



June 19, 2017
Office of the Compliance Advisor Ombudsman (CAO)

COMPLIANCE INVESTIGATION REPORT

IFC Investments in Lydian International (Projects #25924 and #27657), Armenia
Complaints 01 & 02

CAO Investigation of IFC's Environmental and Social Performance in Relation to its Investments in Lydian International (Amulsar Gold Project), Armenia

Office of the Compliance Advisor Ombudsman for the
International Finance Corporation (IFC) and the
Multilateral Investment Guarantee Agency (MIGA),
Members of the World Bank Group

About CAO

CAO's mission is to serve as a fair, trusted, and effective independent recourse mechanism and to improve the environmental and social accountability of IFC and MIGA.

CAO (Office of the Compliance Advisor Ombudsman) is an independent post that reports directly to the President of the World Bank Group. CAO reviews complaints from communities affected by development projects undertaken by the two private sector arms of the World Bank Group, the International Finance Corporation (IFC) and the Multilateral Investment Guarantee Agency (MIGA).

CAO's Compliance function oversees investigations of IFC/MIGA's environmental and social performance, particularly in relation to sensitive projects, to ensure compliance with policies, standards, guidelines, procedures, and conditions for IFC/MIGA involvement, with the goal of improving IFC/MIGA environmental and social performance.

For more information about CAO, please visit www.cao-ombudsman.org.

Table of Contents

Abbreviations and Acronyms	5
Executive Summary	6
Overview of CAO’s Compliance Process	10
I. Background to IFC’s Investments in Lydian International.....	11
A. IFC’s Investments in Lydian International	11
B. IFC’s Early Equity Business.....	11
II. Background to the CAO Compliance Investigation.....	13
A. The Complaints	13
B. CAO Assessment of the Complaints.....	13
C. CAO Compliance Appraisals	13
D. Compliance Investigation Methodology	14
E. Applicable IFC Policies, Performance Standards, and Procedures.....	14
III. Issues Raised by the Complaints	16
A. IFC Policies and Processes.....	16
B. Environmental Issues and Quality of Analysis in the ESIA Process	16
C. Social Issues, Quality of the ESIA, and Consultation Processes.....	16
IV. Description of the Amulsar Gold Project	17
V. CAO’s Observations of the Gndevaz Community	20
VI. IFC Environmental and Social Appraisal and Supervision of Lydian International/Amulsar Project	22
A. IFC’s Environmental and Social Review of the Project	22
B. IFC’s Environmental and Social Supervision of the Project.....	25
VII. Analysis of Environmental and Social Issues Raised in the Complaints	29
A. Analysis of Environmental Issues Raised in the Complaints	29
1. Assessment of Potential Future Environmental Impacts at Amulsar.....	29

2. Biodiversity and the Presence of Armenian “Red Book” Species	37
B. Analysis of Social Issues	41
1. Land Acquisition and Livelihood Restoration.....	41
2. Impacts on Jermuk Tourism.....	45
3. Adequacy of Assessment of Impacts on the Village of Gndevaz	49
4. Consultation and Engagement Processes, Access of Concerned Stakeholders to Public Hearings, and Extent to Which Complaints Have Been Registered and Addressed	56
 VIII. Conclusion and Observations	61
 Appendix A. IFC Investments in Lydian International Ltd.....	63
Appendix B. CAO Investigation Terms of Reference	64
Appendix C. Project Timeline.....	66
Appendix D. Summary of CAO Findings	68

Abbreviations and Acronyms

Acronym	Definition
AMR	Annual Monitoring Report
AQNVMP	Air Quality Noise and Vibration Plan
BCS	Broad Community Support
BFS	Bankable Feasibility Study
BMP	Biodiversity Management Plan
BRSF	Barren Rock Storage Facility
CAO	Office of the Compliance Advisor Ombudsman (IFC and MIGA)
CDP	Community Development Plan
CHSSP	Community Health, Security and Safety Plan
CLC	Community Liaison Committee
CLO	Community Liaison Officer
E&S	Environmental and Social
EIA	Environmental Impact Assessment (at national level)
EMP	Environmental Monitoring Plan
ESAP	Environmental and Social Action Plan
ESIA	Environmental and Social Impact Assessment
ESMS	Environmental and Social Management System
ESRS	Environmental and Social Review Summary
ESRP	Environmental and Social Review Procedures
GIIP	Good International Industry Practice
GLAC	Guide to Land Acquisition and Compensation
HLF	Heap Leach Facility
HSEC	Health Safety Environment and Community
IESC	Independent Environmental and Social Consultant
IFC	International Finance Corporation
LALRP	Land Access and Livelihood Restoration Plan
NGO	Non-Governmental Organization
PCDP	Public Consultation and Disclosure Plan
PS	Performance Standards
SEP	Stakeholder Engagement Plan
SPI	Summary of Proposed Investment
TOR	Terms of Reference
VEC	Valued Ecosystem Components

Executive Summary

Background

This report provides the analysis and findings of CAO's compliance investigation into IFC's investment in Lydian International Ltd. ("the company") and its Amulsar Gold Project, a gold mining project located 170 km south of Armenia's capital Yerevan.

IFC first invested in the company in 2007 to finance exploration activities and feasibility studies for Lydian's mineral resource properties in Kosovo, Armenia and Turkey. This initial investment was followed by eleven supplemental investments between 2008 and 2015. IFC has invested \$16.4 million since 2007 and held equity shares in the company until May 2017. In May 2017, IFC sold all of its shares and is now no longer an investor in the company. In December 2015, the company announced that it had entered into agreements related to a \$325 million construction financing package for the Amulsar Gold Project with two main lenders. The total financing requirement to fund construction of Amulsar is estimated to be \$395 million.

At the time of finalizing this report, construction of the Amulsar mine had commenced. CAO's investigation process, however, deals with the period of IFC's investment from 2007 to 2016, shortly before construction started.

IFC's investment in Lydian was considered an early equity investment as IFC bought equity in the company prior to the company having defined a resource within its license area at Amulsar. IFC's stated goal in participating in early phases of mining project developments includes having a positive impact on the environmental and social (E&S) performance of companies working in countries where the management of E&S impacts of mining is challenging from a regulatory perspective. IFC emphasizes the value it adds in these contexts as a long-term partner.

This compliance investigation was triggered in response to two complaints submitted in April and July 2014 by community members living near the mine area, with the support of local and national NGOs. The complainants raise a broad range of environmental and social concerns, including concerns about the future environmental impacts of the project such as impacts on water, dust, seismic risks, radioactive risks, biodiversity; social impacts such as the adequacy of the land acquisition process, impacts on the tourism sector in the nearby spa town of Jermuk, risks of social impacts on the community of Gndevaz (including health, livelihoods, well-being of the community), and concerns related to consultation and stakeholder engagement; as well as allegations that IFC did not ensure client compliance with IFC environmental and social requirements.

Summary of CAO's Analysis and Findings

CAO has assessed IFC's performance in relation to a range of community concerns regarding the E&S impacts of the Amulsar mine. CAO finds that the majority of these concerns were the subject of appropriate supervision by IFC. CAO acknowledges IFC's support to the client in preparing an Environmental and Social Impact Assessment (ESIA) that addressed the risks and potential impacts of the mine in a manner that, overall, meets the requirements of IFC's Sustainability Framework and reflects good international industry practice. This is a significant achievement for an investment in a junior mining company working in a challenging country context.

At the same time, this report identifies shortcomings in IFC's appraisal and supervision of the project as relate to a number of the issues raised in the complaints. CAO finds that IFC's pre-investment E&S review of the project was not commensurate to risk. In particular, CAO notes a lack of early expert scoping of E&S risks and an overestimation of the client's commitment and

capacity to address E&S risks associated with the project in the exploration phase. Given the complexity of the project, acknowledged gaps in client capacity, and its lack of E&S track record, CAO finds that a more detailed and structured E&S action plan was needed at the point of IFC's engagement.

Weaknesses in IFC's pre-investment review translated into problems during the initial years of supervision. CAO finds that IFC did not effectively supervise the client's delivery of agreed E&S mitigation measures during the period between 2007 and 2013. In particular, the requirement to develop an Environmental and Social Management System (ESMS) for exploration activities was not completed in a timely manner. As a result, IFC did not have assurance that the company's exploration activities were being carried out in accordance with its E&S requirements. Similarly, IFC lacked assurance during this period that the client's ongoing E&S assessment work was being conducted to IFC standards.

From 2013 onward, however, CAO notes a marked advance in IFC's supervision of the project. The result was significant improvement in client E&S performance, particularly through the development of an exploration phase ESMS and an international standard ESIA.

This report considers a range of specific environmental and social concerns raised by the complainants. From an environmental perspective these include:

- Risks of ground and surface water contamination
- Seismic risks
- Radiation risks
- Risks of contaminated dust deposition
- Risks of impacts on rare and endangered species

In relation to each of these issues, CAO finds that IFC's review of the ESIA process was commensurate to risk.

In relation to project impacts on biodiversity, however, CAO finds that IFC's supervision during early exploration was insufficient. In this context, IFC observed in 2013 that the client's exploration activities had negatively impacted tier one critical habitat for the population of a critically-endangered plant, *Potentilla porphyrantha*. During the post-2013 period, however, CAO finds that IFC's supervision was commensurate to risk and resulted in the development of appropriate action plan items designed to minimize, mitigate and offset potential impacts of the project on biodiversity as required by the IFC *Performance Standards on Environmental and Social Sustainability*, including in relation to *Potentilla porphyrantha*.

Specific social concerns addressed in the report include the following:

- Land acquisition and livelihood restoration
- Potential impacts of the project on the brand of the nearby resort of Jermuk
- Impacts of the project on the village of Gndevaz
- Consultation and engagement processes, access of concerned stakeholders to public hearings, and whether complaints have been registered and addressed

Regarding land acquisition, CAO finds that IFC provided appropriate guidance to the client in relation to a land acquisition program that prioritized negotiated purchases. CAO also finds that IFC's supervision provided reasonable assurance of compliance with the requirements of the Performance Standards in relation to livelihood restoration planning, which is required when projects cause physical or economic displacement.

In relation to the resort town of Jermuk, CAO notes well-documented community concerns regarding potential adverse impacts of the project on tourism. While Jermuk was not initially

considered to be within the area of influence of the project, CAO finds that IFC took appropriate measures to ensure that this was the case when the client prepared its international ESIA. Further, CAO finds that IFC assured itself that the risks of project-related environmental impacts on Jermuk were low.

As noted in the project ESIA, the reputation of Jermuk as a spa town is associated with wellness, fresh air, and tranquility. Project impacts—for example, those from blasting, visual disturbance, and more general perceptions that arise from the mine's proximity to the town—were not subject to an assessment that took Jermuk's reputation as a tourist center into consideration. At the date of writing this report, an assessment of impacts on Jermuk's brand as a tourist destination had been undertaken only in relation to the issue of labor influx and not in relation to the broader potential impacts associated with the town's proximity to the mine. As a result, CAO finds that IFC does not have assurance that potential impacts on Jermuk's brand as a tourist center have been assessed and mitigated in accordance with the requirements of PS1.

