3b)</i>. <p>Incomplete assessment:</p> <ul style="list-style-type: none"> • Key seismic information missing or contradicts other information in source documentation <i>(PE section 3c)</i>; • Salmon surveys and other data on affected salmon habitat are incomplete <i>(PE section 3b)</i>; • No clear methodology for Social Impact Assessment <i>(PE section 10a)</i>. <p>Disputed results:</p> <ul style="list-style-type: none"> • Discrepancy between Shell/SEIC statements and Joint Study of the Wildlife Preservation Bureau of Hokkaido and Moscow State University on the number of braces of Steller’s sea eagle in Chaivo Gulf and Piltun Gulf <i>(PE section 5b)</i>; • Conjecture that most watercourses are of lower significance to salmon than believed by regional fisheries authorities <i>(PE section 3b)</i>. <p>Assessment made without use of proper or sufficient data:</p> <ul style="list-style-type: none"> • Some seismic risk conclusions based on generalizations and not on the complex site-specific geological conditions on Sakhalin <i>(PE section 3c)</i>.
b) requirements under host country laws and regulations, applicable international treaties and agreements	<p>Omissions:</p> <ul style="list-style-type: none"> • Evaluation of citizens’ environmental lawsuits against the project <i>(PE section 11a)</i>; • Evaluation of conflicts between environmental provisions of the project’s Production Sharing Agreement and Russian national legislation <i>(PE section 11a)</i>. <p>Unclear and inadequate assessment:</p> <ul style="list-style-type: none"> • Contradictory information on protection status of Aniva Bay; loose reference to seeking exemptions if restrictions enforced <i>(PE section 6b)</i>.

d) protection of human health, cultural properties, and biodiversity, including endangered species and sensitive ecosystems

Omission of evaluation of environmental risks and impacts:

- Impact of tanker accidents, including in Aniva Bay and La Perouse Straights (*PE section 1b*);
- Impacts of pipelines and access roads on poaching of wild salmon (*PE section 3e*);
- Impact of new hatcheries on wild salmon stocks (*PE section 3e*);
- Impacts of pipelines crossing the Makarovski Preserve (*PE section 5a*);
- Impact of hydrotesting of pipelines on fish (*PE section 3b*);
- Potential thermal impacts on salmon (*PE section 3b*).

Evaluation of some mitigation measures deferred until later, so omitted or treated incompletely in EIA:

- Oil spill response plans for various elements only in preliminary form (*PE section 1a*);
- Solid waste management plans not yet developed (*PE section 7a*);
- Key project design decisions that affect critical risks and impacts (eg impact of watercourse crossings on wild salmon) to be made in Detailed Design phase subsequent to EIA (*PE sections 3a, 8b, 9a*).

Failure of design methodology:

- Decisions of preferred method of watercourse crossings (especially trenching) prior to complete knowledge of precise pipeline crossing locations and site-specific characteristics upon which such decisions should be based (*PE section 3b*).

Failure to apply generally accepted EIA methodology:

- Failure to identify High Magnitude Impact of Major Significance (risk of causing extinction of Western Gray Whale) (*PE section 2a*);
- Failure to apply a precautionary approach (eg in relation to preventing extinction of Western Gray Whale, to seismic risks, to other impacts) (*PE sections 2c, 13a*);
- Some risk analysis (eg significance criteria for impacts on groundwater at OPF) based only on risks to humans, not to the environment (including salmon, other fish and wildlife and habitats) (*PE section 3d*);
- No analysis of cumulative impacts of project elements in relation to other project elements (*PE section 4a*).

Reliance on conjecture rather than analysis to reach many conclusions:

- Assessment of impacts (eg noise) on Western Gray Whales, and success of mitigation measures to protect them, based on conjecture rather than quantifiable data or analytical modeling (*PE section 2b*);
- Prediction of most residual impacts not based on quantifiable data or analytical modeling (*PE sections 3a, 3b, 3c, 5b*).

i) socioeconomic impacts	Inadequate assessment: <ul style="list-style-type: none"> Insufficient detail on social impacts and mitigation, and lack of quantification, in Social Impact Assessment (<i>PE section 10a</i>).
m) cumulative impacts of existing projects, the proposed project, and anticipated future projects	Omission: <ul style="list-style-type: none"> Cumulative impacts of Sakhalin III-VI projects.³³ Inadequate approach: <ul style="list-style-type: none"> Cumulative impacts with Sakhalin I considered only partially and superficially (without quantitative analysis).³⁴
n) participation of affected parties in the design, review and implementation of the project	Inadequate and flawed approach: <ul style="list-style-type: none"> Public consultations contrived; project sponsors fail to disclose requested information; project sponsors present manipulated data presented at consultations; public and independent expert input ignored (<i>PE section 12a</i>).
o) consideration of feasible environmentally and socially preferable alternatives	Inadequate and flawed approach: <ul style="list-style-type: none"> Evaluation of alternatives appears based on preconceived conclusions; no adherence to required methodology, no appropriate scale of resolution, and no due consideration of stakeholder input (<i>PE section 8a</i>).
q) pollution prevention and waste minimization, pollution controls (liquid effluents and air emissions) and solid and chemical waste management	Evaluation of some critical risks and impacts deferred until later, so omitted or treated incompletely in EIA: <ul style="list-style-type: none"> Oil spill response plans for various elements only in preliminary form (<i>PE section 1a</i>); Solid waste management plans not yet developed (<i>PE section 7a</i>)

Principle 3 (ii) – World Bank Pollution Prevention and Abatement Guidelines

Secondly, Principle 3 requires that:

“Reference will have been made to the minimum standards applicable under the World Bank and IFC Pollution Prevention and Abatement Guidelines... the EA will have addressed, to our satisfaction, the project’s overall compliance with (or justified deviations from) the ... Guidelines”³⁵

Detailed and rigorous assessment of project compliance with requirements of the World Bank Pollution Prevention and Abatement Handbook is outside the scope of this report. However, some initial observations are made below.

Although the Sakhalin II EIA lists the Handbook as one of the “typical international guidance that may be relevant”³⁶, it does not assess compliance with it – nor does it even make reference to the standards it requires. Indeed, in cases where the EIA gives projected emissions levels, it is in different units from those specified in the Handbook. In order to comply with Equator Principle 3, the EIA will have to be supplemented to explicitly evaluate compliance.

The Handbook requires that

“Emissions levels for the design and operation of each project must be established through the environmental assessment (EA) process on the basis of country legislation and the Pollution Prevention and Abatement Handbook, as applied to local conditions. The emissions levels selected must be justified in the EA.”³⁷

The Sakhalin II EIA does not justify its emissions levels, but simply (at most) states them, so fails to comply with this requirement.

Furthermore, there are several types of emissions whose projected levels are omitted altogether from the EIA. For example:

- Solid wastes generated by pipeline pigging are not assessed – they are dismissed on grounds that they will be much smaller in volume than construction wastes, but the EIA neglects to assess their different toxicity profile.
- Atmospheric emissions from the onshore processing facility are not quantified, on

grounds that the facility is not near ‘human receptors’.

- Atmospheric emissions from the offshore platform are not quantified.

Principle 3 (iii) – IFC Safeguard Policies

Thirdly, Principle 3 requires that:

“For projects located in low and middle income countries as defined by the World Bank Development Indicators Database, the EA will have further taken into account the then applicable IFC Safeguard Policies ... the EA will have addressed, to our satisfaction, the project’s overall compliance with (or justified deviations from) the ... Safeguard Policies”³⁸

The World Bank categorises the Russian Federation as a lower-middle income country,³⁹ so the requirement of compliance with the Safeguard Policies applies to Sakhalin II.

Of particular relevance to the Sakhalin II project are IFC Operational Policies OP 4.01 (Environmental Assessment) and OP 4.04 (Natural Habitats).

The project fails to comply with both of these policies on a number of counts, which are tabulated below (Tables 2 and 3).

Six relevant requirements of OP 4.01 (Environmental Assessment) are breached:

- Baseline data collection is incomplete, inadequate and potentially inaccurate – including assessment of endangered species, wild salmon populations and social baseline;
- Several major environmental impacts not identified or not assessed – eg tanker accidents, impacts on Makarovski Preserve, certain impacts on wild salmon; some impacts incompletely assessed – eg on Western Gray Whale; some of mitigation measures inadequate – eg protection of Western Gray Whale;
- Consultation failed to provide sufficient information; failed to take consultees’ views into account;
- Project not systematically compared with alternatives; many decisions made on technical or economic basis alone;

- Transboundary impacts not assessed;
- Advisory panel not appointed.

OP 4.04 (Natural Habitats) rules out projects which

“involve the significant conversion or degradation of critical natural habitats”.

The offshore pipeline of the Sakhalin II project will cause degradation of the Western Gray Whales’ summer feeding grounds, which are a critical natural habitat. Thus, in its current design, the project violates OP 4.04.

The project also fails to comply with OP 4.04’s requirements for a precautionary approach and for effective consultation on natural habitats.

Table 2 – Compliance of Sakhalin II project with IFC OP 4.01 (Environmental Assessment)

IFC requirement	Wording of requirement	Assessment of compliance
Baseline data	<p><i>“Assesses the dimensions of the study area and describes relevant physical, biological, and socioeconomic conditions, including any changes anticipated before the project commences. Also takes into account current and proposed development activities within the project area but not directly connected to the project. Data should be relevant to decisions about project location, design, operation, or mitigatory measures. The section indicates the accuracy, reliability, and sources of the data.”⁴⁰</i></p>	<p>Non-compliance:</p> <ul style="list-style-type: none"> • Significant relevant biological and physical data omitted or potentially inaccurate (see Table 1, above – row a); • Some data not sufficient to make informed decisions about project location, design, operation and mitigation measures (see Table 1 – rows a and d); • Accuracy and reliability of data not assessed; • Methodology of socioeconomic data not indicated (see Table 1 – row a); • Cumulative analysis does not consider Sakhalin III-VI oil and gas projects (see Table 1 – row m).
Environmental impacts	<p><i>“Predicts and assesses the project’s likely positive and negative impacts, in quantitative terms to the extent possible. Identifies mitigation measures and any residual negative impacts that cannot be mitigated.”⁴¹</i></p>	<p>Non-compliance (see Table 1 – row d):</p> <ul style="list-style-type: none"> • Failure to identify High Magnitude Impact of Major Significance (risk of causing extinction of Western Gray Whale); • Several substantial impacts omitted or incompletely assessed – including tanker accidents, impacts on wild salmon, on Makarovski Preserve; • Several mitigation measures inappropriate, or lacking evidence of effectiveness, or not yet designed.
Consultation	<p><i>“For all Category A projects ... the project sponsor consults project-affected groups and local nongovernmental organizations (NGOs) about the project’s environmental aspects and takes their views into account.”⁴²</i></p>	<p>Non-compliance:</p> <ul style="list-style-type: none"> • ‘Consultation’ took the form of one-sided presentations on the benefits of the project – affected groups’ and NGOs’ views, and expert advice not taken into account in project planning (see attached Pacific Environment (PE) evaluation, section 12a); • Key documents not made available (PE section 12a).

Analysis of alternatives	<p><i>“Systematically compares feasible alternatives to the proposed project site, technology, design, and operation—including, the “without project” situation—in terms of their potential environmental impacts; the feasibility of mitigating these impacts; their capital and recurrent costs; their suitability under local conditions; and their institutional, training, and monitoring requirements. For each of the alternatives, quantifies the environmental impacts to the extent possible, and attaches economic values where feasible.”⁴³</i></p>	<p>Non-compliance:</p> <ul style="list-style-type: none"> • No systematic comparison (failure to use recommended methodology⁴⁴); • Some highly significant impacts not considered in alternatives analysis – many decisions made only on cost basis;⁴⁵ • Not compared with ‘without project’ situation⁴⁶; • Comparative impacts of various alternatives not quantified; • Stakeholder input not considered.
Transboundary and global impacts	<p><i>“EA takes into account ... transboundary and global environmental aspects.”⁴⁷</i></p>	<p>Non-compliance:</p> <ul style="list-style-type: none"> • The EIA asserts that the main transboundary impact is oil spills affecting Japan, but gives no analysis of the environmental and social impact spills would have.
Advisory panel	<p><i>“For Category A projects that are highly risky or contentious or that involve serious and multidimensional environmental concerns, the project sponsor should normally also engage an advisory panel of independent, internationally recognized environmental specialists to advise on all aspects of the project relevant to the EA.”⁴⁸</i></p>	<p>Non-compliance:</p> <ul style="list-style-type: none"> • Panel not appointed. Project is Category A (see above – Principle 1), is highly risky (risks of onshore and offshore spills, seismic risks etc) and contentious (numerous NGOs concerned), and involves serious environmental concerns (eg potential extinction of Western Gray Whale).