CAO also finds shortcomings in IFC's approach to the supervision of project impacts on the people of Gndevaz. Gndevaz is the village most significantly impacted by the project because of the location of project infrastructure on its lands and the proximity of the village to the mine.

CAO finds gaps in IFC's supervision of the ESIA process in relation to the risks and impacts of the project on Gndevaz, and the potential for mine development to affect the well-being of the community as a whole, and that of vulnerable groups in particular. These risks relate to social cohesion, socioeconomic inequality, and potential impacts from induced poverty as the village is predicted to experience labor influx, land/livelihood loss, inflation, and social change due to the presence of mine workers and new economic beneficiaries. The ESIA and management plans have captured or addressed many of these impacts on a discreet basis, and are recognized by CAO as achieving a good international standard in this respect. In addition, CAO recognizes potential positive impacts for the community, such as an increase in procurement of locally based goods and services and investments in community projects. Nevertheless, CAO finds that changes to the project design after 2013 led to a significant increase in potential adverse impacts on the residents of Gndevaz. These changes required assessment of the risks and impacts of the various project components on the town and its people—with associated consultation, mitigation, and monitoring measures—beyond those which are contained in the current ESIA. This report also notes gaps in IFC guidance on how to ensure that a full and integrated assessment of the social impacts of a project is undertaken.

In relation to consultation and stakeholder engagement, CAO finds that IFC's pre-investment review was not commensurate to risk. IFC did not include in the E&S Action Plan sufficient requirements (deadlines, need for adequate expertise, documentation, and reporting) to ensure that implementation of the client's Public Consultation and Disclosure Plan (PCDP) would be consistent with the objectives of Performance Standard 1. CAO also notes that IFC's initial determination that the project had broad community support (BCS) was not supported by social analysis or expert opinion. However, CAO notes that IFC identified gaps in the client's performance during supervision and has worked with the client to bring it into compliance. CAO finds that throughout its supervision of the project, IFC's oversight ensured the client's compliance with E&S requirements in relation to consultation and stakeholder engagement processes, and implementation of a grievance mechanism.

Conclusion

In light of the findings contained in this report, CAO will keep this investigation open for monitoring, and will issue a monitoring report no later than one year after publication of this investigation.

Project-level findings that will remain open for monitoring are:

- CAO's non-compliance finding in relation to the assessment of impact on Jermuk's brand as a tourist center; and
- CAO's non-compliance finding in relation to the assessment of project impacts on the people of Gndevaz.

CAO will monitor the situation until actions taken by IFC assure CAO that IFC is addressing findings of non-compliance.

Overview of CAO's Compliance Process

CAO's approach to its compliance mandate is set out in its *Operational Guidelines* (March 2013).

When CAO receives an eligible complaint, it first undergoes an assessment to determine how CAO should respond. If CAO's compliance function is triggered, CAO will conduct an appraisal of IFC's/MIGA's involvement in the project and determine whether an investigation is warranted. CAO's compliance function can also be triggered by the World Bank Group President, the CAO Vice President, or senior management of IFC/MIGA.

CAO compliance investigations focus on IFC/MIGA and how IFC/MIGA assured itself/themselves of a project's E&S performance. The purpose of a CAO compliance investigation is to ensure compliance with policies, standards, guidelines, procedures, and conditions for IFC/MIGA involvement, and thereby improve the institution's environmental and social (E&S) performance.

In the context of a CAO compliance investigation, at issue is whether:

- The actual E&S outcomes of a project are consistent with or contrary to the desired effect of the IFC/MIGA policy provisions
- A failure by IFC/MIGA to address E&S issues as part of the appraisal or supervision resulted in outcomes contrary to the desired effect of the policy provisions

In many cases, in assessing the performance of a project and implementation of measures to meet relevant requirements, it is necessary to review the actions of the IFC client and to verify outcomes in the field.

CAO has no authority with respect to judicial processes. CAO is neither a court of appeal nor a legal enforcement mechanism, nor is CAO a substitute for international court systems or court systems in host countries.

Upon finalizing a compliance investigation, IFC/MIGA is given 20 working days to prepare a public response. The compliance investigation report, together with any response from IFC/MIGA is then sent to the World Bank Group President for clearance, after which it is made public on CAO's website (www.cao-ombudsman.org).

In cases where IFC/MIGA is found to be out of compliance, CAO keeps the investigation open and monitors the situation until actions taken by IFC/MIGA assure CAO that IFC/MIGA is addressing the noncompliance. CAO will then close the compliance investigation.

I. Background to IFC's Investments in Lydian International

A. IFC's Investments in Lydian International

Lydian International Limited (“the company,” or “the client”) is an exploration company that is transitioning to being a mining company, based in the United Kingdom and listed on the Toronto Stock Exchange (TSX). The company is focused on its Amulsar Gold Project in Armenia (“the project”). The Amulsar Gold Project is managed by Lydian Armenia CJSC, a subsidiary of Lydian International (Geoteam CJSC until August 2016, also referred to as “the company”, or “the client”), a 100-percent owned Armenian subsidiary of Lydian. IFC first invested in the company in 2007 to finance exploration activities and feasibility studies of Lydian’s mineral resource properties in Kosovo, Armenia and Turkey. This initial investment was followed with eleven additional investments or warrants exercises between 2008 and 2015 (see Appendix A).

At the time of writing this investigation report, construction of the Amulsar mine had commenced. CAO’s investigation process, however, deals with the period of IFC’s investment from 2007 to 2016, before construction started. A bankable feasibility study (BFS) and a national environmental impact assessment (EIA) were completed in July 2014, and a mining license was granted to the company in November 2014. An international environmental and social impact assessment (ESIA) was disclosed in May 2015 and updated in June 2016 to reflect changes due to value engineering.¹ Construction works for the project started in October 2016.

In December 2015, the company announced it had entered into agreements related to a \$325 million construction financing package to be provided by Orion Mine Finance (Orion) and Resource Capital Funds (RCF). The total financing requirement to fund construction of Amulsar is estimated to be \$395 million, consisting of initial capital costs of \$370 million plus an estimated \$25 million for financing and other costs during the construction period.²

IFC has invested \$16.4 million since 2007 and held equity shares in the company until May 2017. In May 2017 IFC sold all of its shares and is now no longer an investor in the company. The European Bank for Reconstruction and Development (EBRD) is a shareholder in the company and holds 6.5 percent equity.³

B. IFC's Early Equity Business

IFC’s investment in Lydian is considered an early equity investment as IFC bought equity in the company prior to the company having defined a resource at Amulsar. This section summarizes key aspects of IFC’s approach to early equity mining investments as it relates to the current complaint, including its scope and stated purpose.

IFC’s mining group provides equity and loan financing for mining companies. The investment strategy includes adherence to IFC’s environmental and social (E&S) policies, standards, and procedures to manage the risks and costs associated with the projects. IFC’s mining strategy focuses on two lines of business:

- Mining companies implementing large-scale projects. These companies seek IFC’s support to mitigate and manage governance, political, and E&S risks.
- Junior companies carrying out mining or exploration activities that have made potentially significant discoveries. IFC supports companies that typically have little internal technical

¹ Amulsar Gold Project. ESIA, May 2016. <http://goo.gl/gsbEjl>.

² Lydian International website. December 1, 2015. <http://goo.gl/kOwyVn>.

³ See <https://goo.gl/kv87yc>

capacity in E&S management by offering E&S advice and preparing them to raise debt financing once the construction stage is reached.

A mining project progresses through several phases, including exploration, pre-feasibility, feasibility, construction, operation/mining, and eventually closure and reclamation. The project moves from one phase to the next only after it meets certain criteria and shows sufficient promise to justify additional work and investment. During the exploration, pre-feasibility and feasibility phases, economic, technical, social and environmental information is developed and usually progresses through several iterations to adjust for changing risk profiles that may affect project viability.

IFC's stated goal in participating in early phases of project development is to have a positive impact in terms of technical as well as E&S guidance in countries where industrial-scale mining is not robustly regulated and supervised in terms of E&S performance.

Many junior companies do not proceed to mine construction. Instead, they typically sell their interest or form joint ventures with more established mining companies. IFC states that it invests in junior companies once a deposit has been discovered and there is a strong probability that a mine will be constructed—and thus the deposit will be commercially viable. IFC's rationale in using equity instruments to finance projects at early phases is to influence its clients' E&S performance and strengthen their capacity and commitment to comply with the IFC Sustainability Framework.⁴

IFC emphasizes the value it adds as a long-term partner. It seeks involvement throughout the project cycle to provide further equity and debt as the mining project progresses.⁵

In relation to early equity mining investments, CAO has considered IFC's engagement with clients in relation to the identification and mitigation of actual E&S risks and impacts that arise during the exploration phase of projects. CAO has also considered IFC's approach to the potential future impacts of mine construction and operation, and whether these have been assessed as required by IFC's Performance Standards. This may include a review of ESIA documentation and planned mitigation measures, depending on the stage of development of the project in question.⁶

⁴ Debt instruments, rather than equity, are usually employed following detailed feasibility studies for mine construction, after an assessment and an evaluation of the risks, and once a more defined reserve position has been proven. *Ibid.*

⁵ "IFC in Mining" (<http://goo.gl/M84uOD>).

⁶ CAO has received several complaints in relation to IFC's approach to equity investments in junior mining companies, presenting issues similar to those raised by the complainants in this case. See, for example, *CAO Investigation of IFC Investment in Minera Quellaveco SA, Peru*, August 2014 (<http://goo.gl/aNauwB>); and *CAO Investigation of IFC Investment in Eco Oro, Colombia*, June 2016 (<http://goo.gl/8yfxlK>).

II. Background to the CAO Compliance Investigation

A. The Complaints

Lydian-01 Complaint

A first complaint (the “Lydian-01 complaint”) was submitted to CAO in April 2014 by two residents of Gndevaz and Jermuk, in Vayots Dzor province, with support from nine nongovernmental organizations (NGOs) and individual representatives. The complainants highlight concerns about potential future impacts of the project on the environment and surrounding communities. Issues raised include criticisms of the national EIA process conducted by the company and alleged violations of IFC’s *Performance Standards on Environmental and Social Sustainability* (“Performance Standards”) and national regulations.

Lydian-02 Complaint

A second complaint (the “Lydian-02 complaint”) was lodged with CAO in July 2014 by 148 residents of Gndevaz raising concerns about project impacts on livelihoods, the environment, and community health. These issues overlap significantly with the issues raised in the Lydian-01 complaint. However, the Lydian-01 and Lydian-02 complaints were brought to CAO on behalf of different individuals.

A more detailed summary of the issues raised in the complaints is presented in section III of this report.

B. CAO Assessment of the Complaints

The purpose of CAO’s assessment stage is to clarify the issues and concerns raised by the complainants, to gather information on how other stakeholders see the situation, and to determine whether the parties prefer to initiate CAO’s dispute resolution or compliance role.

In the course of CAO’s assessment the Lydian-01 complaint, complainants opted not to participate in a CAO facilitated dispute resolution process. As a result, CAO’s compliance function was triggered.

During CAO’s assessment of the Lydian-02 complaint, the complainants and the client agreed to attempt to resolve their issues with the support of CAO’s dispute resolution function.⁷ Although dispute resolution was initiated in February 2015, the complainants subsequently determined that their needs were more likely to be met through CAO’s compliance function. As a result, the Lydian-02 complaint was transferred to CAO’s compliance function in August 2015.⁸

C. CAO Compliance Appraisals

In April 2015, CAO released a compliance appraisal report in relation to the Lydian-01 complaint.⁹ CAO concluded that the complaint raised substantial concerns about a range of potential or actual E&S impacts of the project. CAO also identified questions regarding IFC’s review and supervision of its E&S requirements in relation to the project and thus decided to conduct a compliance investigation of IFC’s performance.

⁷ CAO. *Assessment Report, Lydian-02*, February 2015. <http://goo.gl/YXyiCz>.

⁸ CAO. *Conclusion Report, Lydian-02*, August 2015. <https://goo.gl/XCVu8s>

⁹ CAO. *Compliance Appraisal Report, Lydian-01*, April 2015. <http://goo.gl/wimmlp>.

CAO released a compliance appraisal report in relation to the Lydian-02 complaint in October 2015.¹⁰ The Lydian-02 appraisal built on the Lydian-01 appraisal, given that there were several overlapping issues. Through the Lydian-02 appraisal, CAO identified additional questions regarding IFC's review and supervision of its E&S requirements in relation to the project, in particular with regard to land acquisition (Performance Standard 5). In this context, CAO decided to consider the issues raised by both the Lydian-01 and Lydian-02 complaints together. Thus the two cases were merged for the purpose of this compliance investigation.

D. Compliance Investigation Methodology

This compliance investigation was conducted in accordance with the CAO *Operational Guidelines*¹¹ and with the Terms of Reference published on CAO's website in January 2016 (see Appendix B).¹² From January to August 2016, the CAO investigation team, including CAO staff and two expert panelists, reviewed IFC's project files, interviewed IFC staff with direct knowledge of the project, and conducted a field visit to Yerevan, Gndevaz, and Jermuk, in Armenia.

The CAO team met with:

- The IFC project team and management
- Lydian International and Geoteam management and staff
- The complainants' representatives (NGOs and individuals)
- Residents of Gndevaz (approximately 40 individuals, both signatories and non-signatories of the complaints)
- Lydian's Corporate Liaison Committees in Jermuk and Gndevaz
- Civil society organizations (CSOs)/NGOs and independent experts who have not been involved in the CAO complaint process, but have knowledge of the project and of the mining industry in Armenia more generally

Interviews were conducted both in person and by phone. Relevant secondary material was gathered using Internet searches. Secondary materials were also provided by some of the interviewees.

CAO does not evaluate IFC's E&S performance with the benefit of hindsight. Rather, the criteria applied to each requirement is whether IFC's actions were based on reasonable professional judgment and care in the application of relevant policies in the context of contemporaneously available sources of information and considering the evolution of the project. CAO makes no findings, adverse or otherwise, in relation to the performance of the client.

This compliance investigation covers IFC's performance in relation to the project up to July 2016, prior to commencement of construction of the mine.

E. Applicable IFC Policies, Performance Standards, and Procedures

IFC's Role and Objectives

IFC's 2006 *Policy on Environmental and Social Sustainability* ("the Sustainability Policy") sets out its commitments to sustainable development in the following terms:

Central to IFC's development mission are its efforts to carry out its investment operations and advisory services in a manner that 'do no harm' to people or the environment. Negative impacts

¹⁰ CAO. *Compliance Appraisal Report, Lydian-02*, October 2015. <http://goo.gl/RxQYpt>.

¹¹ CAO. *Operational Guidelines*, 2013. <http://goo.gl/2z8UD6>.

¹² Terms of Reference for CAO Compliance Investigation of IFC's Investment in Lydian International Ltd, Armenia. <http://goo.gl/ND6q4M>.

should be avoided where possible, and if these impacts are unavoidable, they should be reduced, mitigated or compensated for appropriately. In particular, IFC is committed to ensuring that the costs of economic development do not fall disproportionately on those who are poor or vulnerable, that the environment is not degraded in the process, and that natural resources are managed efficiently and sustainably. IFC believes the client's regular engagement with local communities about matters that directly affect them plays an important role in avoiding or reducing harm to people and the environment (para. 8).

The Sustainability Policy further describes IFC client's roles and responsibilities. In particular, it states that:

In its operations, IFC expects clients to manage the social and environmental risks and impacts of their projects. This entails the client's assessment of these risks and impacts, and implementation of measures to meet the requirements of the Performance Standards. An important component of the client's management of its social and environmental performance is the client's engagement with the affected communities through disclosure of relevant project information, consultation, and informed participation (para. 10).

Applicable Requirements

IFC's early equity investment in the company was made in the context of the *IFC Policy on Environmental and Social Sustainability and Performance Standards on Environmental and Social Sustainability*, together referred to as the Sustainability Framework (2006). Through the Sustainability Policy, IFC commits to "ensure that the projects it finances are operated in a manner consistent with the requirements of the Performance Standards" (para. 5).

The Performance Standards establish standards that the IFC client is expected to meet throughout the life of IFC's investment. Clients are also required to comply with national law.¹³

IFC implements the commitments set out in the Sustainability Policy through its *Environmental and Social Review Procedures* (ESRP), which are updated periodically. The Lydian investment was approved under ESRP version 1.0.¹⁴ It was supervised under the subsequent updated versions of the ESRP.

A key outcome of IFC's support was the preparation of the project's international ESIA. This was finalized in 2016. The international ESIA was prepared with reference to IFC's updated Performance Standards of 2012. Using the updated standards for the ESIA represented good practice and was consistent with the requirements of IFC's Sustainability Framework. CAO's assessment of IFC's review of the project ESIA thus refers to the 2012 Sustainability Framework.

CAO notes that since July 2016, IFC has incorporated a new procedure within its ESRP, describing processes for E&S appraisal and supervision of IFC's investments in *phased development projects* (ESRP 13). While CAO acknowledges the relevance of this new procedure to early equity investments, this report does not consider it as this investigation assesses IFC's performance before implementation of ESRP 13.

¹³ IFC. *Policy on Social and Environmental Sustainability*, Introduction, April 2006.

¹⁴ IFC. *Environmental and Social Review Procedures*, version 1.0, April 30, 2006.

III. Issues Raised by the Complaints

The complaints and the CAO assessment report raise a broad range of environmental and social issues regarding the project, as well as concerns related to IFC's policies and practices. Given the complexity of these complaints and the number of issues raised, CAO has summarized the complainants' concerns in three categories, as follows:

A. IFC Policies and Processes

- Generally, IFC has not ensured that the project was processed in compliance with its requirements, including the IFC *Environmental and Social Sustainability Policy* and the IFC *Performance Standards on Environmental and Social Sustainability*.

B. Environmental Issues and Quality of Analysis in the ESIA Process

- Risks of groundwater contamination affecting the spa waters of Jermuk and increased risk due to fracturing from pits and other blasting activities.
- Risks of water pollution from the mine operations to the Vorotan and Arpa Rivers, to Kechut and Vorotan reservoirs, as well as to the Lake Sevan catchment.
- Seismic risks to the security of the heap leach facility (HLF).
- Potential for uranium to be present in mined material, causing broad radioactive contamination and additional radiation risks from radon.
- Risks of deposition of contaminated dust on agricultural land and on the village of Gndevaz due to prevailing wind direction.
- Presence of Armenian "Red Book" species of Flora and Fauna at the mine site.¹⁵

C. Social Issues, Quality of the ESIA, and Consultation Processes

- Transparency and adequacy of consultation for the land acquisition process.
- Whether negotiations to purchase lands from Gndevaz residents were done under duress because of the threat of expropriation.
- Risks of impacts to the tourism sector in Jermuk from negative perceptions of mining with respect to health tourism, resulting in damage to the brand.
- Failure to include Jermuk in the area of influence of the project.
- Risk of a range of social impacts on the Gndevaz community and its population from the location of the project facilities, including impacts on health, livelihoods, and well-being of the community.
- Adequacy of processes of consultation and engagement, access of concerned stakeholders to public hearings, and concerns about whether complaints have been registered or addressed.

CAO notes that some issues raised related to the prospective design, development and operation of the mine rather than to specific actions taken during the exploration stage. However, CAO considers that these issues remain relevant to the extent that they were or ought to have been addressed in the EIA and the ESIA prepared by the company as part of the project, particularly given that construction of the mine was expected to commence imminently at the time CAO's investigation was carried out.

¹⁵ The Armenian Red Book is a comprehensive information source on the conservation status of plant and animal species in Armenia. It was prepared using the criteria of the IUCN (International Union for Conservation of Nature) Red List of Threatened Species.

IV. Description of the Amulsar Gold Project

This section provides an overview of the Amulsar Gold Project, largely based on the project's environmental and social impact assessment (ESIA).¹⁶

As shown in Map 4.1, the Amulsar project is located 170km south of Armenia's capital Yerevan on the border between the provinces (Marz) of Vayots Dzor and Sunnik. The Amulsar licenses cover a total of 65km². Lydian Armenia has been carrying out geological exploration in the Amulsar area since 2006.¹⁷

Map 4.1. Project Location



Source: Lydian International.

The ESIA notes that the Amulsar gold and silver deposits are located on the ridge peaks of Amulsar Mountain, with most of the mine infrastructure proposed on the west side of the mountain at lower elevation. Once in operation, the mine will utilize conventional open pit mining technology, with the extraction of gold and silver through a heap-leaching process followed by conventional recovery and smelting to Doré bullion.¹⁸

The Amulsar project is described as involving the following main phases:¹⁹

- *Exploration*: This phase has been ongoing since 2006. It consists of exploratory surveys and techniques—including surface mapping, exploration drilling, and analysis of soil geochemistry—used to define the geological resource to support future mine development. There will be continued and ongoing exploration at the site during the mine construction and operation activities to identify possible additional ore.
- *Construction*: This phase will comprise the construction of the infrastructure required for the operation of the mine, processing of ore, and refining of precious metals, including ancillary

¹⁶ Amulsar Gold Project, ESIA, May 2016. <http://goo.gl/gsbEjI>.

¹⁷ See Lydian corporate website: <http://www.lydianinternational.co.uk/>.

¹⁸ Amulsar ESIA, Chapter 3, Project Description, June 2016. <https://goo.gl/nm5Twi>.

¹⁹ *Ibid.*

infrastructure such as maintenance workshops and site offices. The early works, in the pre-construction phase, commenced in Q3:2016.