Table 3 – Compliance of Sakhalin II project with IFC OP 4.04 (Natural Habitats)

IFC requirement	Wording of requirement	Assessment of compliance <i>(see section of Pacific Environment (PE) evaluation for more information)</i>
Precautionary approach	<i>“Apply, a precautionary approach to natural resource management to ensure opportunities for environmentally sustainable development.”⁴⁹</i>	Non-compliance: <ul style="list-style-type: none"> • Precautionary approach not applied – eg in relation to Western Gray Whale feeding grounds, to watercourse crossings, or to dumping of wastes in Gulf of Aniva (<i>PE section 13a</i>).
Critical natural habitats	<i>“IFC does not support projects that, in IFC’s opinion, involve the significant conversion or degradation of critical natural habitats.”⁵⁰</i>	Non-compliance: <ul style="list-style-type: none"> • IFC defines “critical natural habitats” as “sites that are critical for rare, vulnerable, migratory, or endangered species”⁵¹ – which certainly applies to the Western Gray Whales’ benthic feeding habitat. • IFC defines “degradation” as “modification of a critical or other natural habitat that substantially reduces the habitat’s ability to maintain viable populations of its native species.”⁵² With the total population of Western Gray Whales estimated at around 100, and fewer than 20 adult females capable of calving, and a reproductive rate of only 1%, any negative impact on the whale’s habitat substantially reduces its ability to maintain viable populations and hence represents a violation of the Natural Habitats Policy.
Consultation	<i>“Take into account the views, roles, and rights of groups, including local nongovernmental organizations and local communities, affected by IFC-financed projects involving natural habitats, and to involve such people in planning, designing, implementing, and monitoring such projects. Involvement may include identifying appropriate conservation measures”⁵³</i>	Non-compliance: <ul style="list-style-type: none"> • Suggestions and recommendations by local groups and NGOs on how to protect natural habitats have been ignored (<i>PE section 12a</i>).

Principle 4 – Environmental management plan

Principle 4 requires that:

*“For all Category A projects, and as considered appropriate for Category B projects, the borrower or third party expert has prepared an Environmental Management Plan (EMP) which draws on the conclusions of the EA. The EMP has addressed mitigation, action plans, monitoring, management of risk and schedules”.*⁵⁴

As yet, no Environmental Management Plan has been published. The project will be considered Category A (see Principle 1, above), so the SEIC consortium will have to publish an EMP before the project is considered for financing, in order to be in compliance with the Equator Principles.

Principle 5 – Consultation

Principle 5 requires that:

*“The borrower or third party expert has consulted, in a structured and culturally appropriate way, with project affected groups, including indigenous peoples and local NGOs.”*⁵⁵

Although ‘consultations’ have taken place during the development of the project, consultees (including local NGOs and international experts) claim that their views have not been taken into account in the EIA – indeed, many of their concerns have been ignored.

Groups also report that the consultation has been fundamentally flawed, due to adequate information not being made available to stakeholders who requested it, and that ‘consultation’ meetings in fact took the form of one-sided lectures.

(see attached Pacific Environment (PE) evaluation, section 12a)

Equator Principle 5 further requires that

*“The EA and the EMP will take account of such consultations, and for Category A Projects, will be subject to independent expert review.”*⁵⁶

No independent expert review has been announced.

In order to be brought into compliance with Principle 5, the SEIC consortium will need at the very least to revise significant areas of the EIA (and consequently of the project design), to take concerns raised in the consultations into account.

Principles 6-8

Principles 6, 7 and 8 set out requirements concerning the relationship between the borrower and the lenders, and mechanisms for ensuring compliance. Since decisions on financing have not yet been made, it is obviously too early for these requirements to come into force. However, given the severity of the concerns outlined above, lenders should carry out extensive due diligence before deciding on whether to finance the project, and if they do finance it, should put considerable effort into monitoring and ensuring compliance.

It should also be noted that Principle 6(c) requires the borrower to covenant to

*“where applicable, decommission the facilities in accordance with an agreed Decommissioning Plan.”*⁵⁷

Principle 9 – Scale of project

Principle 9 simply states that the Equator Principles apply to projects with a total capital cost of \$50 million or more.⁵⁸ With an estimated cost of at least \$11 billion, Sakhalin II clearly falls into this category.

5 - Conclusion and recommendations

Assessment of compliance

As currently designed, the Sakhalin II project fails to comply with the Equator Principles. The project's environmental impact assessment (EIA) is deficient on a number of counts. These include:

- The environmental baseline assessment omits key data, including key information about endangered species and their specific habitats, and mapping of range and behaviour of key species, including wild salmon. Furthermore, some of the environmental baseline data conflicts with other expert reports (including on endangered birds and on significance to salmon of streams); this conflict has not been reconciled. (*Breach of Principle 3a*)
- The EIA fails to evaluate conflicts between the project Production Sharing Agreement and Russian environmental law, and does not address legal challenges to the project. The EIA is unclear about the protection status of Aniva Bay. (*Breach of Principle 3b*).
- Key environmental impacts are omitted from the EIA, including the impacts on the Makarovski Preserve, the impact of oil spills. Other important impacts are inadequately analysed, such as those on the Western Gray Whale. Some mitigation measures are flawed, or their effectiveness not substantiated, including mitigation of impacts on Western Gray Whale, and of seismic risks. (*Breach of Principle 3d*).
- Cumulative impacts with Sakhalin III, IV, V and VI oil and gas projects are not considered. Cumulative impacts with Sakhalin I are only qualitatively and partially addressed. (*Breach of Principle 3m*).
- The EIA does not systematically compare the project with feasible alternatives, and considers only technical and economic factors in key project decisions. (*Breach of IFC Safeguard Policy OP 4.01 (Environmental Assessment) – compliance with which is required under Principle 3*).

The Equator Principles also require the EIA to assess the project's compliance with the World Bank's Pollution Prevention and Abatement Handbook (Principle 3). The EIA does not do this, nor does it provide sufficient information, in an appropriate form, for an external reviewer to assess compliance.

There are further problems in project design and execution, which also constitute breaches of the Equator Principles:

- The siting of the offshore platform and the routing of the offshore pipeline will degrade the Western Gray Whales' summer feeding ground, a critical natural habitat. (*Breach of IFC Safeguard Policy OP 4.04 (Natural Habitats) – compliance with which is required under Principle 3*).
- The project fails to apply the precautionary principle in relation to Western Gray Whale feeding grounds, to watercourse crossings, or to dumping of wastes in Gulf of Aniva. (*Breach of IFC Safeguard Policy OP 4.04 (Natural Habitats)*).
- During the consultation processes, key information was often not available to stakeholders. Furthermore, 'consultation' comprised one-sided presentations of the benefits of the project, and failed to seek views of key stakeholders, including local NGOs. Where views and suggestions were given, they were ignored. (*Breach of Principle 5*).

The Equator Principles also require production of an Environmental Management Plan, which is yet to be published.

Recommendations

Based on these findings, we recommend that banks take the following action:

- In adopting the Equator Principles, banks have committed that they “will only provide loans to projects” that meet the principles.

“We will not provide loans directly to projects where the borrower will not or is unable to comply with our environmental and social policies and processes”

Thus, **in the absence of major improvements to the project, adopting banks should refuse loans to the SEIC consortium.**

- Civil society expectations, and the evolving regulatory, legal, financial and governance climates, make it **essential that banks carry out their own rigorous due diligence** of projects such as Sakhalin II, rather than relying on that of project sponsors or other financial institutions.
- In order to establish trust with civil society, and in the interests of transparency, **banks should publish their analysis of project compliance with the Equator Principles.**

Appendix 1

The Equator Principles

4 June 2003

THE “EQUATOR PRINCIPLES”

AN INDUSTRY APPROACH FOR FINANCIAL INSTITUTIONS IN DETERMINING, ASSESSING AND MANAGING ENVIRONMENTAL & SOCIAL RISK IN PROJECT FINANCING

PREAMBLE

Project financing plays an important role in financing development throughout the world. In providing financing, particularly in emerging markets, project financiers often encounter environmental and social policy issues. We recognize that our role as financiers affords us significant opportunities to promote responsible environmental stewardship and socially responsible development.

In adopting these principles, we seek to ensure that the projects we finance are developed in a manner that is socially responsible and reflect sound environmental management practices.

We believe that adoption of and adherence to these principles offers significant benefits to ourselves, our customers and other stakeholders. These principles will foster our ability to document and manage our risk exposures to environmental and social matters associated with the projects we finance, thereby allowing us to engage proactively with our stakeholders on environmental and social policy issues. Adherence to these principles will allow us to work with our customers in their management of environmental and social policy issues relating to their investments in the emerging markets.

These principles are intended to serve as a common baseline and framework for the implementation of our individual, internal environmental and social procedures and standards for our project financing activities across all industry sectors globally.

In adopting these principles, we undertake to review carefully all proposals for which our customers request project financing. We will not provide loans directly to projects where the borrower will not or is unable to comply with our environmental and social policies and processes.

STATEMENT OF PRINCIPLES

We will only provide loans directly to projects in the following circumstances:

1. We have categorised the risk of a project in accordance with internal guidelines based upon the environmental and social screening criteria of the IFC as described in the attachment to these Principles (Exhibit I).
2. For all Category A and Category B projects, the borrower has completed an Environmental Assessment (EA), the preparation of which is consistent with the outcome of our categorisation process and addresses to our satisfaction key environmental and social issues identified during the categorisation process.
3. In the context of the business of the project, as applicable, the EA report has addressed:
 - a) assessment of the baseline environmental and social conditions
 - b) requirements under host country laws and regulations, applicable international treaties and agreements
 - c) sustainable development and use of renewable natural resources
 - d) protection of human health, cultural properties, and biodiversity, including endangered species and sensitive ecosystems
 - e) use of dangerous substances
 - f) major hazards
 - g) occupational health and safety
 - h) fire prevention and life safety
 - i) socioeconomic impacts
 - j) land acquisition and land use
 - k) involuntary resettlement
 - l) impacts on indigenous peoples and communities

- m) cumulative impacts of existing projects, the proposed project, and anticipated future projects
- n) participation of affected parties in the design, review and implementation of the project
- o) consideration of feasible environmentally and socially preferable alternatives
- p) efficient production, delivery and use of energy
- q) pollution prevention and waste minimization, pollution controls (liquid effluents and air emissions) and solid and chemical waste management

Note: In each case, the EA will have addressed compliance with applicable host country laws, regulations and permits required by the project. Also, reference will have been made to the minimum standards applicable under the World Bank and IFC Pollution Prevention and Abatement Guidelines (Exhibit III) and, for projects located in low and middle income countries as defined by the World Bank Development Indicators Database (<http://www.worldbank.org/data/countryclass/classgroups.htm>), the EA will have further taken into account the then applicable IFC Safeguard Policies (Exhibit II). In each case, the EA will have addressed, to our satisfaction, the project's overall compliance with (or justified deviations from) the respective above-referenced Guidelines and Safeguard Policies.

4. For all Category A projects, and as considered appropriate for Category B projects, the borrower or third party expert has prepared an Environmental Management Plan (EMP) which draws on the conclusions of the EA. The EMP has addressed mitigation, action plans, monitoring, management of risk and schedules.

5. For all Category A projects and, as considered appropriate for Category B projects, we are satisfied that the borrower or third party expert has consulted, in a structured and culturally appropriate way, with project affected groups, including indigenous peoples and local NGOs. The EA, or a summary thereof, has been made available to the public for a reasonable minimum period in local language and in a culturally appropriate manner. The EA and the EMP will take

account of such consultations, and for Category A Projects, will be subject to independent expert review.

6. The borrower has covenanted to:

a) comply with the EMP in the construction and operation of the project

b) provide regular reports, prepared by in-house staff or third party experts, on compliance with the EMP and

c) where applicable, decommission the facilities in accordance with an agreed Decommissioning Plan.

7. As necessary, lenders have appointed an independent environmental expert to provide additional monitoring and reporting services.

8. In circumstances where a borrower is not in compliance with its environmental and social covenants, such that any debt financing would be in default, we will engage the borrower in its efforts to seek solutions to bring it back into compliance with its covenants.

9. These principles apply to projects with a total capital cost of \$50 million or more.

The adopting institutions view these principles as a framework for developing individual, internal practices and policies. As with all internal policies, these principles do not create any rights in, or liability to, any person, public or private. Banks are adopting and implementing these principles voluntarily and independently, without reliance on or recourse to IFC or the World Bank.

EXHIBIT I: ENVIRONMENTAL AND SOCIAL SCREENING PROCESS

Environmental screening of each proposed project shall be undertaken to determine the appropriate extent and type of EA. Proposed projects will be classified into one of three categories, depending on the type, location, sensitivity, and scale of the project and the nature and magnitude of its potential environmental and social impacts.