- *Operations*: The operations will comprise production of gold and silver through the phased mining of ore and barren rock from the open pits, together with the processing of ore, and placement of barren rock in the storage facility.
- *Closure*: The closure phase includes post operation activities, which consists of the reclamation of the open pits, barren rock storage facility (BRSF), and the heap leach facility. Topsoil stockpiles established during construction will be used during site reclamation and closure. Infrastructure will be dismantled and disturbed areas will be restored to grasslands or other habitats similar to those now present within the project footprint.

Once constructed, some of the main project components will include:²⁰

- Three open pits (Artavazdes/Tigranes and Erato)
- A BRSF located on the north side of Amulsar Mountain, approximately 3.8km from Tigranes pit and 2.6km north of Erato
- A crushing and screening facility
- A 5.8km-long covered, ground level, overland conveyor to transport ore from the crusher to the crushed ore stockpile at the truck load-out facility near the HLF
- An HLF located approximately 6.8 km to the west of the crushing plant
- Haul roads and access roads
- Maintenance workshops
- Waste water treatment facilities
- A worker accommodation camp with space and infrastructure sized to accommodate between 500 and 920 workers during the construction phase

The closest village to project facilities is Gndevaz, which in 2014 had a population of 899 and is located approximately 1km from the future HLF. The BRSF will be located approximately 7km from the spa town of Jermuk, which in 2014 had a population of more than 7,500 and represents a major tourist attraction in the region. Jermuk is located 10km from the Erato pit and 11km from the Tigranes/Artavazdes pits.²¹

Mining and associated operations are anticipated to commence in Q1:2018 following construction of the haul roads, BRSF, mine processing, and ancillary facilities, together with the HLF and associated infrastructure. The project components occupy 609 hectares (ha). This area, along with the area immediately adjacent to the project footprint, is likely to be disturbed as a consequence of construction: the combined subtotal of disturbed land is estimated at 930ha. There is an additional restricted area (either fenced for safety reasons or temporarily restricted during blasting in the open pits) of 383ha.²²

The peak workforce to be employed during construction is estimated at approximately 1,300 people. The total workforce during mine operations is estimated at 657 employees.²³

Map 4.2 show key project components, as well as the project's local surroundings (villages/towns, rivers and water courses, roads, tracks, water reservoirs, and the like).

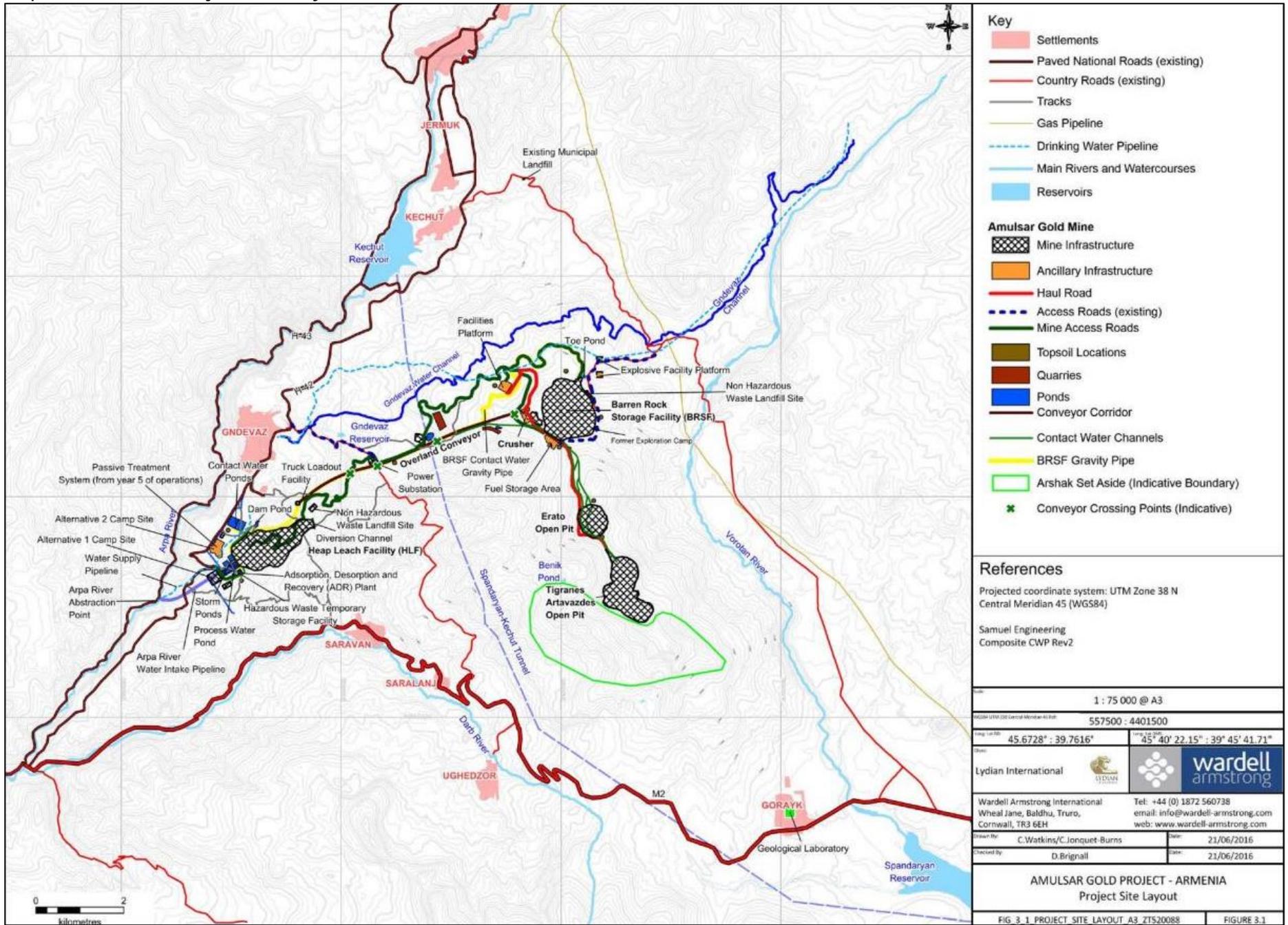
²⁰ *Ibid.*

²¹ Amulsar ESIA, Chapter 4.12, Environmental and Social Baseline–Demographics, May 2016 and Chapter 3, Project Description, June 2016

²² Amulsar ESIA, Chapter 3, Project Description, June 2016.

²³ *Ibid.*

Map 4.2. Amulsar Project Site Layout



Source: Amulsar ESIA, Chapter 3, Project Description, Figure 3.1, June 2016.

V. CAO's Observations of the Gndevaz Community

To provide context for the assessment, this section describes the community of Gndevaz. The village of Gndevaz is worthy of special consideration because it is the community located closest to the project infrastructure—in particular, to the heap leach facility. It is also acknowledged as the community that will experience the greatest direct impact of the project, both positive and negative. This information is drawn primarily from the project ESIA and associated documents.²⁴

This section also draws on observations made during CAO's investigation field visit. During the field visit, the investigation team met with a group of approximately 10 representatives of the complainants. The CAO team also met with several individuals who sold land to the company, and spoke informally with more than 20 additional residents. These observations and exchanges do not provide a representative sample of the perceptions of community members. Nevertheless, concerns about the overall impact of the project on traditional livelihoods and social structure were evident during CAO's visit to Gndevaz.

Based on the design of the mine up until 2013, relatively minor impacts on Gndevaz were anticipated. Some village land at the top of the mountain was identified as potentially impacted. Impacts from transportation because the village is close to the main road along which all four access points to the mine site are located were also expected; one access point is south of Gndevaz and one is directly opposite the village.

Following successive siting changes from 2013 to 2015 made in order for the company to meet changes in the Armenian regulatory requirements, Gndevaz will also be close to the heap leach facility (HLF) and the adsorption, desorption, recovery (ADR) plant. The conveyor system, transport routes, and other facilities making up the project footprint will run through the community's lands from the mountaintop down to below the level of the village. Under the current design, most of the land impacts—and therefore the social impacts and potential health risks—and a fair amount of uncertainty over closure affect Gndevaz more than any other community. It will also be the closest community to the construction camp and there will be impacts from broader social changes associated with the mine.

In 2015, Gndevaz had 211 households and a total population of 899.²⁵ As a rural community, it is primarily dependent on agricultural production. Similar to rural communities across Armenia, it is poor but has a relatively educated population and high levels of literacy. Economic activities in 2010 included almost equal dependence on agriculture and various kinds of public payments. Gndevaz's employment figures for 2014, as reported by the community mayor, were approximately 23 percent in agriculture and less than 10 percent each in the public sector or other businesses.²⁶ There are limited employment opportunities in the community, which is clear from baseline information, with 37 percent of respondents indicating in 2011 that they were unemployed. It should also be noted that more than 16 percent of the population consists of pensioners—more than the other rural communities and higher than the national average. The baseline information notes a high degree of dependence on pensions as well as other state benefits, indicating a vulnerability to inflation.²⁷

Conversations during the CAO site visit indicated tensions between those in favor of the mine and those opposed, and evidence of social fractures between groups. Some residents mentioned

²⁴ This includes information drawn from both the baseline and impact chapters on demography, economics, livelihoods, land use, community health, traffic/transport, and ecosystem services.

²⁵ Amulsar ESIA, Chapter 4.12, Environmental and Social Baseline – Demographics, May 2016. <https://goo.gl/uwMJtT>.

²⁶ Data sourced from "Village Passports" collected and prepared by village mayors.

²⁷ Amulsar ESIA, Chapter 4.12, Environmental and Social Baseline, Livelihood Activities and Employment Opportunities, May 2016. <https://goo.gl/7iKV1R>.

employment opportunities as a positive aspect of the project. Others mentioned divisions between groups and fear that those “left out” of the benefits would be worse off due to the construction of the mine. Several residents also mentioned their fear that the community as a whole would become impoverished and abandoned, and that those who sold land had the finances to move to Yerevan but that those who had not sold would have to stay. Alternatively, residents expressed concerns about the transformation of their community into an industrial town.

According to the 2010 household surveys cited in the company’s social baseline, 75 percent of agricultural production in Gndevaz is consumed rather than sold. Much in evidence in the community were the gardens, orchards, and even small-scale fields that dot the land within the village around each residence. It appears that a fair amount of food security is currently provided by community members’ own production rather than purchasing of food. People live in close relationship to the health of the land, and during the CAO visit, residents of Gndevaz expressed concern that they would be negatively affected by the pollution associated with mine development and by radiation. This was a prevalent concern, even among residents generally in favor of the mine.

The social baseline also identified that apricots are highly prized in Gndevaz and were reported by local people to be highly valued in the national and international market. In spite of that value, 60 percent of those surveyed in 2010 reported a monthly income of less than \$210 during the apricot harvest season. Gndevaz also has a large number of livestock. Local residents expressed concern about the markets for their products, and in particular concern about losing the “brand” value that they currently have in the market. Several residents, including complainants, were concerned about health impacts associated with the absorption by livestock or bees of heavy metals in the dust, or of cyanide gas.

Beyond the specific issues raised by different individuals and echoed in other conversations, CAO observed several other points that affect perceptions of both the company and the information provided by the company.

First, community members in general were highly distrustful of the government and expect that there are levels of corruption and personal benefit either at the national level or at other levels, down to the village authorities. Studies and findings provided by national organizations or experts were greeted with similar distrust, whereas international expertise was viewed as more credible.

Second, the lack of experience with international standard mining projects and ESIA’s has meant that the iterative process and the changes in project design—some due to political issues and some to financial/engineering constraints—has reduced the credibility of the process for some observers. The nearly 10 years of exploration and the extensive changes to the project design have created doubt and credibility challenges for the company.

In this context, CAO found during its discussions that local residents on all sides of the debate about the mine, including the company’s Community Liaison Committees, felt that NGOs that have criticized the project were doing an important job in raising concerns. Residents expressed concerns about most of the issues raised in the complaints—confirming that the concerns are shared by directly-affected community members, and that, at the time of the CAO visit, these concerns had not been fully resolved. CAO notes IFC’s position that observations from its supervision visits differ from those that villagers of Gndevaz shared with CAO. CAO also notes IFC’s position that villagers’ views on the role of NGOs as related to CAO is not shared by all community members.

VI. IFC Environmental and Social Appraisal and Supervision of Lydian International/Amulsar Project

When financing a project, IFC first conducts an appraisal aimed at assessing the full business potential, risks, and opportunities associated with the investment. Once the project is approved and IFC has invested, the investment is monitored throughout the project cycle to ensure compliance with applicable IFC policies and standards.

The purpose of this section is to assess IFC's performance at these two stages in the project cycle between 2007 and 2016 in general terms. The section discusses IFC's initial appraisal of the project and CAO's conclusion that it was not commensurate to risk, and particularly that early scoping of E&S issues was lacking. Weaknesses in IFC's pre-investment review translated into problems during the initial years of supervision. From 2013 onwards, however, CAO notes a marked advance in IFC's supervision of the project. The result was significant improvement in client E&S performance, in particular through the development of an exploration phase ESMS and an international standard ESIA.

More specific issues raised by the complainants are dealt with in section VII.

A. IFC's Environmental and Social Review of the Project

Pre-Investment Requirements

At the pre-investment stage, IFC reviews the E&S risks and impacts of a proposed investment and agrees with the client on measures to mitigate these risks in accordance with IFC's *Environmental and Social Sustainability Policy and Performance Standards on Environmental and Social Sustainability*.

As required by the 2006 Sustainability Policy, IFC's E&S review should be "appropriate to the nature and scale of the project" and "commensurate to the level of social and environmental risks and impacts" (para. 13). In conducting the E&S review, IFC considers the E&S risks as assessed by the client and the "the commitment and capacity of the client" to manage these risks (para. 15). IFC also considers the client's "track record" in relation to E&S issues.²⁸ A central principle of the Sustainability Policy is that "IFC does not finance new business activity that cannot be expected to meet the Performance Standards over a reasonable period of time" (para. 17).

The 2006 ESRP²⁹ requires that IFC identify E&S issues of concern in relation to any direct investment, gain an indication of sponsor management capacity, identify the magnitude of impacts, and identify the Performance Standards to be applied. It is anticipated that the client ESMS will be reviewed and any need for external expert support to the client identified.

IFC's Performance Standard 1 (PS1) sets out the IFC client's requirements for social and environmental assessment and management systems. It requires that the client have an ESMS (para. 3) and an appropriate social and environmental assessment process based on an accurate project description and appropriate social and environmental baseline data (para. 4). It requires that project risks and impacts are analyzed in the context of the project area of influence and are relevant to key stages of the project cycle including pre-construction (para. 5). PS1 further indicates that a full-scale or limited/focused ESIA may be required (para. 8) along with clear organizational structures and responsibilities within the client's organization (para. 17).

²⁸ ESRP 3, para.3.2.3, version 1, April 2006.

²⁹ IFC *Environmental and Social Review Procedures*, Version 1.0, April 30, 2006.

PS1 also requires that compliance with national law is addressed through the client's E&S Assessment (para. 4) and ESMS (para. 14). This includes collecting baseline data on compliance with national law (para. 4), addressing any gaps through an Action Plan (para. 16), and monitoring and reporting on compliance (paras. 24–26).

IFC's Environmental and Social Pre-Investment Review

IFC completed its appraisal of its initial investment in Lydian in May 2007. At the time of IFC's appraisal, Lydian was proceeding with proposed exploration projects in Kosovo, Turkey and Armenia. The purpose of IFC's investment was to support each of these exploration ventures, including feasibility studies, environmental and social impact assessments, and other preparatory activities. The company's main focus when IFC first invested was on its project in Kosovo, which was the most advanced project in the company's portfolio. The Amulsar project was an early stage prospect with limited work having been undertaken on site.

At the time of IFC's investment, the Amulsar Gold Project was part of a joint-venture agreement with a major international mining company (Newmont). IFC's early documentation asserted that the investment was drawing upon lessons learned from other IFC investments. It stated that the sponsor had a proven industry track record, was striving to employ E&S best practice, and was willing to address key E&S issues at the exploration stage.

IFC conducted E&S appraisal visits to the company's project sites in Kosovo and Armenia in May 2007. While an IFC E&S Specialist visited the Kosovo sites, only a member of IFC's investment staff visited the Amulsar project site. Nevertheless, IFC's board documentation stated that it had undertaken a full physical appraisal of E&S issues at the company's Amulsar property. The conclusions of IFC's appraisal visit to the Amulsar site state that the project had support from communities and would not have any negative impacts on the environment.

IFC disclosed an Environmental and Social Review Summary (ESRS) and Summary of Proposed Investment (SPI) for the investment in May 2007.³⁰ The ESRS states that, while all Performance Standards are applicable to this investment, only PS1 to PS4 would be immediately relevant, given project risks during exploration. The ESRS notes that the relevance of PS5 (Land Acquisition and Involuntary Resettlement) and PS8 (Cultural Heritage) for each of the company's prospects would be determined upon completion of the mine feasibility study. It further notes that "the site visits and review of project information suggest that there will be no impacts related to biodiversity and natural resources (PS6)." Evidence to support IFC's conclusions as to the E&S impacts of the Amulsar project is, however, lacking.

The project was categorized B, meaning that it was expected to have limited potential E&S risks and impacts that were few in number, largely reversible and readily addressed through mitigation measures. IFC's rationale for a B categorization relied on the early stage of the client's projects at the time and on the fact that IFC's investment would only fund exploration of the client's properties, including feasibility studies, environmental and social impact assessments, and other preparatory activities.

Board documentation pertaining to IFC's initial investment notes that IFC had conducted a detailed E&S assessment and concluded that the company's projects in Kosovo and Armenia had broad community support (BCS). CAO notes that IFC did not disclose information about the methodology used to assess BCS.

IFC also noted that the client, while wishing to implement its projects in line with good industry practice, was a junior company at an early stage of development with limited internal management

³⁰ IFC Investment in Lydian Resources Company Ltd., *Environmental and Social Review Summary*, May 2007. <http://goo.gl/3qx7hs>.

capacity and was therefore actively seeking IFC guidance on how to address E&S issues and build up its internal E&S management capacity.

At the same time, IFC noted that the involvement of Newmont as the largest investor in the Amulsar project should provide comfort regarding the capacity of the company to manage E&S issues as well as assurance that the project would be developed in line with industry best practice.³¹

An environmental and social action plan (ESAP) was prepared by IFC and agreed with the company prior to investment.³² Relevantly, the ESAP included the following requirements for the company with respect to the Amulsar Project:

- Hire an experienced consultant to oversee E&S management and baseline work (6 months after investment).
- Develop a corporate ESMS for exploration activities with a mutually acceptable time frame for implementation, and allocate adequate E&S staff (one year after investment);
- Carry out environmental and social baseline studies at Amulsar in compliance with Armenian laws and IFC requirements.
- Carry out an independent Health, Safety, Environment, and Community (HSEC) audit of Lydian assets, including a review of EIA/SEA commitments, the ESMS implementation, and site rehabilitation plans, and check compliance with national laws and IFC requirements; and
- Report annually on progress regarding public consultation and community development.³³

As presented to the Board, IFC anticipated that the company would comply with all IFC requirements by 2008. IFC also noted that the Amulsar project had a potential to develop into a world class open pit gold mine.

The project was approved by the IFC Board in June 2007. The shareholders agreement, signed in July 2007, required the company to comply with the ESAP and submit annual monitoring reports (AMR) to IFC on its activities.

CAO's Assessment of IFC's Performance

CAO finds shortcomings in IFC's pre-investment E&S review of the Amulsar project. In particular, CAO notes the absence of E&S information from the client and lack of a site visit by an IFC E&S specialist. In this context, expert scoping of E&S risks at Amulsar would have been appropriate. E&S scoping would have identified key risks and provided a framework for the development of the ESIA and baseline studies.

CAO also notes an overreliance by IFC on statements of commitment by the client's management. Given the complexity of the project, acknowledged gaps in client capacity, and its lack of E&S track record, a more detailed and structured action plan would have been appropriate at the pre-investment stage.

In this context, CAO finds that IFC's E&S review did not meet the standard of being commensurate to risk.

³¹ In March 2010, Lydian announced that it would buy out Newmont's stake in the Amulsar gold project. <http://goo.gl/e51oI3>.

³² IFC investment in Lydian Resources Company Ltd., *Environmental and Social Action Plan*, May 2007. <https://goo.gl/bRIFSS>.

³³ *Ibid.*

As a consequence of the shortcomings in IFC's pre-investment E&S review, CAO finds that IFC did not have sufficient basis to conclude that the company would be in a position to comply with all IFC requirements by 2008, as presented to the Board.

Thus, CAO finds that IFC's E&S review was not compliant with requirements of the Sustainability Policy (2006), para. 17.

With regards to categorization of the investment, CAO notes that IFC considered exploration impacts, and requested that the client develop an ESMS for exploration activities and hire an E&S consultant. In this context, and given the early stage of the project at the time of IFC's investment, CAO finds that a B categorization was appropriate.

B. IFC's Environmental and Social Supervision of the Project

General Supervision Requirements

Following approval and investment, IFC monitors the project to ensure compliance with the conditions in the investment agreements and applicable IFC policies and standards.

As set out in the ESRP, "the purpose of E&S supervision is to develop and retain the information needed to assess the status of compliance with the Performance Standards, general and sector-specific Environmental Health and Safety (EHS) Guidelines, and the Environmental and Social Action Plan (ESAP or Action Plan)" agreed with the client.³⁴

The 2006 Sustainability Policy further states that "if a client fails to comply with its social and environmental commitments, as expressed in the Action Plan of legal agreement with IFC, [IFC will] work with the client to bring it back into compliance to the extent feasible, and if the client fails to reestablish compliance, exercise remedies when appropriate" (para. 26).