Category A: A proposed project is classified as Category A if it is likely to have significant adverse environmental impacts that are sensitive, diverse, or unprecedented. A potential impact is considered “sensitive” if it may be irreversible (e.g., lead to loss of a major natural habitat) or affect vulnerable groups or ethnic minorities, involve involuntary displacement or resettlement, or affect significant cultural heritage sites.. These impacts may affect an area broader than the sites or facilities subject to physical works. EA for a Category A project examines the project's potential negative and positive environmental impacts, compares them with those of feasible alternatives (including, the “without project” situation), and recommends any measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance. A full environmental assessment is required which is normally an Environmental Impact Assessment (EIA)..

Category B: A proposed project is classified as Category B if its potential adverse environmental impacts on human populations or environmentally important areas—including wetlands, forests, grasslands, and other natural habitats—are less adverse than those of Category A projects. These impacts are site-specific; few if any of them are irreversible; and in most cases mitigatory measures can be designed more readily than for Category A projects. The scope of EA for a Category B project may vary from project to project, but it is narrower than that of Category A EA. Like Category A EA, it examines the project's potential negative and positive environmental impacts and recommends any measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance.

Category C: A proposed project is classified as Category C if it is likely to have minimal or no adverse environmental impacts. Beyond screening, no further EA action is required for a Category C project.

EXHIBIT II: IFC SAFEGUARD POLICIES

As of 4 June 2003, the following is a list of IFC Safeguard Policies:

Environmental Assessment
OP4.01 (October 1998)

Natural Habitats
OP4.04 (November 1998)

Pest Management
OP4.09 (November 1998)

Forestry
OP4.36 (November 1998)

Safety of Dams
OP4.37 (September 1996)

Indigenous Peoples
OD4.20 (September 1991)

Involuntary Resettlement
OP4.30 (June 1990)

Cultural Property
OPN11.03 (September 1986)

Child and Forced Labor
Policy Statement (March 1998)

International Waterways
OP 7.50 (November 1998)*

*Note: The principal requirements relate to the role of IFC as a multi-lateral agency and notification requirements between riparian states which are generally outside the remit of private sector operators or funders. It is referenced for the sake of completeness. The substantive elements of good practice with respect to environmental and social aspects therein are fully covered by OP 4.01.

EXHIBIT III: WORLD BANK AND IFC SPECIFIC GUIDELINES

As of 4 June 2003, IFC is using two sets of guidelines for its projects.

1. IFC is using all the environmental guidelines contained in the World Bank Pollution Prevention and Abatement Handbook (PPAH). This Handbook went into official use on July 1, 1998.

2. IFC is also using a series of environmental, health and safety guidelines that were written by IFC staff in 1991-1993 and for which there are no parallel guidelines in the Pollution Prevention and Abatement Handbook. Ultimately new guidelines, incorporating the concepts of cleaner production and environmental management systems, will be written to replace this series of IFC guidelines. When completed these new guidelines will also be included in the Pollution Prevention and Abatement Handbook.

Where no sector specific guideline exists for a particular project then the World Bank General Environmental Guidelines and the IFC General Health and Safety Guideline will be applied, with modifications as necessary to suit the project.*

The table below lists both the World Bank Guidelines and the IFC Guidelines.

World Bank Guidelines (PPAH)

1. Aluminum Manufacturing
2. Base Metal and Iron Ore Mining
3. Breweries
4. Cement Manufacturing
5. Chlor-Alkali Plants
6. Coal Mining and Production
7. Coke Manufacturing
8. Copper Smelting
9. Dairy Industry
10. Dye Manufacturing
11. Electronics Manufacturing
12. Electroplating Industry
13. Foundries
14. Fruit and Vegetable Processing
15. General Environmental Guidelines
16. Glass Manufacturing
17. Industrial Estates
18. Iron and Steel Manufacturing
19. Lead and Zinc Smelting
20. Meat Processing and Rendering
21. Mini Steel Mills

22. Mixed Fertilizer Plants
23. Monitoring
24. Nickel Smelting and Refining
25. Nitrogenous Fertilizer Plants
26. Oil and Gas Development (Onshore)
27. Pesticides Formulation
28. Pesticides Manufacturing
29. Petrochemicals Manufacturing
30. Petroleum Refining
31. Pharmaceutical Manufacturing
32. Phosphate Fertilizer Plants
33. Printing Industry
34. Pulp and Paper Mills
35. Sugar Manufacturing
36. Tanning and Leather Finishing
37. Textiles Industry
38. Thermal Power Guidelines for New Plants
39. Thermal Power Rehabilitation of Existing Plants
40. Vegetable Oil Processing
41. Wood Preserving Industry

IFC Guidelines

1. Airports
2. Ceramic Tile Manufacturing
3. Construction Materials Plants
4. Electric Power Transmission and Distribution
5. Fish Processing
6. Food and Beverage Processing
7. Forestry Operations: Logging
8. Gas Terminal Systems
9. General Health and Safety
10. Health Care
11. Geothermal Projects
12. Hazardous Materials Management
13. Hospitals
14. Office Buildings
15. Offshore Oil & Gas
16. Polychlorinated Biphenyls (PCBs)
17. Pesticide Handling and Application
18. Plantations
19. Port and Harbor Facilities
20. Rail Transit Systems
21. Roads and Highways
22. Telecommunications

23. Tourism and Hospitality Development
24. Wildland Manage
25. Wind Energy Conversion Systems
26. Wood Products Industries
27. Waste Management Facilities
28. Wastewater Reuse

* Exception (the following are World Bank Guidelines not contained in the PPAH and currently in use)

Mining and Milling - Underground
Mining and Milling - Open Pit

Appendix 2

Pacific Environment evaluation of project conformity with World Bank and IFC standards

**Preliminary Evaluation of Conformity
Sakhalin II, Phase 2 and the
Environmental Standards of the World Bank (WB) and
International Finance Corporation (IFC)
By Pacific Environment—January 2004**

Introduction

This report evaluates conformity of the Sakhalin II Project, Phase 2 with selected World Bank (WB) and International Finance Institution (IFC) environmental policies. The evaluation reveals that many aspects of the Sakhalin II project clearly contravene identified WB/IFC environmental policies.

The enormous Sakhalin II on-shore and off-shore oil and gas project at Sakhalin Island in the Russian Far East is an industrial project involving two off-shore oil and one off-shore gas drilling platforms, undersea platform-to-shore pipelines, on-shore oil and gas processing facilities, 800 kilometers of on-shore pipelines, the world's largest LNG processing and export facility, oil export facilities and consequent outgoing tanker passage. The project proponents claim that, at a cost of \$10 billion, Sakhalin II is the largest single integrated oil and gas project ever undertaken.

Sakhalin Island off-shore waters are some of the most abundant yet threatened marine environments on the Pacific Rim. They contain 25 marine mammal species, 11 of which are endangered, including the world's most critically endangered gray whale species, the Western Gray Whale. These marine environments are rich with crab, herring, cod, and salmon, including the unique masu salmon and endangered Sakhalin taimen, the most ancient salmonid.

The Sakhalin II project threatens this marine environment with off-shore platforms that are adjacent to the Western Gray Whale's benthic feeding and migrating habitat and undersea pipelines to be trenched through this habitat. The project's on-shore facilities include two 800-kilometer pipelines (oil and gas) that will cross 1103 watercourses. Many of these watercourses provide spawning and rearing habitat for unique and important wild salmon including the endangered Sakhalin taimen. They are vital to the fishing industry and to indigenous people. During construction of the proposed LNG terminal, one million cubic meters of construction dredging materials will be dumped into Aniva Bay and over 500,000 cubic meters of wastewater will annually enter into this fisheries-rich bay. The Sakhalin II project will operate in difficult climatic and seismic conditions: high earthquake activity, heavy ice pack, frequent storms and fog. Sakhalin II also creates conditions for potential catastrophic oil spills, including tanker spills on the scale experienced in the Exxon Valdez incident.

Registered in Bermuda, the Sakhalin II project is managed by the Sakhalin Energy Investment Company, Ltd. (SEIC), a consortium led by Shell Ltd., and whose partners include Mitsubishi and Mitsui. Phase 1 of Sakhalin II is now complete. Shell/SEIC is now negotiating external financing for its much larger Phase 2. These negotiations are under way with a variety of public international finance institutions, export credit agencies, and private banks.

Rationale for An Evaluation Against World Bank/IFC policies:

Shell/SEIC and several public and private finance institutions have explicitly claimed and/or inferred that Sakhalin II complies with World Bank and IFC environmental policies. For example:

EBRD:

“The EBRD requires that projects that it finances meet good international environmental practice. Therefore, the EBRD will require that projects be structured so as to meet: (i) applicable national environmental law; and (ii) EU Environmental Standards, insofar as these can be applied to a specific project. Where such standards do not exist or are inapplicable, the EBRD shall identify other sources of good international practice, including *relevant World Bank Group guidelines*, the approach of other IFIs and donors, and good industry practice, and require compliance with the selected standards.”¹

Regarding the Sakhalin II project: “The Environmental Action Plan specifies that the Company will meet or exceed *World Bank environmental standards*...”²

Export Credit Agencies:

“When undertaking environmental reviews, Members should benchmark projects against host country standards, against one or more relevant environmental standards and guidelines published by the *World Bank Group*, the European Bank for Reconstruction and Development...”³

(Note: Members include the U.S. Export-Import Bank, the U.K. Export Credit Guarantee Department, and the Japanese Bank for International Cooperation, all of whom are prospective financiers of Sakhalin II)

Private Banks That Have Signed the Equator Principles:

“The “Equator Principles”...In adopting these principles...we will only provide loans directly to projects in the following circumstances: 1. We have categorised the risk of a project in accordance with internal guidelines based upon the environmental and social screening criteria of the IFC...”⁴

(Note: At least two private banks that have adopted the Equator Principles, ABM AMRO, and Credit Suisse Group, are involved in financing the Sakhalin II project)

¹ Environmental Policy, European Bank for Reconstruction and Development, 2003.

² Project Summary Document, European Bank for Reconstruction and Development, Sakhalin II (phase I) project, Russian Federation, 1997.

³ Revised Draft OECD Recommendation on Common Approaches on Environment and Officially Supported Export Credits, Working Party on Export Credits and Credit Guarantees, Working Party on Export Credits and Credit Guarantees, Organization for Economic Cooperation and Development, Nov. 7, 2003.

⁴ The “Equator Principles.” A Framework for Banks to Manage Environmental and Social Issues in Project Financing, 2003.

Shell/SEIC:

“The regulatory instruments, guidelines and industry standards that will guide this project (include) international guidelines for impact assessment, for which the World Bank/IFC guidelines are applied as a benchmark;”⁵

“The international conventions and standards that are potentially applicable to the project are...WB Natural Habitats Operational Policy...WB Environmental Assessment Operational Policy...”⁶

Selected World Bank/IFC standards and guidelines

An evaluation of Sakhalin II Phase 2 documents reveals a failure to comply with the following World Bank/IFC policies:

- IFC OP 4.01 Environmental Assessment
- IFC OP 4.04 Natural Habitats
- IFC Environmental, Health and Safety Guidelines--Oil and Gas Development (Offshore)
- World Bank Pollution Prevention and Abatement Handbook—Oil and Gas Development (Onshore)
- IFC Procedure for Environmental and Social Review of Projects: Annex C—Types of Environmental Assessment

⁵ Sakhalin II Phase 2 Environmental Impact Assessment, Volume 1, Common Elements, Chapter 2, *Legislation and Project Standards*, Introduction

⁶ Ibid #5

Evaluation of Conformity with IFC OP 4.01 Environmental Assessment*

IFC OP 4.01.2. ... EA evaluates a project's potential environmental risks and impacts in its area of influence...;

IFC OP 4.01.7...a range of instruments can be used to satisfy IFC's EA requirement: (including) environmental impact assessment (EIA)...

The Sakhalin II Phase 2 EIA, published on SEIC's website (www.sakhalinenergy.com), is the principle document sustaining its claim that it adheres to these EA requirements.

There are a number of fundamental flaws in the EIA, flaws that in effect violate WB/IFC policies and that should prevent public finance institutions from considering the EIA adequate for public disclosure and comment under their respective requirements. These flaws include, *inter alia*:

- Complete omission of any evaluation of certain critical environmental risks and impacts;
- Evaluation based on incomplete, inaccurate or distorted information;
- Premature conclusions of risks and impacts made prior to the collection and assimilation of primary data and research necessary to conduct an evaluation;
- Deferment of evaluation of some critical risks and impacts to processes that will occur later and that are outside the scope of this EIA;
- Failure to apply generally accepted EIA methodology;
- Reliance on conjecture rather than analysis to reach many conclusions.

**(Note: Violations of EBRD Environmental Procedures are also interspersed in the text below)*

1) Evaluation of Oil Spill Risks and Impacts

A fundamental risk associated with any large oil project is the potential for oil spills. This is especially true of the Sakhalin II Project in light of the challenging natural conditions in which the project operates.

In 1999 independent experts from Alaska and the Shetland Islands issued a report on the risk of oil spills associated with first phase of Sakhalin II entitled, "Sakhalin's Oil: Doing It Right." The report warned that the oil spill prevention and response measures leave the coastlines of Sakhalin and Hokkaido vulnerable to a catastrophic spill. The report recommended 78 specific measures -- including designation of mandatory tanker routes, increased monitoring of tanker traffic, notifications to fishing vessels if a tanker is in the area, increased spill response equipment and improved access to the shoreline where it would be deployed.⁷ Shell/SEIC has for the most part failed to act on these recommendations. As a *Wall Street Journal* article reports, "Spill response in Canada, Norway and Britain is generally far more comprehensive,"

⁷ *Sakhalin's Oil, Doing it Right, Applying Global Standards to Public Participation, Environmental Monitoring, Oil Spill Prevention & Response, and Liability Standards in the Sakhalin Oblast of the Russian Federation*, Lawn, Steiner & Wills, Pacific Environment, 1999

and in Alaska, following the disastrous Exxon Valdez spill, "state and U.S. officials ordered the industry to set up a massive spill-response system for Prince William Sound."⁸

Sakhalin II Phase 2 represents a much broader range of oil spill risks than Phase 1. It is true that Phase 2 will pipe oil and gas to shore, thus eliminating the risks associated with its loading of tankers directly at its off-shore platforms. However, there are new risks associated with off-shore and on-shore pipelines as well as risks associated with tanker traffic in the congested Aniva Bay as these tankers pass through the La Perouse Straights. And it must be remembered that the increased volume of oil produced and transported under Phase 2 will exacerbate these risks.

1(a) Deferred Evaluation: The Phase 2 EIA materials contain a very brief and cursory discussion of oil spill risk and mitigation measures and entail only a few paragraphs for each project element. Several paragraphs of brief discussion are not an evaluation of oil risks associated with this project or a demonstrated plan on how to reduce them! Volume 1, *Common Elements*, Chapter 6.6 *Health, Safety and Environmental Management in SEIC, Oil Spill Response Planning*, refers to separate Oil Spill Response Plans that are being developed for each element of the project. These plans are only at a preliminary stage and are unavailable on SEIC's website. It appears that Shell/SEIC are not committed to a rigorous evaluation of all aspects of this project as part of the EIA process. It will instead undertake these studies after the EIA is completed and after public and private financial institutions have been asked to decide to support or reject the project. Hence, the EIA fails to perform one of its most basic functions—evaluate the project's most fundamentally risky and potentially harmful impacts.

1(b) Omission of An Evaluation of Tanker Risks: There is no evidence that the pending oil spill response plans will evaluate potential environmental risks and impacts of oil spills that could occur as export tankers moving along dangerous and accident-prone shipping lanes from the project's export facilities at Anvia Bay through the La Perouse Straights.

2) Evaluation of Risks and Impacts on Western Pacific Gray Whale

The Western Pacific Gray Whale is listed as an endangered species lists in the U.S. and Russia, and is recognized as critically endangered by the International Union for the Conservation of Nature (IUCN).⁹ Historically, gray whales were present in both the Pacific and Atlantic oceans. However, Atlantic stocks were driven to extinction prior to the 17th century. The United States Government listed the Pacific Gray Whale as endangered in 1970, but in 1994 the species was de-listed following what is generally considered to be a successful conservation effort.¹⁰

The Western Gray Whale is genetically distinct from the Eastern Pacific population, hence the status and condition of the two species cannot be arrogated. Historic declines in Western Gray Whale numbers are attributed to aboriginal and commercial harvesting, incidental catches and strandings.¹¹ Recent data suggests there are now only about 100 Western Gray Whales left in

⁸ *Stymied in Alaska, Oil Producers Flock To a Newer Frontier*, Jim Carlton, *The Wall Street Journal*, September 4, 2002.

⁹ IUCN is an international conservation organizations whose members include the governments of the U.S. and Russia.

¹⁰ *The Gray Whale and the Oregon Endangered Species Act*, Background, Oregon Department of Fish and Wildlife,

¹¹ *Report on the Workshop of the Western Gray Whale*, Research and Monitoring Needs; Scientific Committee of the International Whaling Committee, October 22-25, 2002 (SC/55/Rep4).

the wild and fewer than 20 reproductive females capable of calving.¹² The Western Gray Whale is considered one of the most critically endangered whale species in the world.

In respect to the threats that the Sakhalin II Project represents for the Western Gray Whale, the Scientific Committee of the International Whaling Commission (IWC) notes “that it is a **matter of absolute urgency**...to reduce various types of anthropogenic disturbances to the lowest possible level”¹³ [emphasis maintained]. Potential disturbances from oil and gas development on the Northeast Sakhalin shelf include seismic surveys, installation of drilling and production platforms, and significant increases in vessel and aircraft traffic.¹⁴ The kinds of disturbances that Sakhalin II Phase 2 will create include off-shore oil and gas platforms adjacent to Western Gray Whale migration, feeding and rearing habitat and four undersea pipelines sliced along the sea bottom, including sections trenched directly through the Western Gray Whale’s only known benthic feeding habitat).

2(a) Failure to Follow Evaluation Methodology: EIA Volume I, Chapter 3, contains a methodology for assessing the project’s environmental impacts. Box 3.3, Assessment Criteria for the Magnitude of Ecological Impacts defines a **High Magnitude Impact** as one that negatively “affects an entire population or species in sufficient magnitude to cause a decline in abundance and /or change in distribution beyond which natural recruitment (reproduction, immigration from unaffected areas) would not return that population or species, or any population or species dependent upon it, to its former level within several generations.” Given that only 100 Western Gray Whales, and less than 20 females capable of calving remain, any negative impact is a potential *High Magnitude Impact*. Further, Volume 1, Chapter 3 Table 3.9, Overall Significance Criteria for Ecological Impacts, defines **Major Significance** as one where there is a *High Magnitude Impact* for high value/sensitivity or *internationally important habitat or flora/fauna*. Given the Western Gray Whale’s population status, and its designation as an internationally listed critically endangered species, any negative impact has the potential to be a **High Magnitude Impact of Major Significance**, i.e., extinction.

The potential for a **high magnitude impact of major significance** is reinforced by the scientific research conducted by leading U.S. and Russian cetacean experts, who state that, “Disruption of feeding in preferred areas is a biologically significant event that could have major negative effects on individual whales, their reproductive success, and thus the population as a whole.”¹⁵

However, EIA Volume 2, Platforms, Offshore Pipelines and Landfalls, Chapter 3.8, *Impacts Assessment, Mitigation and Monitoring, Marine Mammals*, makes no reference even to the potential for a **High Magnitude Impact of Major Significance**. Indeed, the word extinction does not appear anywhere in Volume 2. Instead, while claiming adherence to a “precautionary principle,” Chapter 3 arbitrarily assigns only a moderate rating for significance of residual impacts to the critically endangered Gray Whale.

¹² Brownell, Dr. Robert, presentation before U.S. House Oceans Caucus briefing on Sakhalin II, *Oil and Gas Drilling on the Northern Pacific Rim and US Financing: Opportunities for Marine Conservation*, October 29, 2003. See also [Will Oil Spell Trouble for Western Pacific Gray Whales?](#), *Webster*, Paul, Science, Volume 300, Number 5624, May, 2003

¹³ Report of the Scientific Committee, International Whaling Commission, Section 10.7.5, July 22, 2001, p. 54.

¹⁴ *Ibid* #12

¹⁵ Influence of seismic surveys on Western Gray Whales off Sakhalin Island, Russia in 2001. WELLER, Yulia, Ivashchenko, Tsidulko, Burdin & Brownell, Scientific Committee, International Whaling Commission, 2003.

2(b) Evaluation Based on Conjecture:

(Note: In addition to IFC OP 4.01, EBRD Environmental Procedures, Annex 2, Environmental Impact Assessment Report, Characterisation of Impacts and Issues, states that EIAs should “identify and characterise positive and negative environmental impacts in terms of magnitude, significance, reversibility, extent and duration...Quantitative data should be employed to the extent possible.”)

EIA Volume 2, Chapter 3.8, *Impacts Assessment, Mitigation and Monitoring, Marine Mammals*, generally acknowledges that some potentially serious impacts, such as noise, could occur during construction and operation phases. For example, the Chapter acknowledges that, “Construction activities associated with the Sakhalin II project will introduce a substantial amount of noise into the marine environment,” and, “(v)ery loud noises at close range may also cause hearing damage and other physical damage in whales.” The Chapter lists many potential sources of noise from construction and operation activities, but fails to provide any quantifiable analysis of actual noise levels associated with each of the proposed activities. Moreover, the Chapter claims that “(c)ontractors will be requested and encouraged to use equipment and procedures that minimize noise,” but fails to describe what equipment will be in place to mitigate noise, how or whether implementation of procedures will be required, and what quantifiable levels of noise will still be generated or be acceptable. Nor is there any analysis of how even mitigated levels of noise will affect the Western Gray Whale. In general, the Chapter is rife with conjecture and void of analytical modeling of impact levels on individual whales or on the population in general.

2 (c) Failure to Apply Widely Accepted Methodology:

EBRD’s Environment Policy: The Bank “supports a precautionary approach to the management and sustainable use of natural biodiversity resources (such as wildlife, fisheries and forest products) and will seek to ensure that its operations include measures to safeguard, and, where possible, enhance natural habitats and the biodiversity they support.”

The European Environment Agency (European Commission) defines “precautionary approach” as “(a) decision to take action, based on the possibility of significant environmental damage, even before there is conclusive, scientific evidence, that the damage will occur.”

In this context, a precautionary approach could include, *inter alia*, quantifiable modeling of potential impacts of current plans, mitigation measures, residual impacts and alternative proposals on whales at individual and population levels; the establishment of a protective no-impact buffer zone around whale feeding and migration areas; the development of an alternative set of project elements that assures zero negative impacts on the Western Gray Whale; coordination with other oil and gas operators in the area to ensure their construction and operation activities do not result in negative cumulative effects; more direct collaboration with the Scientific Committee of the International Whaling Commission (IWC) and incorporation of the Committee’s 10 year research plan into Shell/SEIC’s own Gray Whale Protection Plan. Such coordination with the IWC Scientific Committee and incorporation of its plan will help fulfill the EBRD Environment Policy mandate to work with other international institutions to promote “a coordinated approach to effective environmental interventions in the region including the alleviation of severe environmental problems.”

3) Evaluation of Risks and Impacts on Wild Salmon

The Sea of Okhotsk has one of the world's most productive fisheries, in large part due to the presence of abundant wild salmon. The health of ocean and riverine ecosystems is critical to the wild salmon stocks that spawn in Sakhalin Island rivers and streams and that migrate into the Sea of Okhotsk. In turn, these stocks are fundamental to the regional fisheries economy and are key to the survival of indigenous peoples and those who depend on subsistence fishing. The salmon fisheries is the traditional backbone of the local economy and an important part of the culture of the indigenous Nivkh people. Protection of these rivers and streams is therefore a paramount outcome of the Sakhalin II project.

The Sakhalin II project proposes to trench pipelines through nearly 1100 rivers, streams and brooks, many of which play a role in the life cycle of wild salmon and other salmonids, including the Sakhalin taimen, which is the most ancient salmonid, and is listed as endangered in the Russian Federation. Trenching of pipelines can, *inter alia*, affect fish spawning behavior and reduce overall spawning levels, can destroy salmon spawning beds, and can indirectly smother those beds with suspended sediments that flow downstream from excavated pipeline trenches. Accurate evaluation of the trenched pipelines' risks and impacts on wild salmon is critical to this project's EIA.

3(a) Premature Conclusions: Volume 1, Chapter 3.6 The EIA Process, *Evaluation of Impacts*, reveals that the only impacts analyzed in the EIA are those that can be ascertained at the preliminary Front End Engineering and Design (FEED), while many specific impacts will only be analyzed at Detailed Design (DD) phase, which will commence after the EIA is complete. Many of the most significant on-the-ground impacts will only be identifiable at the DD phase.