IFC's Supervision of the Project

IFC's supervision of its investment in Lydian commenced in 2007 and is documented in annual reviews of the company's AMRs and reports of site supervision visits.

In December 2007, IFC made an additional investment of \$1.242 million in the company.

IFC's first site supervision visit to Armenia took place in June 2008. IFC's documentation in relation to this visit reported that the client had hired an experienced E&S consultant, that an ESMS was in development, and that environmental and social baselines for the project had been commenced. The report noted that a flora inventory had been commenced and that the presence of Caucasian Brown Bear had been reported in the area. IFC's documentation further reported that a key issue for the company was difficulty in engaging with local stakeholders, who do not show much interest in the possible development of a mine in their area. IFC thus recommended that all community meetings and outcomes be carefully documented. At this point, IFC considered that exploration results were promising and a decision to proceed with further development was expected in mid-2009.

The ESAP was updated in January 2009.³⁵ It noted that the ESMS for exploration activities was now expected in May 2009, compared with July 2008 in original ESAP. The revised ESAP also noted that biodiversity baseline work would extend through the end of 2009. IFC's observations attached to the 2009 Action Plan noted the absence of advice about international standards in

³⁴ ESRP 6, para.1, version 5, August 16, 2010.

³⁵ IFC Investment in Lydian International (Project #27657), *Environmental and Social Action Plan*, January 2009. <http://goo.gl/H3isQ0>.

relation to E&S issues, continued absence of an ESMS, and the need to initiate ESIA studies to international standards as soon as possible. CAO notes, however, that no specific action was required by IFC at that time to address the shortcomings identified.

A further IFC investment to support continued exploration was approved in March 2009 and disbursed in May 2009.³⁶ IFC documentation related to this follow-on investment noted the importance of Newmont as a joint-venture partner and that the project could reach production by 2011. It reported that the company was implementing the 2007 Action Plan thoroughly and had met all targets, although this analysis was not supported by IFC's E&S supervision documentation. The ESRS for the follow-on investments highlighted potential challenges with community relations and noted that the ESMS for exploration activities at Amulsar was still under development.³⁷ It further noted that baseline biodiversity work was underway and had identified several plants listed in the Armenian "Red Book."³⁸

An August 2009 site supervision visit by IFC staff noted that the project should hire experts in relation to international standards to coordinate baseline studies and that E&S baselines and ESIA work should be undertaken according to the IFC Performance Standards because this would likely be a requirement for future international financing. Specifically on biodiversity, IFC advised Lydian that baseline studies needed to reference international as well as Armenian standards. IFC documentation also reported the need for the company to scale up and formalize community engagement. At this point, IFC further advised the company to reconsider the project's area of influence, including potential impacts on the nearby spa town of Jermuk.

In April 2010, IFC made an additional investment of \$1.772 million in the company.

In October 2010, an IFC site supervision visit to Amulsar noted the engagement of an international consultant to prepare the ESIA in accordance with international and IFC standards, and recommended a thorough review of all baseline studies for adequacy. Following this visit, anticipated completion dates for the ESMS, the Stakeholder Engagement Plan (SEP), and baseline studies were further delayed. For reasons that are not made clear in the IFC documentation, the requirement for Lydian to undergo independent HSEC audits against IFC and national standards was dropped from the ESAP at this point.

From the early stages of the project, IFC noted concerns regarding the company's engagement with communities around Amulsar, especially as consultation had mostly been with village mayors and not with the wider communities. IFC also raised questions regarding the methodology applied by the company to identify communities within the project's area of influence. As a result, IFC urged the company to refine its stakeholder engagement process.

In November 2010, IFC made an additional investment of \$3.188 million in the company.

After an October 2011 supervision visit, IFC noted that the company had recently developed a stakeholder engagement plan (SEP). At this point, IFC also reported that the company had decided to include Jermuk in all its stakeholder engagement activities, following concerns raised by the mayor of Jermuk. IFC further emphasized the urgent need for increased support from an international E&S consultant with experience in the application of the Performance Standards and Environmental, Health, and Safety Guidelines.

³⁶ IFC Investment in Lydian International (Project #27657), *Summary of Proposed Investment*, January 2009. <https://goo.gl/rfCQSB>.

³⁷ IFC investment in Lydian International, *Environmental and Social Review Summary*, January 2009. <http://goo.gl/a58vxi>.

³⁸ The Armenian Red Book is a comprehensive information source on the conservation status of plant and animal species in Armenia. It was prepared using the criteria of the International Union for Conservation of Nature (IUCN) Red List of Threatened Species.

In December 2011, IFC made an additional investment of \$1.952 million in the company.

In September 2012, the company released its first Feasibility Study for the Amulsar project. It noted at the time that an international ESIA was expected to be publicly disclosed in November 2012.

In March 2013, IFC made an additional investment of \$1.901 million in the company.

In June 2013, following a supervision visit, IFC questioned the HLF location selection process. It was unclear to IFC whether the alternatives analysis that led to the selection of the site adequately considered social impacts. IFC noted that there was no evidence of any agreements with communities and/or private land owners for the installation of this infrastructure. IFC further noted that the project was significantly behind in its development of an ESMS for exploration, representing a significant non-compliance with IFC's Performance Standards. As a result, IFC noted exploration activities had permanently impacted populations of a critically endangered plant, *Potentilla porphyrantha*. This was identified by IFC as a serious compliance issue.

A continued emphasis in IFC's supervision documentation from 2007 to 2013 was the company's lack of an adequate ESMS for exploration activities, as required per the ESAP. In July 2013, as a result of ongoing deficiencies regarding the project's on-site E&S performance, which related to the lack of an ESMS, IFC urged the company to address this issue as a condition for further financing.³⁹

Later in 2013, IFC's supervision documents acknowledged the development of a corporate ESMS. IFC also noted that the government of Armenia rejected the company's mining license application because of the selected HLF location.

In March 2014, IFC made an additional investment of \$1.543 million in the company.

In April and July 2014, the two complaints were filed with CAO.

Upon revision of the project design, an updated national EIA was approved by the government of Armenia and a permit was granted in late 2014. In October 2014, the company disclosed an updated Feasibility Study for the project. It identifies important impacts on biodiversity and endangered cultural heritage features and notes that mitigation measures would be proposed in the international ESIA.

IFC's documentation following a supervision visit in October 2014 stresses the importance of developing an ESMS for construction activities, because the company at the time was planning to start mine construction in 2015.

In March 2015, IFC made an additional investment of \$1.084 million in the company.

In May 2015, the company disclosed an international ESIA for the Amulsar project, as required by IFC to comply with the Performance Standards and good international industry practice. An independent review of the ESIA was carried out by an Independent Environmental and Social Consultant (IESC) on behalf of the company's current and future shareholders (including IFC).

IFC conducted a site visit in October 2015. The objective of this visit was to carry out an appraisal of the Amulsar project anticipating a potential IFC investment for construction of the mine. Following this visit, IFC and the company agreed to an interim Action Plan, which had to be implemented as a condition for IFC to remain a shareholder in the company and to move forward with the new investment. The interim Action Plan included items in relation to corporate governance, land acquisition, and livelihood restoration, the development of an ESMS for

³⁹ In its letter to the client, IFC noted deficiencies in relation to soil management and erosion control, soil restoration, footprint management, land access and related consultation, waste management, fuel and hazardous waste management, biodiversity management, traffic management, and environmental monitoring.

construction, and the need to update the project ESIA to reflect changes in project design following a value engineering study.

The company disclosed an updated ESIA in May 2016,⁴⁰ and received approval from the Government of Armenia for amendments requested to its mining right. Subsequently, the independent review of the ESIA was updated by the IESC and completed in May 2016.⁴¹

As relevant to the issues raised in the complaints, CAO notes that there is no evidence in IFC's documentation that it has reviewed the project's compliance with national law as part of its E&S supervision. IFC reported to CAO that its practice in such cases is to rely on permits that are granted by sovereign governments and that it does generally not undertake additional assessments.

In July 2016, IFC disclosed a Summary of Proposed Investment⁴² and an Environmental and Social Review Summary⁴³ for a further investment to participate in the project's construction financing arrangement. IFC, however, subsequently decided not to proceed with the investment in the construction phase and the disclosure was removed from IFC's website.

At the time of writing, the company had started construction works for the project.

CAO's Assessment of IFC's Performance

CAO finds that IFC did not effectively supervise the client's delivery of several critical ESAP requirements from 2007 to 2013: in particular, requirements to develop an ESMS for exploration activities and to carry out independent HSEC audits. As a result, early E&S analysis was not developed in a timely manner and client performance did not meet IFC requirements. Shortcomings in IFC's supervision of the project over this period also contributed to adverse impacts during exploration, as described later in this report.

While IFC was aware of these issues and raised them with the client, noncompliance in relation to the management of E&S risk in client's exploration activities was not adequately addressed over a period of more than six years. During this period, IFC made nine additional investments in the company. It was not until 2013 that IFC made it clear to the company that further investments would be contingent on the development of an appropriate ESMS for exploration phase activities.

In this context, CAO finds that IFC's supervision of the client's exploration activities during the period 2007–13 did not provide assurance of compliance. IFC's commitment of additional funds to the project during this period was inconsistent with the requirement under the Sustainability Policy that IFC consider remedies in response to ongoing noncompliance.

IFC's supervision of the project improved significantly from 2013 onward. The result has been a clear improvement in the level of the client's E&S performance: in particular, through the development of an exploration phase ESMS. From this point on CAO finds IFC's supervision of the client exploration activities provided adequate assurance of compliance.

Commencing in 2010, CAO also notes significant inputs from IFC in relation to the development of the international ESIA. Although this report identifies some important gaps in IFC's oversight of the E&S performance and ESIA process (see section VII), CAO acknowledges IFC's contribution to the development of a bankable project that reflects good international industry practice in many respects.

⁴⁰ See <http://www.geoteam.am/en/publications.htm>.

⁴¹ Knight Piésold, *Independent Review of the Amulsar Project Environmental and Social Impact Assessment v10*, May 2016. <https://goo.gl/hQ51t5>.

⁴² IFC, *Summary of Proposed Investment*, Amulsar Gold Project (#37084), July 29, 2016.

⁴³ IFC, *Environmental and Social Review Summary*, Amulsar Gold Project (#37084), July 29, 2016.

VII. Analysis of Environmental and Social Issues Raised in the Complaints

This section assesses IFC's performance in relation to the concerns raised by the complainants regarding the project E&S risks and impacts against IFC's policies, standards, and procedures.

A. Analysis of Environmental Issues Raised in the Complaints

1. Assessment of Potential Future Environmental Impacts at Amulsar

The complaints allege that the project will result in environmental damage in a number of ways. They further allege that the risk of such impacts has been inadequately addressed by the company. The issues raised by the complainants are wide ranging. CAO has therefore synthesized the environmental matters raised into the following categories:

- Risks of groundwater contamination affecting the "spa" waters (thermal springs) of Jermuk, and increased risk of contamination due to fracturing from the pit and other blasting activities.
- Risks of water pollution from the mine operations to the Vorotan and Arpa Rivers, to Kechut and Vorotan Reservoirs, and the Lake Sevan catchment.
- Seismic risks to the security of the heap leach facility.
- Potential for uranium to be present in mined material, causing radioactive contamination and radiation risks from radon.
- Risks of deposition of contaminated dust on agricultural land and on the village of Gndevaz due to prevailing wind direction.

A further issue raised by the complainants is the presence of Armenian "Red Book" species of flora and fauna at the mine site. IFC's performance in relation to this issue is analyzed in a separate section and more extensively, at every stage of the project cycle, because impacts on biodiversity were possible during the exploration stage.

Relevant IFC Requirements

The issues raised in the complaints relate primarily to the future potential environmental impacts of mine development. While individually significant, these issues have a common feature in that they should be addressed through the project environmental and social impact assessment (ESIA) process. This section applies the requirements of IFC's 2012 Sustainability Framework because these are referenced in the ESIA and were the basis for IFC's review.

Performance Standard 1 requires that the scope of the risks and impacts identification process will consist of an adequate, accurate, and objective evaluation and presentation, prepared by competent professionals (para. 19) and will be consistent with good international industry practice (GIIP) (para. 7). The process may comprise a full-scale environmental and social impact assessment, a limited or focused environmental and social assessment, or straightforward application of environmental siting, pollution standards, design criteria, or construction standards, as appropriate to the project (*Ibid.*).

For each of the issues analyzed below, CAO outlines: (a) the key issues as raised by the complainants; (b) how these issues are discussed in the ESIA; (c) any gaps identified by the 2016 IESC gap analysis; and (d) measures incorporated in the client's E&S action plans. In this context, CAO assesses whether IFC had reasonable assurance that the client's ESIA met the standard of GIIP as required by PS1.

- Specific risks of groundwater contamination affecting the 'spa' waters (thermal springs) of Jermuk, and increased risk of contamination due to fracturing from the pit and other blasting activities

Issues Raised by the Complainants

Two separate questions stem from the issue of groundwater contamination that was raised in the complaints: (i) whether there is potential for the project to adversely impact the Jermuk spa waters, and (ii) whether it is possible that vibration from blasting and other activities at the project might affect underlying groundwater flows to create such an impact at a later point.

ESIA Process and Outcomes

The ESIA identifies the perennial springs at Jermuk used for therapeutic and recreational use as a highly sensitive receptor that cannot be substituted. They are regarded as being of national importance.⁴⁴

The ESIA groundwater baseline identifies the springs as part of the Arpa River catchment but upstream of the intersection of potential discharge from Amulsar.⁴⁵ It provides technical analysis of the composition of groundwater and surface waters in the Amulsar project area and surrounding the Jermuk Hydrothermal Park to support the conclusion that the spring water is influenced by different sources, rock types, and groundwater chemistry. It concludes that they are fed by deep regional springs that are not connected to the project area. The technical analysis infers resilience to changes in water quality in the project area. It further asserts that it is not possible for groundwater flow or quality in the project area to influence the quantity or quality of discharge from the hydrothermal springs. The impact assessment for groundwater resources⁴⁶ concludes that the potential impact is negligible. It is understood in the ESIA that the company has made a commitment to repeat the isotope study during the operational phase of the project.

The ESIA also sets out detailed analysis of vibration impacts (both air overpressure and ground-borne vibration) from project activities, including blasting. The blasting impact assessment concludes that “there is considered to be no potential for blasting activities to impact upon Jermuk spring waters.” This is based upon modelled vibration levels.⁴⁷

The May 2016 IESC gap analysis does not identify gaps in relation to the ESIA’s assessment of the project risks of groundwater contamination to the Jermuk springs, or contamination due to blasting activities. It further notes that the company has committed to continued groundwater monitoring in its Environmental Management Plan (EMP).⁴⁸

CAO’s Assessment of IFC’s Performance

The complainants’ concerns regarding groundwater contamination were identified and analyzed in the ESIA process.

⁴⁴ Amulsar ESIA, Chapter 6.9, Potential Impacts and Mitigation Measures, Groundwater Resources, Table 6.9.2: Receptor Sensitivity (Groundwater), June 2016. <https://goo.gl/sBEIBd>.

⁴⁵ Amulsar ESIA, Chapter 4.8, Environmental and Social Baseline, Groundwater Resources, June 2016. <https://goo.gl/kPOLJR>.

⁴⁶ Amulsar ESIA, Chapter 6.9, Potential Impacts and Mitigation Measures, Groundwater Resources, June 2016. <https://goo.gl/sBEIBd>.

⁴⁷ Amulsar ESIA, Chapter 6.7, Potential Impacts and Mitigation Measures, Noise and Vibrations, June 2016. <https://goo.gl/YFzjxy>.

⁴⁸ Knight Piésold, *Independent Review of the Amulsar Project Environmental and Social Impact Assessment v10*, May 2016. <https://goo.gl/hQ51t5>.

IFC has worked with the client to review the different versions of the ESIA and took into account the IESC gap analysis as part of its review.

CAO finds that IFC's review of the client's international ESIA in relation to potential groundwater contamination was commensurate to risk and resulted in the development of appropriate action plan items.

- *Risks of water pollution from the mine operations to the Vorotan and Arpa rivers, to Kechut and Vorotan reservoirs and the Lake Sevan catchment*

Issues Raised by the Complainants

The Lydian-01 complaint asserts that, according to the Republic of Armenia Law on Lake Sevan, Kechout and Spandaryan Reservoirs are a part of the Lake Sevan catchment basin as well as the Arpa and Vorotan River catchment basins. The complaint notes that “any activity having adverse impact on the Lake Sevan ecosystem is banned in the central zone, [and] in zones of direct and indirect impact.” The complaint alleges that these restrictions were neglected by the national EIA for Amulsar, which did not consider the likely risks to the Lake Sevan ecosystem. The complainants further allege that mining activities will contaminate the main water resources of Armenia.

ESIA Process and Outcomes

The ESIA addresses in detail existing baseline surface⁴⁹ and groundwater quality, and identifies and assesses the wide range of surface and groundwater users, including potable supply, fish farms, agriculture, and ecosystem services.⁵⁰ The ESIA evaluates impacts associated with the pits, the barren rock storage facility, the heap leach facility, the absorption, desorption and recovery plant, and other associated infrastructure.⁵¹

Hydrogeological and geotechnical investigations were undertaken at the proposed locations of mine infrastructure and at a number of other locations to provide complete hydrogeological data for the project area. The Groundwater Study Area was defined as the area formed by the Arpa, Darb, and Vorotan Rivers because these represent hydraulic boundaries. Jermuk lies outside this hydraulically-defined area because it is to the north of the Arpa River. Nonetheless, it was included in the analysis because of the importance of the springs to local and national stakeholders. A hydrogeological conceptual model for the project area was developed by the international consultant. Analysis is based upon defined hydrogeological units but recognizes the influence of man-made features (such as existing mineral exploration adits and the Spandaryan–Kechut Tunnel).⁵² The surface water baseline investigation was also conducted for the project by an international consultancy and the study area was consistent with the groundwater analysis.⁵³

Lake Sevan and its catchment are specifically protected by Armenian law and no activity is permitted that may negatively impact the Lake and its ecosystem. While most project facility locations will drain to the Arpa River, downstream of the Kechut Reservoir, and therefore will not

⁴⁹ Amulsar ESIA, Chapter 4.9, Environmental and Social Baseline, Surface Waters, June 2016. <https://goo.gl/4lhV5R>.

⁵⁰ Amulsar ESIA, Chapter 4.8, Environmental and Social Baseline, Groundwater Resources, June 2016. <https://goo.gl/kP0LJR>.

⁵¹ Amulsar ESIA, Chapter 6.9, Potential Impacts and Mitigation Measures, Groundwater Resources, June 2016 (<https://goo.gl/sBEIBd>); and Chapter 6.10, Surface Water Resources, June 2016 (<https://goo.gl/IMQ8Gc>).

⁵² Amulsar ESIA, Chapter 4.8, Environmental and Social Baseline, Groundwater Resources, June 2016. <https://goo.gl/kP0LJR>.

⁵³ Amulsar ESIA, Chapter 4.9, Environmental and Social Baseline, Surface Waters, June 2016. <https://goo.gl/4lhV5R>.

be in the “immediate impact zone” of Lake Sevan, the BRSF will naturally drain upstream of the Kechut Reservoir and lies within the “immediate impact zone” of Lake Sevan.⁵⁴

Surface water quality monitoring has been conducted since 2007 by the company and the Ministry of the Environment. Monitoring outcomes show the project is dealing with significant naturally-occurring levels of water contamination.⁵⁵

Two groundwater flow receptors are assessed as highly sensitive: the hydrothermal springs in Jermuk, which are of national importance and cannot be substituted; and the Spandaryan–Kechut Tunnel, which in turn supplies water to Lake Sevan. There is no current planned inflow to the tunnel from the Spandaryan Reservoir, but there is significant outflow that appears from modelling to be groundwater from the project area. Groundwater impacts include the total loss of springs beneath the BRSF and HLF, quality impacts on springs, and impacts on groundwater quality adjacent to the Vorotan River and in groundwater flows into the Spandaryan–Ketchut Tunnel.⁵⁶

The ESIA provides detailed analysis of surface water impacts on all identified receptors and includes a summary of the impacts, magnitude, significance of impact, and scale of significance. The scale of significance to all surface water receptors during mine operations, based on design mitigations, is considered not significant. Further analysis is provided of post closure mitigation. Each of the major project facilities has design engineering and management measures to control the potential discharge of water during each phase of the mine life specified in the ESIA.⁵⁷

The project has a water management strategy to separate noncontact water from contact water, and to achieve a zero discharge from mine facilities to the groundwater environment. All the ground and surface water receptor monitoring requirements are captured within the Environmental Monitoring Plan, which includes standard operating procedures for monitoring and audit.⁵⁸

Water management arrangements are set out in a comprehensive Surface Water Management Plan, which addresses management issues during all project phases: construction, operations, and post closure.⁵⁹

Overall, the ESIA contends that appropriate design of project facilities and mitigation measures will ensure that the impact of mine activity on surface and ground water resources will be eliminated or reduced to acceptable levels. The May 2016 IESC gap analysis does not identify gaps in relation to the ESIA’s assessment of the project risks and impacts on surface and groundwater pollution from mine operations. It notes that the company has developed a Water Management Plan with objectives consistent with international standards.

CAO notes that in the context of IFC new investment in 2016, the disclosed ESAP contained a requirement for the company to develop a plan for a participatory monitoring program in line with good international industry practice to create awareness about water quality and management during the construction and operational phase of the project. This action was envisaged as a requirement before IFC’s approval of the investment.⁶⁰

⁵⁴ *Ibid.*

⁵⁵ *Ibid.*

⁵⁶ Amulsar ESIA, Chapter 6.9, Potential Impacts and Mitigation Measures, Groundwater Resources, June 2016. <https://goo.gl/sBEIBd>.