Referring to the 1100 watercourses that the project's pipelines will cross, including those bearing wild salmon, Volume 4, Chapter 3.7.1, Pipeline Transportation System, Gas Disposition Terminal and Booster Station, *Impacts Assessment, Mitigation and Monitoring*, states:

“The extent of the anticipated physical impacts to watercourses is difficult to predict because:

- the exact crossing locations at each watercourse have yet to be determined; and*
- the rivers' site-specific physical characteristics at each crossing location are not fully determined... Impacts at watercourse crossings are therefore discussed according to a general knowledge of the corridor rather than relating them to each individual crossing, which would not be possible at this stage in the project development.”*

Since the environmental impact of pipeline crossings on any river or stream is very site-specific and since data at the FEED stage on specific crossing locations and their characteristics are absent, the EIA simply fails to evaluate these extremely important potential environmental impacts, thus placing salmon and other fish at undue risk.

3(b) Evaluation Based on Incomplete or Inaccurate Information, and Conjecture:

EIA Volume 4, Chapter 1.11, *Existing Environment*, identifies a system of watercourse classifications that Shell/SEIC has adopted for purposes of determining salmon spawning sensitivity, and presumably, corresponding mitigation measures:

- Group I - watercourses with no salmon spawning, and insignificant importance for fishery;
- Group II - watercourses with insignificant salmon spawning, and minor importance for fishery;
- Group III - watercourses with significant salmon spawning and major importance for fishery.¹⁶

It is not clear that any of the Russian regulators with authority over fisheries resources has approved this system of classification. However, it is known that the regional fisheries authority, SakhalinRybvod, disagrees with the classification of individual rivers and streams in respect to their significance in the salmon's life cycle. Concurrently, the Russian Fisheries Research Institute, VNIRO, believes that 663 watercourses should have the highest category of protection.¹⁷ Sakhalin II project classification includes only 63 watercourses, a ten-fold smaller number. Meanwhile, many Group I watercourses, which supposedly play no role in salmon spawning) are in fact used by small numbers of salmon for spawning and other functions. Depending on the year, and water levels, the significance of a river or a creek for purposes of spawning and other functions, varies.¹⁸

Why are ten times fewer watercourses classified as significant in the Shell/SEIC system? One reason might be that Shell/SEIC's data on spawning habitat are incomplete, and that the system of watercourse classification discounts some rivers' significance when salmon spawning is known to exist, but where no data exists on exact locations or extent. Meanwhile, Sakhalin Volume 4, Chapter 1.7, *Information Gaps*, acknowledges that "(p)recise information on fish species is also limited to those species typically of commercial value, leaving a gap for other species not currently exploited commercially.

If the watercourse classification system described above is based on commercially exploitable salmon only, the omission indicates a failure to evaluate impacts on non-commercial salmon species that are important for indigenous people, subsistence fishing, biodiversity and endangered species protection. This includes the lack of evaluation on species including, *inter alia*, Sakhalin taimen, masu salmon and green sturgeon.¹⁹ These impacts may be pronounced on taimen and masu salmon since the taimen spend a few years, and masu salmon spend more than a year in Sakhalin streams. Masu salmon are even more vulnerable because a) they stay in streams more than a year (thus subject to multiple or chronic impacts) and b) there is a resident form of masu salmon that spends its whole life in fresh water and that intermingle with the anadromous form.²⁰

When viewed as a whole, Shell/SEIC's assignment of more rivers into classifications of lower significance for salmon appears to reflect conjecture, inaccurate and incomplete information. Yet, is unclear what Shell/SEIC's system of watercourse classification was intended to achieve

¹⁶ Gamble, Mark, Briefing Paper: Watercourse Crossing Classification Methodology and Crossing Techniques, REV 3, Sakhalin Energy Investment Company, August 2002.

¹⁷ Meijden, Blok & Willemsse, Environmental Review Water Course Crossing on Sakhalin, Sakhalin Energy Investment Company, Ltd., December 12, 2002.

¹⁸ Dr. Dr. Mikhail Skopets, December 25, 2003, personal communications.

¹⁹ Public input from Wild Salmon Center, Portland, Oregon, to SEIC on Sakhalin II EIA, May 28, 2003

²⁰ Dave Martin, Wild Salmon Center, personal communications, January 8, 2004.

in the first place, since there is no corresponding relationship between the number of watercourses it classifies as having higher significance and any superior method of watercourse crossings. Instead, Shell/SEIC propose to trench across almost all of these 63 watercourses (the worst global practice), and to bridge over none of them (the highest global practice).

Volume 4, Chapter 3 discusses the impacts of proposed pipeline hydrotesting, but the information in the Chapter is incomplete because it does not evaluate key potential indirect impacts related to the sources of water to be used, such as impacts on fish.²¹

Sakhalin II Project, Phase 2 could potentially have harmful thermal impacts on salmon. Water temperature is one of the most significant factors in the health of stream ecosystems. Temperature affects salmon egg and fry incubation, fish metabolism, organisms' resistance to disease, the availability of oxygen and nutrients to fish and wildlife, and other factors. Adult cold-water fish species may cease to migrate or die unspawned if exposed to long periods of warmer than usual temperatures. Alaska's water quality standards to protect cold-water fish habitat are as follows: Upper limit for spawning areas, egg and fry incubation = 13 C (55.5 F); Upper limit for migration routes = 15 C (59.0 F).²²

There is no apparent scientific literature exploring the potential for thermal impacts on salmon from pipelines of higher temperatures that cross watercourses of lower temperature. However, there is considerable literature about impacts to salmon due to increased temperatures from the removal of tree cover in riparian zones.²³

Volume 4, Chapter 3, Table 2.7 indicates that oil temperatures at the OPF BS #1 suction and OPF BS #2 outlet will be 50-68 degrees. However, there is no elaboration about whether this could have localized impact on spawning habitat adjacent to trenched pipeline crossings. Meanwhile, there is no elaboration on potential thermal impacts on salmon habitat from the removal of trees from riparian zones in the pipeline corridor.

3(c) Evaluation Based on Conjecture and Incomplete Information About Seismic Risks: Sakhalin Island is a very active seismic zone, a fact perhaps best illustrated by the 7.2 magnitude Neftegorsk earthquake in 1995, which killed 2000 people. It is obvious that there is significant risk from earthquake-induced rupture or leakage of oil pipelines and processing facilities. Any earthquake-induced oil spill, or undetected oil seepage will have severe negative impacts on the affected environment, especially on stream ecology and wild salmon runs.

According to the EIA, Volume 4, Chapter 1.3, Pipeline Transportation System, Gas Disposition Terminal and Booster Station, Existing Environment, after the Neftegorsk earthquake much of the Sakhalin II on-shore pipeline route was raised from the occurrence of one magnitude 6 to 7 event every one thousand years to one magnitude 8 to 9 event every one thousand years. By definition, large and destructive earthquakes of somewhat lower magnitude are anticipated to be more frequent.

Despite the high seismic risks, the EIA and associated documents fail to fully evaluate this risk, and contain incomplete and inaccurate information. For example, the EIA is missing fault

²¹ IBID #19

²² Personal communications, Sue Mauger, Stream Ecologist, Cook Inlet Keepers, January 14, 2003

²³ Ibid #22

crossing and seismic zone information; fails to interpret baseline data of reported ground movements at faults; does not provide evidence that its definition active and inactive faults is compatible with the complex geological conditions on Sakhalin; provides information on seismicity ratings and on the number of earthquake fault crossings that contradicts other information contained in the source documentation; fails to provide adequate design criteria; does not present information on site-specific risks at individual fault crossings and strategies to mitigate those risks; and presents a risk analysis based on risks to people, not to the environment (including salmon, other fish and wildlife and habitats).²⁴

3(d) Failure to Apply EIA Methodology: Volume 3, Onshore Processing Facility (OPF) Chapter 3.4.1, *Assessment of Impacts and Mitigation* acknowledges that “(b)ecause of the shallow nature of groundwater at many locations on Sakhalin Island, the majority of impacts to groundwater are likely to have very closely related secondary impacts on surface water. In turn, effects on surface water quality will have secondary effects on the freshwater ecology, fisheries and possibly water supply for humans.” However, in determining the significance of these secondary impacts, Chapter 3.4.2 states “(a)s a general note the significance criteria for impacts to groundwater (*Volume I, Chapter 3, EIA Process*) refer to Sanitary Protection Zones (SPZ). With no population close by there is no existing SPZ in the vicinity of the OPF...” Based on this anthropocentric methodology, Shell/SEIC concludes that the significance of construction and operation of the OPF on water resources will be minor. Thus, the very closely related secondary impacts on freshwater ecology and fisheries are ignored.

3(e) Complete Omission of Evaluation: Volume 4, Chapter 3 does not evaluate the impact of the pipelines and access roads on induced poaching of wild salmon. Volume 4, Chapter 3 also fails to evaluate the impact that new hatcheries, which are proposed as compensation, will have on wild salmon stocks.²⁵

4) Evaluation of Cumulative Impacts

The various elements of the Sakhalin II project do not exist in a vacuum. The environmental impact of each element combines with those of other elements to increase the cumulative impact of the overall project. In turn, overall project impacts combine with those of other projects in the area, resulting in increased overall cumulative impacts. Therefore, an essential part of the environmental assessment for Sakhalin II is the accurate evaluation of cumulative impacts *in relation to other project elements and to other projects*. The evaluation of cumulative impacts is one of the most widely accepted components of effective environmental assessment. For example:

IFC Procedure for Environmental and Social Review of Projects: Annex C—Types of Environmental Assessment: “The EA considers the following, as appropriate to specific project...Cumulative impacts of existing projects, the proposed projects, and anticipated future projects...”

(Note: EBRD Environmental Procedures, Annex 2, Environmental Impact Assessment Report also calls for a description of potential cumulative impacts: “Identify the potential environmental and social impacts that could be associated

²⁴ Letter to Rachele Sheard, Sakhalin Energy, from Richard Fineberg, December 29, 2003.

²⁵ Public input from Wild Salmon Center, Portland, Oregon, to SEIC on Sakhalin II EIA, May 28, 2003

with the proposed project and its feasible alternatives including those of an indirect and cumulative nature.”)

4(a) Brief Discussion But No Analysis of Cumulative Impacts of Project Elements in Relation to Other Project Elements: While the EIA chapters for each project element acknowledge that these elements have cumulative impacts in relation to other elements, that acknowledgement is typically a simple declarative statements of the kind like “Other activities associated with the Sakhalin II project could give rise to cumulative impacts.” In some Chapters the description is a very cursory depiction of the *kinds* of impacts that might be expected. However, there is no analytical modeling or quantifiable prediction of the severity of these impacts, nor are there mitigation measures described to reduce them.

Meanwhile, important cumulative impacts are skipped altogether. EIA Volume 4, Chapter 3.17.2 *Cumulative Impacts* fails to assess cumulative impacts from the crossing of multiple watercourses that collectively combine to fill downstream rivers and streams.²⁶ Instead, watercourses are considered individually. Combined upstream siltation and sediment loading can have dramatic impacts on salmon in rivers and streams downstream from proposed pipeline-related activities.

4(b) No Evaluation of Existing or Anticipated Future Projects: Leading cetacean experts are very concerned about the cumulative impacts on the endangered Western Gray Whale from all existing and anticipated future oil and gas development off-shore Northeast Sakhalin Island:

“There are nine major oil and gas development regions in the waters that surround Sakhalin Island. Two major projects (Sakhalin I [Exxon Neftegas Ltd.] and Sakhalin II [Sakhalin Energy Investment Company] directly overlap or are in near proximity to the primary feeding ground of western gray whales. Activities related to oil and gas exploration and production, including increased vessel and aircraft traffic, geophysical seismic surveys, well-drilling, and production operations are of concern to the well-being of western gray whales summering in the area.”²⁷

While the chapters for various elements of the Sakhalin II project provide a cursory discussion of cumulative impacts of that element in relation to other elements of Sakhalin II—it *does not evaluate the many other enormous existing and anticipated future oil and gas projects in the area* (such as Sakhalin I-VI).

5) Evaluation of Impacts on Wildlife Habitats

Sakhalin II Phase 2 will encroach upon habitats for a wide variety of wildlife species, including bird species such as spotted greenshank, a sub-species of the dunlin, and Steller's sea eagle. The status of the Steller's sea eagle is an international concern.²⁸ The Sakhalin II

²⁶ Public input from Wild Salmon Center, Portland, Oregon, to SEIC on Sakhalin II EIA, May 28, 2003

²⁷ Influence of seismic surveys on Western Gray Whales off Sakhalin Island, Russia in 2001. WELLER, Yulia, Ivashchenko, Tsidulko, Burdin & Brownell, Scientific Committee, International Whaling Commission, 2003.

²⁸ Correspondence from Friends of the Earth Japan to EBRD President Jean Lemierre and Japanese Bank for International Cooperation Governor Kyosuke Shinozawa, December 12, 2003.

Project OPF and pipelines will cut through an area generally regarded as having relatively more intact habitat than other areas, while other lengths of the pipelines will cut through the Makarovski Preserve.

5(a) Complete Omission of Evaluation: Volume 4, Chapter 3.9, *Protected Area*, states that the pipelines will cross the Makarovski Preserve, but that “a Decree has been obtained from the Governor granting permission to pass through the preserve with special protection provisions.” Notwithstanding this decree, the EIA provides no evaluation of the environmental impacts this project will have on the Preserve.

Volume 4, Chapter 3.10 *Habitat*, acknowledges that a potential impact from construction and operation of pipelines is increased access to previously isolated areas, and Chapter 3.17 *Cumulative impacts* acknowledges there is a genuine risk in more isolated areas such as near the OFP, but the Chapter fails to evaluate the risk or to propose any mitigation measures.

5(b) Evaluation Based on Incomplete or Inaccurate Information: The Joint Study of the Wildlife Preservation Bureau of Hokkaido and Moscow State University shows a serious discrepancy on the number of braces of Steller’s sea eagle in Chaivo Gulf and Piltun Gulf over what is reported by Shell/SEIC.²⁹

Volume 3, Chapter 1 provides a list of rare and endangered species that are present in general area of the OPF. However, it does not present base line data on the current status of these species in the project area, and fails to describe their habitat needs, to identify sensitive sites, and to provide other information necessary to evaluate and adequately mitigate project impacts. This information is vital to protect birds dependant on this coastal area. According to this Chapter, “If endangered species are encountered, SEIC will minimise the presence of people in the nesting and feeding grounds during the nest-making, egg-sitting and offspring-rearing periods (April to September) whenever possible.” Yet, it is not explained how construction workers, whose professional expertise is not typically associated with avian ecology, will know when they are encountering endangered species, or what to do if the *do* encounter them!

6) Risks and Impacts from Liquid Natural Gas Plant (LNG) and Oil and Gas Export Facilities

6(a) Complete Omission of Evaluation of LNG Explosion Risk: The risk of explosion at LNG plants is a growing concern in many countries. As a measure of the severity of this concern, an LNG tanker was recently turned away from the Boston Harbor; a proposed LNG plant in Mare Island in the San Francisco Bay Area was stopped; and U.S. Congress authorized approximately \$40 million to study four catastrophic scenarios.³⁰ Meanwhile, IFC Environmental Procedures require that such risks and their impacts be taken into account:

²⁹ Ibid #28

³⁰ See, *Inter Alia*, [Terrorism: Ready to Blow](#), Jerry Havens, *Bulletin of Atomic Scientists*, July/August, 2003.

IFC Procedure for Environmental and Social Review of Projects: Annex C—Types of Environmental Assessment: “The EA considers the following, as appropriate to specific project...Major hazards...Occupational health and safety...Fire prevention and life safety.”

Yet, the EIA provides no evaluation of the potential risk of explosion at the proposed LNG plant, including the potential for rapid phase transition, flammable vapor clouds, vapor cloud explosions, and pool fires.

6(b) Evaluation based on incomplete or inaccurate information: EIA Volume 5: LNG, Oil Export Terminal, LNG Jetty & Tanker Loading Unit, 3.12. *Impacts to Seawater Quality* states, “Aniva Bay is recognized as a sensitive area, based predominantly on the salmon population. It is currently not classified, however if Aniva Bay were to be classified as a high water category in the future, SEIC would need to apply for exemptions for the proposed development. Depending on the classification and the permitting process, changes may be required during the detailed design process.” However, Volume 5 2.4.3 states: “Aniva Bay is designated a zero discharge site, details of effluent permitting are currently under discussion with the relevant authorities.” Thus the EIA contradicts itself, and relies on a hope that Aniva Bay will have its classification lowered rather than proposing adequate alternatives or mitigation measures.

7) Solid Waste Disposal

Volume 4, Chapter 3 Pipeline Transportation System, Gas Disposition Terminal, and Booster Station, Section 3.4 on *Solid Waste Management* reveals that “management of solid wastes remains one of the main vulnerabilities associated with the project..” and “the existing local and regional infrastructure is insufficient to accept and store the projected amounts of solid waste associated with pipeline construction, and SEIC will therefore undertake to upgrade such facilities to an appropriate standard....”

7(a) Deferment of Evaluation: Volume 4, Chapter 3 states “EPC contractors will be required to develop specific waste management plans associated with their activities..” and “an EIA for the newly planned facility will be carried out in accordance with legislative requirements.” While the commitment to a subsequent EIA is a useful acknowledgement, it confirms that this EIA is inconclusive and incomplete with respect to “one of the main vulnerabilities associated with the project.”

8) Evaluation of Alternatives

The evaluation of alternatives, as the required provisions of IFC policy below suggest, is a vital part of the EIA process for it allows project sponsors, stakeholders, and Bank decision-makers to fully understand and influence project design decisions and the outcomes these decisions will have on the environment, on peoples’ lives, and on the public interest.

OP 4.01.2:...EA...examines project alternatives; identifies ways of improving project selection, siting, planning, design, and implementation by preventing, minimizing, mitigating, or compensating for adverse environmental impacts and enhancing positive impacts; and includes the process of mitigating and managing adverse environmental impacts throughout project implementation.

O.P. 4.01 (8) (a): *EA for a Category A project examines the project's potential negative and positive environmental impacts, compares them with those of feasible alternatives (including, the “without project” situation)...*

Environmental Assessment Report for Category A Projects—(2)(f) Analysis of Alternatives: *Systematically compares feasible alternatives to the proposed project site, technology, design, and operation—including, the “without project” situation—in terms of their potential environmental impacts; the feasibility of mitigating these impacts; their capital and recurrent costs; their suitability under local conditions; and their institutional, training, and monitoring requirements. For each of the alternatives, quantifies the environmental impacts to the extent possible, and attaches economic values where feasible. States the basis for selecting the particular project design proposed and justifies recommended emission levels and approaches to pollution prevention and abatement.*

(Note: EBRD Environmental Procedures, Annex 2, Environmental Impact Assessment Report also calls for Analysis of Alternatives: “A systematic comparison of feasible alternatives to the project in terms of location, project technology or design in terms of potential environmental impact. This should include the ‘do-nothing’ option...”).

8(a) Failure to Apply EIA Methodology: Volume 1, Chapter 5.2 *Development of Projects and Alternatives* describes alternatives that are analyzed in “a series of studies,” “screening studies,” “preliminary engineering studies,” “field reconnaissance and recommendations,” most of which are not directly cited there for reference. Readers are unable to ascertain whether or on what basis alternatives were evaluated.

In contrast, the IFC provisions quoted above outline required elements of an evaluation of project alternatives. Volume 1, Chapter 5.2 *Development of Projects and Alternatives* fails to systematically compare, as required, feasible alternatives to the proposed project site, technology, design, and operation in terms of their potential environmental impacts; the feasibility of mitigating these impacts; their capital and recurrent costs; their suitability under local conditions; and their institutional, training, and monitoring requirements, etc. Also, Volume 1, Chapter 5.2 *Development of Projects and Alternatives* also fails to analyze any “without project” situation.

Instead, Chapter 5.2 first takes a cursory, “bird’s eye” view of alternatives at a scale too low to realistically address most site-specific impacts. For example, it ponders whether the entire 800 kilometers of pipelines from platforms to the proposed LNG plant should be all off-shore or mostly on-shore. While this discussion is interesting, it is not at a scale of resolution that is high enough to discuss critically important alternatives of specific elements of the project (such as the methods that will be employed to construct pipelines crossing 1103 watercourses and 24+ seismic faults).

Volume 1, Chapter 3.1.2, *The EIA Process; Consultation and Scoping*, states that the EIA, “is one in a series of EIAs that have been prepared for the Sakhalin II Project (see *Volume I, Chapter 1*). These EIAs have had extensive inputs from local

experts and feedback from the regulators and stakeholders... These past activities have therefore effectively delivered one of the objectives of EIA scoping: namely stakeholder and regulator input on what are deemed to be the most important issues for the EIA.” However, despite extensive input from stakeholders on the importance of specifically identified alternatives, Chapter 5.2, *Development of Projects and Alternatives* fails to discuss and evaluate these proposals. Examples include the failure to discuss alternatives to routing undersea pipelines through Western Pacific Gray Whale feeding habitat; on-land pipelines bridged over watercourses; elevated earthquake-flexible pipeline designs over seismic faults; re-injected LNG plant wastewater; dumping of dredging wastes in less biologically productive zones at sea. It should be noted that the EIA fails to consider many alternatives even when regional government authorities and even their own consultants suggest them.

One critically important alternative to be analyzed is a combination of project elements (or elimination of project elements) to have zero impact on the benthic feeding habitat of the Western Gray Whale. Only gray whales feeds on benthos (organisms that live at the bottom of the sea). Its only known benthic feeding area is off-shore North East Sakhalin Island, due west of Sakhalin II PA and PB platforms. Proposed undersea pipelines are to be laid from the PB to PA platforms, and then trenched in a straight line from the PA platform to shore--directly through the Southern portion of this benthic feeding area. There is insufficient information to fully understand the potential negative impacts of trenching these pipelines on the Western Gray Whale, from disruptions from pipeline construction and operation from noise or damage to benthic feeding habitat, or otherwise. However, Chapter 5.2 *Development of Projects and Alternatives* puts forward the preconceived conclusion that the cheapest alternative for site selection is the best alternative! It states, “*For reasons of safety and cost ... will generally take the shortest route from the platforms to shore,*” even if this route dissects the endangered whale’s feeding habitat.

8(b) Deferment of Evaluation: Chapter 5.1, *Introduction*, states, “As the project progresses into detailed design, the focus will gear towards asset specific alternative, more related to the selection and specifications of plant and equipment.” Yet, the Detailed Design (DD) stage is expected to happen after the EIA is approved or rejected by public and private finance institutions. Hence the EIA fails to evaluate alternatives to key project design decisions that will be taken at the time of Detailed Design.

9) Evaluation of mitigation measures

OP 4.01.1: EA Evaluates... implementation by preventing, minimizing, mitigating, or compensating for adverse environmental impacts and enhancing positive impacts; and includes the process of mitigating and managing adverse environmental impacts throughout project implementation....

O.P. 4.01.8.a: EA...recommends any measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance.

9(a) Deferment of evaluation: The EIA relegates most specific impact mitigation measures to the Detailed Design phase, thus providing little description of mitigation measures, for example, for the 1103 watercourse crossings or the 100 access roads. Yet the Detailed Design phase is expected to follow public and private finance institutions’ approval or

rejection of the project. Hence, the EIA fails to adequately evaluate implementation by preventing, minimizing, mitigating or compensating adverse or enhanced environmental impacts.

10) Evaluation of Social Aspects

The Sakhalin II project represents serious threats to indigenous people and subsistence fisheries. The various elements of the Sakhalin II project could cause undue harm to the aquatic environment upon which the fisheries depend from pipelines trenched through watercourses and from pollution.

O.P. 4.01.3: *EA takes into account...social aspects (involuntary resettlement, indigenous peoples and cultural property);*

10(a) Evaluation Based on Incomplete Information: The Central and Eastern European Bankwatch Network undertook an assessment of the Social Impact Assessment (SIA) that Shell/SEIC prepared in parallel to the EIA. CEE Bankwatch's assessment indicates that the SIA lacks adequate evaluation of alternatives; that impact identification and mitigation measures that are not discussed in sufficient detail; that positive and negative impacts are not quantified; that although there are impact assessments for the construction and operation phase, there is no such assessment for the decommissioning phase; that the document lacks a description of the methodology used for the SIA.³¹

11) Evaluation of Consistency with National Policy Framework and Legislation

O.P. 4.01.3: *EA ... takes into account the findings of ... the country's overall policy framework and national legislation;*

11(a) Complete Omission of Information: The ESHIA fails to note and take into account that civil society organizations have been and continue to be compelled to file lawsuits to force the Sakhalin II project to comply with federal environmental law. Meanwhile, the ESHIA fails to take into account that the project's Production Sharing Agreement overrides the Russian Water Code and allows for the illegal dumping of drilling and other industrial wastes into the sea.

12) Consultation With Project-Affected Groups and Local Governments

OP 4.01.12: *For all Category A projects and as appropriate for Category B projects during the EA process, the project sponsor consults project-affected groups and local nongovernmental organizations (NGOs) about the project's environmental aspects and takes their views into account.*

(Note: Also the EBRD Environment Policy, General Principles (11) states that the Bank "will promote four basic principles regarding public information and consultation. They are (i) transparency; (ii) compliance with the mandate and accountability to shareholders; (iii) willingness to listen receptively to comments...")

³¹ Quality Analysis for the SIA for the Sakhalin II Phase 2 project, CEE Bankwatch Network, 2003.

12(a) Evaluation Based on Inaccurate and Distorted Information: Project-affected communities and non-governmental organizations have consistently stated that while project sponsors have held many meetings with them, the public's views are seldom taken into account. For example, project-affected communities believe that project sponsors have a fixed and inflexible idea of what kind of project will occur (e.g., trenched instead of bridged watercourse crossings), that consultations are contrived, and that viable alternatives and effective mitigations measures are ignored.

Sakhalin Environment Watch (SEW) reports that Shell/SEIC consultations with affected communities often take the form of lectures on project benefits by company officials with little time or patience for detailed questions and discussion of concerns.³² SEW also reports that many documents that Shell/SEIC has promised to publicly disclose, which are supposedly the basis for some key findings in the EIA, have not been provided.³³

Friends of the Earth Japan reports that Shell/SEIC has presented documents with manipulated information during its consultations; has failed to provide supplementary explanations about the incomplete environmental and social impact assessments, has ignored requests by Japanese citizens for more information regarding the project and consultations; and has rejected requests to permit audio recording of meetings to ensure an accurate record of the proceedings.³⁴

Pacific Environment and other groups have reported that independent expert input contained in the report entitled, "Sakhalin's Oil: Doing It Right," was largely ignored. This report warned of the project's potential vulnerability to a catastrophic oil spill and provided 78 specific remedial measures, including such basic recommendations as mandatory tanker routes, increased monitoring of tanker traffic, notifications to fishing vessels if a tanker is in the area, increased spill response equipment and improved access to the shoreline where it would be deployed.³⁵

³² Personal communications with Dmitry Lisitsyn, Chairman, Sakhalin Environment Watch, September 25, 2003.

³³ Personal communications with Dmitry Lisitsyn, Chairman, Sakhalin Environment Watch, January 18, 2003.

³⁴ Correspondence from Friends of the Earth Japan to EBRD President Jean Lemierre and Japanese Bank for International Cooperation Governor Kyosuke Shinozawa, December 12, 2003.

³⁵ *Sakhalin's Oil, Doing it Right, Applying Global Standards to Public Participation, Environmental Monitoring, Oil Spill Prevention & Response, and Liability Standards in the Sakhalin Oblast of the Russian Federation*, Lawn, Steiner & Wills, Pacific Environment, 1999

13) Evaluation of Compliance with IFC OP 4.04 Natural Habitats

IFC's Natural Habitats policy states requirements for projects located in or that affect natural habitats. Sakhalin II will have an impact on 11 endangered marine mammal species (including the critically endangered Western Gray Whale), hundreds of wild-salmon bearing streams (including those containing the endangered Sakhalin Taimen), and many other natural habitats and rare and endangered species. Given these local conditions and in light of a commitment by Shell/SEIC and public and private banks to World Bank/IFC policy, Sakhalin II's adherence to the Natural Habitats policy is paramount.

OP 4.04.1: IFC supports, and expects project sponsors to apply, a precautionary approach to natural resource management to ensure opportunities for environmentally sustainable development.

(Note: The European Environment Agency (European Commission) defines "precautionary approach" as "A decision to take action, based on the possibility of significant environmental damage, even before there is conclusive, scientific evidence, that the damage will occur")

13(a) Failure to Apply Generally Accepted Methodology Related to the Precautionary Approach: Volume 2, Chapter 3.81 states, "Given the international importance of critically endangered and endangered species a precautionary approach was adopted when defining impact assessment criteria (see Volume 1, Chapter 3 so that all impacts on these species are considered to be either moderate or major (i.e. there are no impacts defined as minor)." However, Volume 1, Chapter 3 makes no reference to the precautionary approach.

Meanwhile, Shell/SEIC fail to take precautionary actions that avoid routing undersea pipelines across Western Gray Whale benthic feeding habitat; that design the OPF to protect migrating shore birds; that bridge on-land pipelines over watercourses and seismic faults; and that identify alternative dumping sites for dredging wastes.

OP 4.04.3: IFC does not support projects that, in IFC's opinion, involve the significant conversion or degradation of critical natural habitats.

OP 4.04 Annex A—Definitions:

1(a)(i) Critical natural habitats are:

existing protected areas and areas officially proposed by governments as protected areas (e.g., reserves that meet the criteria of the World Conservation Union [IUCN] classifications²), areas initially recognized as protected by traditional local communities (e.g., sacred groves), and sites that maintain conditions vital for the viability of these protected areas (as determined by the environmental assessment process³); or

ii) sites identified on supplementary lists prepared by the World Bank or an authoritative source determined by IFC's Environment Division. Such sites may include areas recognized by traditional local communities (e.g., sacred groves); areas with known high suitability for biodiversity conservation; and sites that are critical for rare, vulnerable, migratory, or endangered species.⁴ Listings are based on systematic evaluations of such factors as species

richness; the degree of endemism, rarity, and vulnerability of component species; representativeness; and integrity of ecosystem processes.

b) Significant conversion is the elimination or severe diminution of the integrity of a critical or other natural habitat caused by a major, long-term change in land or water use. Significant conversion may include, for example, land clearing; replacement of natural vegetation (e.g., by crops or tree plantations); permanent flooding (e.g., by a reservoir); drainage, dredging, filling, or channelization of wetlands; or surface mining. In both terrestrial and aquatic ecosystems, conversion of natural habitats can occur as the result of severe pollution. Conversion can result directly from the action of a project or through an indirect mechanism (e.g., through induced settlement along a road).

c) Degradation is modification of a critical or other natural habitat that substantially reduces the habitat's ability to maintain viable populations of its native species.

OP 4.04.4: *IFC does not support projects involving the significant conversion of natural habitats unless there are no feasible alternatives for the project and its siting, and comprehensive analysis demonstrates that overall benefits from the project substantially outweigh the environmental costs. If the environmental assessment indicates that a project would significantly convert or degrade natural habitats, the project includes mitigation measures acceptable to IFC. Such mitigation measures include, as appropriate, minimizing habitat loss (e.g., strategic habitat retention and post-development restoration) and establishing and maintaining an ecologically similar protected area. IFC accepts other forms of mitigation measures only when they are technically justified.*

OP 4.04 Annex A—Definitions (1): *The following definitions apply:*

Natural habitats¹ are land and water areas where (i) the ecosystems' biological communities are formed largely by native plant and animal species, and (ii) human activity has not essentially modified the area's primary ecological functions. All natural habitats have important biological, social, economic, and existence value. Important natural habitats may occur in tropical humid, dry, and cloud forests; temperate and boreal forests; mediterranean-type shrublands; natural arid and semi-arid lands; mangrove swamps, coastal marshes, and other wetlands; estuaries; seagrass beds; coral reefs; freshwater lakes and rivers; alpine and subalpine environments, including herbfields, grasslands, and paramos; and tropical and temperate grasslands.

13(b) Policy Violation: This policy defines “critical natural habitats” as “areas with known high suitability for bio-diversity conservation; and sites that are critical for rare, vulnerable, migratory, or endangered species,” which certainly includes habitat for the critically threatened Western Pacific Gray Whale. The policy defines “degradation” as modification of a critical or other natural habitat that substantially reduces the habitat's ability to maintain viable populations of its native species.” *With the total population of Western Pacific Gray Whales estimated at around 135, and fewer than 20 adult females capable of calving, and a reproductive rate of only 1%, any negative impact on the whale’s habitat from Sakhalin II substantially reduces its ability to maintain viable populations and hence*

represents a violation of the Natural Habitats Policy. Hence, this represents a prima facie violation of this policy.

Other rare, vulnerable, migratory, or endangered species of concern that meet the “critical natural habitats” definition, include: Sakhalin taimen, green sturgeon, spotted greenshank, a sub-species of dunlin, Steller's sea eagle, a rare species that attracts international concern, White-tailed Sea-eagle, Osprey, Siberian Spruce Grouse, Aleutian Tern, Marbled Murrelet, Peregrine Falcon, Spoonbilled Sandpiper, Curlew Sandpiper, and the multitude of plant species listed in Volume 4, Chapter 1b.

Meanwhile, given the findings above in Section #8, Evaluation of Alternatives, the case can be made that Shell/SEIC has not demonstrated that there are “no feasible alternatives for the project and its siting,” and hence are in violation of this policy.

14) Evaluation of Compliance with IFC Environment, Health and Safety Guidelines: Oil and Gas Development (Offshore)

Prepare a platform and facilities removal plan for closure as part of the Environmental Assessment process; the plan and budgets/provisions for financing should be agreed with the sponsor as early as possible;

-and-

World Bank Pollution Prevention and Abatement Handbook—Oil and Gas Development (Onshore)

A reclamation and closure plan is required. This plan should be developed early in the project and should address the removal and disposal of production facilities in an environmentally sensitive manner, the restoration of the site, and provisions for any ongoing maintenance issues. Where possible, progressive restoration should be implemented

(Note: Also EBRD Environmental Procedures, Annex 2, Environmental Impact Assessment Report, Mitigation and Management of Impacts and Issues states that “(f)inancial provisions for potential risks should also be described (for example escrow accounts and insurance cover to provide for inter alia abandonment and decommissioning, site remediation and oil spills and other emergencies”)

14(a) Complete Omission: The EIA contains cursory discussions about the decommissioning process for each project element, but the document does not provide closure plans, with a budget financing provision. Instead, the EIA relegates decommissioning to the Russian side, saying ownership of facilities will ultimately revert to them in 30 years. The EIA should have a detailed decommissioning plan that includes a provision that a decommissioning fund be established prior to the beginning of the project.

Conclusion:

This report evaluates conformity of the Sakhalin II Project, Phase 2 with selected World Bank (WB) and International Finance Institution (IFC) environmental policies. A rationale for an evaluation against WB/IFC policies is based on the requirements of the public finance institutions and private banks that are being approached to finance the project, as well as the commitments made by the project sponsor, Shell/SEIC.

The evaluation focuses on the Sakhalin II, Phase 2 EIA, the principle document sustaining Shell/SEIC's claim that the project adheres to WB/IFC environmental policies. The EIA is the primary document presented to the public for purposes of facilitating citizens' input to bank officials. An adequate EIA is considered by most public and many private banks to be a prerequisite beginning to their own required public comment periods before proceeding to ultimate institutional approval or rejection of a project.

The evaluation finds that the Sakhalin II Project, Phase 2 fails to comply with identified provisions of the following WB/IFC policies:

- IFC OP 4.01 Environmental Assessment
- IFC OP 4.04 Natural Habitats
- IFC Environmental, Health and Safety Guidelines--Oil and Gas Development (Offshore)
- World Bank Pollution Prevention and Abatement Handbook—Oil and Gas Development (Onshore)
- IFC Procedure for Environmental and Social Review of Projects: Annex C—Types of Environmental Assessment

Separate violations of EBRD Environmental Procedures are also interspersed in the report.

The evaluation identifies fundamental flaws recurring throughout the EIA that indicate violations of these policies. In summary, these include:

- **Complete omission of any evaluation of certain critical environmental risks and impacts, including:**
 - Impact of tanker accidents, including in Aniva Bay and La Perouse Straights;
 - Cumulative impacts of existing and anticipated future projects;
 - Prima facie violation of the IFC Natural Habitats Policy;
 - No reclamation plan;
 - LNG explosion risks;
 - Impacts of pipelines and access roads on poaching of wild salmon;
 - Impact of new hatcheries on wild salmon stocks;
 - Impacts of pipelines crossing the Makarovski Preserve;
 - Evaluation of citizens' environmental lawsuits against the project;
 - Evaluation of environmental provisions of the project's Production Sharing Agreement;
- **Evaluation based on incomplete, inaccurate or distorted information;**
 - Key seismic information missing or contradicts other information contained in the source documentation;
 - No base line data on status of rare and endangered species in the OPF area, habitat needs, identified sensitive sites, and site specific mitigation measures;
 - Evaluation of impacts on salmon based on commercial species only;
 - Salmon surveys and other data on affected salmon habitat are incomplete;
 - Impact of hydrotesting of pipelines on fish not assessed;
 - Potential thermal impacts on salmon not assessed;
 - Contradictory information about fisheries classification of Aniva Bay;
 - Incomplete Social Impact Assessment;
 - Discrepancy between Shell/SEIC statements and Joint Study of the Wildlife Preservation Bureau of Hokkaido and Moscow State University on the number of braces of Steller's sea eagle in Chaivo Gulf and Piltun Gulf;
 - Public consultations contrived; project sponsors fail to disclose requested information; project sponsors present manipulated data presented at consultations; public and independent expert input ignored;

- **Premature conclusions of risks and impacts made prior to the collection and assimilation of primary data and research necessary to conduct an evaluation;**
 - Decisions of preferred method of watercourse crossings (especially trenching) prior to knowledge of pipeline crossing locations and site-specific characteristics upon which such decisions should be based;
 - Conclusions regarding classification of watercourse sensitivity for spawning of salmon prior to surveys of salmon habitat being completed;
- **Deferment of evaluation of some critical risks and impacts to processes that will occur later and that are outside the scope of this EIA;**
 - Oil spill response plans for various elements only in preliminary form;
 - Solid waste management plans not yet developed;
 - Key project design decisions that affect critical risks and impacts to be made in Detailed Design phase subsequent to EIA;
- **Failure to apply generally accepted EIA methodology:**
 - Failure to consider potential impacts to Western Gray Whale including High Magnitude Impact of Major Significance (extinction);
 - Significance criteria for impacts on groundwater at OPF based on impacts to humans, not fish and wildlife;
 - Evaluation of alternatives appears based on preconceived conclusions; no adherence to required methodology, no appropriate scale of resolution, and no due consideration of stakeholder input;
 - Failure to apply a precautionary approach.
- **Reliance on conjecture rather than analysis to reach many conclusions:**
 - Prediction of success of mitigation measures to protect Western Gray Whales from extinction based on conjecture rather than quantifiable data or analytical modeling;
 - Prediction of most residual impacts not based on quantifiable data or analytical modeling;
 - Conjecture that most watercourses are of lower significance to salmon than believed by regional fisheries authorities;
 - Some seismic risk conclusions based on generalizations and not on the complex site-specific geological conditions on Sakhalin; some risk analysis based on risks to people, not to the environment (including salmon, other fish and wildlife and habitats).

These fundamental flaws indicate that the Sakhalin II Project, Phase 2 EIA is insufficient to provide assurance that the environmental impacts of the project are fully understood, are accurately portrayed, are acceptable, are manageable, and will be subject to adequate mitigation over the life of the project. Many of the most significant environmental impacts of the project will only be addressed after the EIA is deemed by project sponsors to be complete, thus defeating the very purpose of the EIA. It therefore cannot be demonstrated that the project conforms to the policies, missions and mandates of the public and private banks that are considering it for financing. This is disturbing, given the enormity of the project and the precedent it sets for future projects in the area. It is recommended that the public and private banks reviewing the EIA halt further consideration of the project unless and until these fundamental flaws are remedied.

Endnotes

- ¹ The Equator Principles website (<http://www.equator-principles.com/>) reports that as at 28 October 2003, London-based Dealogic ProjectWare, which produces statistics and analysis of the project finance market, has calculated that the 18 banks which had by then adopted the Equator Principles arranged \$43 billion of project loans in 2002 (74% of market volume), and 78% of project loans in 2003 to date. Since then, a further two banks, CIBC and KBC, have also adopted the Principles.
- ² Equator Principles, June 2003, Preamble, page 2
- ³ Equator Principles, June 2003, Statement of Principles, page 2
- ⁴ Dmitry Vasilievich Lisitsyn (of Sakhalin Environment Watch) et al, 4 January 2003, 'Statement of common demands by environmental NGOs regarding the Sakhalin-1 and Sakhalin-2 oil and gas projects', <http://www.pacificenvironment.org/russia/sakhalindemands>
- ⁵ Naomi Kanzaki (of Friends of the Earth Japan) et al, 15 December 2003, letter to Jean Lemierre (President, European Bank for Reconstruction and Development) and Kyosuke Shinozawa (Governor, Japan Bank for International Cooperation), Re: Financing for Phase 2 construction of Sakhalin II Oil and Gas Development Project, <http://www.foejapan.org/aid/jbic02/sakhalin/letter/20031215e.html>
- ⁶ Claimants are number of citizens and nongovernmental organizations from Moscow and Russian Far East. The claim has been made and sent on behalf of claimants by lawyers of the Moscow-based NGO Legal center Rodnik. Respondents of the claim are the Government of the Russian Federation and the Ministry for Natural Resources of the Russian Federation. The SEIC consortium is involved as the third party of the law suit. See <http://www.eca-watch.org/problems/russia/documents/BackgroundonSakhalinIIILawsuit.doc>
- ⁷ Paul Webster, 'Will Oil Spell Trouble for the Western Pacific Gray Whales?', *Science*, May 30, 2003
- ⁸ Jim Carlton, 'Stymied in Alaska, Oil Producers Flock to a New Frontier', *The Wall Street Journal*, September 4, 2003
- ⁹ ME Vinogradov, 6 June 2001, letter to Yu.S. Osipov (President of the Russian Academy of Sciences), B.A. Yatskevich (Minister of Natural Resources), and E.I. Nazdratenko (Chairman of the State Committee of Fisheries).
- ¹⁰ *Wall Street Journal*, September 4, 2003, 'Stymied in Alaska, Oil Producers Flock to a New Frontier'
- ¹¹ SEIC Phase II Development – Environmental Impact Assessment Volume 4, Chapter 1, Section 1.3.3 – 'Geology', page 1-25
- ¹² Richard A Fineberg, February 2004, 'Seismic Risk and the Onshore Pipeline Portion of Sakhalin Energy Investment Company's Sakhalin-II Phase 2 Project: Unanswered Questions', Report to Sakhalin Environment Watch, Friends of the Earth Japan, ISAR, Pacific Environment and WWF Russia
- ¹³ Lawn, Steiner & Wills, 'Sakhalin's Oil: Doing it Right', Pacific Environment and Sakhalin Environment Watch, 1999
- ¹⁴ NGO Collective Analysis of Equator Principles, 1 Introduction - <http://www.banktrack.org/index.php?id=50>
- ¹⁵ For example, the Karahnjukar dam in Iceland, signed by Barclays and other banks in July 2003; the Ban La, Tuyen Quang and Buon Kuop hydropower plants in Vietnam, signed by Citigroup and ABN Amro and others in September 2003; the Baku-Tbilisi-Ceyhan oil pipeline in Azerbaijan / Georgia / Turkey, signed by nine banks that had adopted Equator (and six others) in February 2004.
- ¹⁶ Equator Principles, June 2003, Preamble, page 2
- ¹⁷ PLATFORM et al, October 2003, Evaluation of compliance of the Baku-Tbilisi-Ceyhan (BTC) pipeline with the Equator Principles, http://www.carbonweb.org/documents/Equator_Principles.pdf
- ¹⁸ WWF-UK press release, 3 February 2004, 'Royal Bank of Scotland to fund controversial oil pipeline', http://www.wwf.org.uk/News/n_0000001107.asp
- ¹⁹ BankTrack Network press release, 3 February 2004, 'Major banks criticised for supporting Caspian pipeline project'
- ²⁰ eg *Guardian*, 8 December 2003, 'Principles in the pipeline'; *Wall Street Journal*, 10 December 2003, 'WWF Urges Banks Not To Fund Caspian Oil Pipeline', *Sunday Herald*, 8 February 2004, 'RBS attacked over unethical oil pipeline Controversial projects'
- ²¹ *Sunday Times*, 15 February 2004, 'BP accused of cover-up in pipeline deal'
- ²² A case brought by Georgian environment group Green Alternative, alleging unlawful awarding of the environmental permit, was lost in March 2004, but is now going to appeal. In January 2004, the Corner House and Kurdish Human Rights Project applied to the European Court of Justice that the pipeline legal framework conflicted with Turkey's environment, human rights and European Union accession commitments. Cases are also expected on behalf of individual landowners in the European Court of Human Rights.
- ²³ Equator Principles, June 2003, Statement of Principles, page 4
- ²⁴ BankTrack, January 2004, 'No U-Turn Allowed: Recommendations to the Equator banks', http://www.banktrack.org/fileadmin/user_upload/documents/0_BT_own_publications/No_U_turn_allowed.pdf
- ²⁵ *Financial Times*, 28 February 2004, 'Government faces \$60m claim over India losses'
- ²⁶ Letter from Susan Hawley of the Corner House and six other signatories to Mike O'Brien, UK Minister of State for Trade and Investment, 27 February 2004
- ²⁷ Equator Principles, June 2003, Statement of Principles, page 2
- ²⁸ Equator Principles, June 2003, Statement of Principles - 1, page 2
- ²⁹ Equator Principles, June 2003, Exhibit 1 – Environmental and social screening process, page 5
- ³⁰ Equator Principles, June 2003, Statement of Principles - 2, page 2
- ³¹ Equator Principles, June 2003, Statement of Principles - 3, pages 2-3
- ³² Equator Principles, June 2003, Statement of Principles - 3, pages 2-3
- ³³ The EIA claims that it only need to look at cumulative impacts with Sakhalin I, as the others a) do not have data available; and b) will be developed later. However, the lack of detailed data should not preclude at least a qualitative assessment of cumulative impacts, which given the scale of the projects, are likely to be significant; indeed, the Sakhalin I cumulative impacts analysis is essentially qualitative. Also, although the construction periods may not overlap, the periods of operation certainly will. The Equator Principles requirement is to assess "anticipated" future projects, a description which suggests lack of complete certainty, and would seem to include the other four Sakhalin oil and gas projects.

- ³⁴ Considerable data is available for Sakhalin I – yet the Sakhalin II EIA has no modelling, no analytical measurement of potential impacts, no numerical or descriptive prediction of impacts – in contravention of normal industry practice.
- ³⁵ Equator Principles, June 2003, Statement of Principles - 3, page 3
- ³⁶ SEIC Phase II Development – Environmental Impact Assessment Volume 1, Chapter 2, Table 2.6 – ‘Typical International Guidance that may be Relevant’ (page 2-18)
- ³⁷ World Bank, Pollution Prevention and Abatement Handbook, 1998, ‘General environmental guidelines’, page 436
- ³⁸ Equator Principles, June 2003, Statement of Principles - 3, pages 2-3
- ³⁹ World Bank Group website - Data & Statistics > Country Classification > Country Groups. At <http://www.worldbank.org/data/countryclass/classgroups.htm> - accessed 21/3/04
- ⁴⁰ International Finance Corporation, OP 4.01 (Environmental Assessment), Annex B—Content of an Environmental Assessment Report for a Category A Project, clause 2d
- ⁴¹ International Finance Corporation, OP 4.01 (Environmental Assessment), Annex B—Content of an Environmental Assessment Report for a Category A Project, clause 2e
- ⁴² International Finance Corporation, OP 4.01 (Environmental Assessment), clause 12
- ⁴³ International Finance Corporation, OP 4.01 (Environmental Assessment), Annex B—Content of an Environmental Assessment Report for a Category A Project, clause 2f
- ⁴⁴ See World Bank, Environmental Assessment Sourcebook, Update no. 17, December 1996, ‘Analysis of alternatives in environmental assessment’ – which makes recommendations on how to assess alternatives systematically. This is in strong contrast to the approach followed in Sakhalin II.
- ⁴⁵ For example, in assessing alternative routes for the offshore pipeline, the EIA does not consider the impact on the feeding area of the Western Gray Whale. Rather it asserts that “For reasons of safety and cost however, they will generally take the shortest route from the platforms to shore.” [SEIC Phase II Development – Environmental Impact Assessment Volume 1, Chapter 5 – ‘Development of project and alternatives’, section 5.4.2]. Similarly, the siting of the LNG terminal was chosen based only on “technical, operational and economic criteria” [section 5.8.2]. This is thus in direct contravention of IFC’s OP 4.01, which requires that the project and its alternatives are evaluated for “potential environmental impacts; the feasibility of mitigating these impacts”, as well as cost and technical issues.
- ⁴⁶ SEIC Phase II Development – Environmental Impact Assessment Volume 1, Chapter 5 – ‘Development of project and alternatives’
- ⁴⁷ International Finance Corporation, OP 4.01 (Environmental Assessment), clause 3
- ⁴⁸ International Finance Corporation, OP 4.01 (Environmental Assessment), clause 4
- ⁴⁹ International Finance Corporation, OP 4.04 (Natural Habitats), clause 1
- ⁵⁰ International Finance Corporation, OP 4.04 (Natural Habitats), clause 3
- ⁵¹ International Finance Corporation, OP 4.04 (Natural Habitats), Annex A, clause 1a
- ⁵² International Finance Corporation, OP 4.04 (Natural Habitats), Annex A, clause 1b
- ⁵³ International Finance Corporation, OP 4.04 (Natural Habitats), clause 8
- ⁵⁴ Equator Principles, June 2003, Statement of Principles - 4, page 3
- ⁵⁵ Equator Principles, June 2003, Statement of Principles - 5, page 3
- ⁵⁶ Equator Principles, June 2003, Statement of Principles - 5, pages 3-4
- ⁵⁷ Equator Principles, June 2003, Statement of Principles – 6(c), page 4
- ⁵⁸ Equator Principles, June 2003, Statement of Principles - 9, page 4