⁵⁷ Amulsar ESIA, Chapter 6.10, Potential Impacts and Mitigation Measures, Surface Water Resources, June 2016. <https://goo.gl/IMQ8Gc>.

⁵⁸ Amulsar ESIA, Appendix 8.12, Environmental Monitoring Plan (EMP), June 2016. <https://goo.gl/LQT6fh>.

⁵⁹ Amulsar ESIA, Appendix 8.22, Surface Water Management Plan (SWMP), June 2016. <https://goo.gl/b5viFv>.

⁶⁰ IFC, *Environmental and Social Action Plan*, Amulsar Gold Project (#37084), July 29, 2016.

CAO's Assessment of IFC's Performance

The issues raised by the complainants were identified and analyzed in the ESIA process. The ESIA provides analysis of the surface and ground water baselines, the sensitivity of key receptors, and potential impacts on those receptors. It provides data and mitigation measures to suggest that there will be no detrimental effects on waters within the Lake Sevan catchment.

IFC has worked with the client to review the different versions of the ESIA and took into account the IESC gap analysis as part of its review.

CAO finds that IFC's review of the client's international ESIA in relation to potential water pollution issues was commensurate to risk and resulted in the development of appropriate action plan items.

- Seismic risks to the security of the heap leach facility

Issues Raised by the Complainants

The Lydian-01 complaint alleges that “the project doesn't have any calculations and risk projections for a quake with a magnitude of 10...The territory of the tail accumulation has numerous outlets of ground waters, which will spread toxic substances from the tails to the Vorotan River, then through Vorotan-Arpa tunnel to Lake Sevan...Explosives may activate landslip processes with their unpredictable consequences...”

ESIA Process and Outcomes

The ESIA recognizes that the proposed mine development is located within a seismically-active region. It states that there is no geomorphic evidence for faults or other tectonic geomorphology within the project area, including the proposed sites of the BRSF, HLF, crushing plant, or open pit. It predicts a very low potential for surface fault rupture within the project area. The ESIA provides an analysis of historical earthquakes and seismic activity in relation to the project area. A probabilistic seismic hazard analysis (PSHA) was conducted for the project site, concluding that a moderate level of seismic hazard exists within the license area.⁶¹

The ESIA methodology involves assessing additional loading placed on key facilities during a seismic event during their operational phase using peak ground acceleration (PGA) predictions based on certain earthquake probabilities. The ESIA advises that slopes on key facilities such as the HLF and BRSF have been designed to be stable under the PGA loading induced by such earthquakes to an acceptable engineering standard of care for the industry. A further specialist analysis undertaken by the client, based on engineering design, indicates acceptable pad and heap stability from an earthquake during operations of M6.4, which has a 10 percent probability of exceedance within 50 years. Longer-term analysis (covering the period post closure) is based on a maximum design earthquake of M6.6 with a 2 percent probability of exceedance within 50 years.⁶²

The May 2016 IESC gap analysis does not identify gaps in relation to the ESIA's assessment of seismic risks and impacts. It notes that a safety and seismic compliance evaluation of potential accommodation facilities was carried out, and that the Workers Accommodation Management

⁶¹ Amulsar ESIA, Chapter 4.6, Environmental and Social Baseline, Geology and Seismicity, June 2016. <https://goo.gl/PICM32>.

⁶² Amulsar ESIA, Chapter 6.18, Potential Impacts and Mitigation Measures, Community Health, Safety and Security, June 2016. <https://goo.gl/Vic1Yp>.

Plan (WAMP) makes provision for a detailed analysis to be undertaken for buildings constructed before 1994.

CAO's Assessment of IFC's Performance

The complainants' concerns regarding seismic risks have been identified and analyzed in the ESIA.

IFC has worked with the client to review the different versions of the ESIA, and took into account the IESC gap analysis as part of its review.

CAO finds that IFC's review of the client's international ESIA in relation to potential seismic risks was commensurate to risk and resulted in the development of appropriate action plan items.

- Potential for uranium to be present in mined material causing radioactive contamination, and additional radiation risks from radon

Issues Raised by the Complainants

The Lydian-01 complaint alleges that open-pit mining activities at Amulsar may also touch uranium deposits, causing radioactive contamination of the area, particularly affecting Jermuk resort, Gndevaz, Saravan, and Gorayk villages. It further notes that the company's response to these concerns is not satisfactory to the complainants. The Lydian-02 complaint also alleges that as a result of blasting activities, "according to independent experts, the radioactive levels with rise."

ESIA Process and Outcomes

Based on stakeholder concerns and historic exploration for uranium in and around the project area, a radiological study was undertaken by an independent international company specialized in radiological protection management. The investigation assessed radio-nuclides in dust, gas, and water (via dust) and assessed their potential impacts on workers, the public, herders/villagers accessing land, and water use. The outputs from this analysis are included in the ESIA.⁶³ The impacts are predicted as ranging from negligible to minor/localized. The risk assessment was undertaken using numerous dust and rock samples, which included both ore and waste rock. While maximum concentrations were very slightly above reported Armenian maximum levels, mean concentrations were well below Armenian norms.

A pathway assessment identified the highest risk as coming from direct inhalation of dust or radon gas. Raised radon levels mean that mine buildings will all be provided with protection measures. For uranium and thorium, an analysis using dose assessment estimates exposure, irrespective of pathway, to be well below international and Armenian standards. For water, most levels measured fall within World Health Organization (WHO) guidelines.⁶⁴

The IESC gap analysis does not mention the risks of radioactive contamination from project activities.

⁶³ Amulsar ESIA, Appendix 6.18.1, Radiological report (Radman 2012). <https://goo.gl/JwxYzx>.

⁶⁴ Amulsar ESIA, Chapter 6.18, Potential Impacts and Mitigation Measures, Community Health, Safety and Security, June 2016. <https://goo.gl/Vic1Yp>.

CAO's Assessment of IFC's Performance

An expert assessment of radiation risks was undertaken in response to stakeholder concerns, and included in the ESIA. It concludes that the potential impact of radiation as a result of the project is considered to be negligible.

On the basis of the material available, CAO finds that IFC took adequate steps to supervise the ESIA process in relation to this issue.

- Risks of deposition of contaminated dust on agricultural land and on the village of Gndevaz due to prevailing wind direction

Issues Raised by the Complainants

The Lydian-02 complaint alleges that “as a result of the explosions resulting from the exploitation of the Amulsar gold mine, the heavy metal dust will spread over the pastures, hay lands and farmlands, as well as the residential area of the village.”

ESIA Process and Outcomes

The ESIA baseline assessment recognizes the significance of potential health issues from respirable airborne dust and larger mineral dust particles, which do not pose the same health effects but generate nuisance dust through soiling of surfaces. The ESIA describes baseline monitoring of dust levels and other gaseous parameters.⁶⁵ The baseline monitoring for gaseous NO₂ and SO₂ undertaken in five local communities showed very low concentration, consistent with what is expected in a rural location with no significant pollution sources. Dust deposition was monitored at locations near the main project infrastructure locations, with low levels of natural and potentially man-made sources of dust distributed according to local wind patterns. However, fine particulate monitoring indicates elevated PM₁₀—particularly in Gndevaz, and to a lesser degree in Jermuk—but low PM_{2.5} concentrations. The ESIA recognizes that further monitoring is required and such is ongoing.

Significant sources of air pollution during the operation of the mine are predicted to be dust emissions from mining (including blasting), haulage, tipping, conveyor transfer points, crushing activities, and vehicle exhaust gases.

The ESIA assesses the effects of construction, operation, and closure of the project with regard to sensitive air quality receptors. It provides a comprehensive analysis of projected dust emissions from project sources. Assumptions about the level of dust attenuation that can be achieved through dust suppression measures at various site infrastructure locations are specifically set out within the ESIA.⁶⁶ An Air Quality Noise and Vibration Management Plan (AQNVM) has been developed and ongoing monitoring techniques and plans are specified. There is an overarching commitment to best practice methodology to protect workers and off-site receptors.⁶⁷

The ESIA recognizes future potential health impacts from specific hazardous chemicals—such as cyanide utilized in the HLF and mercury (a byproduct of the HLF)—as well as environmental exposure to heavy metals. A 50m-buffer zone around all facilities will effectively be “lost” to all activities because vegetation will be “smothered,” while an additional 368 hectares are identified as “disturbed” due to dust (including heavy metal) deposition. It is estimated that 80 percent of

⁶⁵ Amulsar ESIA, Chapter 4.4, Environmental and Social Baseline, Air Quality, June 2016. <https://goo.gl/YXBs59>.

⁶⁶ Amulsar ESIA, Chapter 6.6, Potential Impacts and Mitigation Measures, Air Quality, June 2016. <https://goo.gl/EXloq8>.

⁶⁷ Amulsar ESIA, Appendix 8.14, Air Quality, Noise and Vibration Management Plan, June 2016. <https://goo.gl/rfhym3>.

dust will be deposited within 100 meters of site infrastructure. Based on available data, the ESIA concludes that it is not possible to determine if the naturally-occurring heavy metals present in the soil or parent rock have contributed to any human health effects in the study area. Gndevaz is approximately 1.0km from the nearest source and the fine particulate levels should have reduced to a less than 1 percent of emitted levels at this distance.⁶⁸ A plan was in place to carry out detailed village biomedical surveys in 2016 before the operational phase to gain additional data and the company is committed to long-term monitoring of impacts.⁶⁹ The company also committed to implementing the cyanide management plan prepared and to ensuring that it is compliant with the International Cyanide Management Code. This is a legitimate objective at this stage, which will require further detail and planning in advance of operations.

An assessment of health risks associated with deposition of heavy metals within dust has been undertaken in the ESIA using appropriate methodologies. The analysis concludes that there is an acceptable risk to identified receptors (adult or child farmers) within the study area based on metal concentrations in soil. While analysis suggests that nuisance dust and respirable dust—which may have health impacts at sensitive receptors—will be maintained at acceptable levels, this is dependent on a very high standard of ongoing mitigation of dust emissions at site facilities. Health impacts from heavy metal exposures are not predicted, although overall risks are deemed acceptable.⁷⁰

Beyond the disturbed zones, the further impacts on vegetation are unknown because their tolerance to increased dust levels is unknown. There may therefore be future impacts on livestock grazing, informal herb collection, and cropping that are as yet unspecified. The acceptability of this situation is therefore predicated on a monitoring and management program that is participatory and transparent, and that actively manages future impacts that may affect the health or livelihoods of villagers such as those living in Gndevaz.⁷¹

The IESC gap analysis notes that the Community Health, Safety and Security Management Plan (CHSSP) addresses relevant requirements. It further notes that a comprehensive air quality monitoring program is proposed in the AQNVMP, but does not include metals analysis of collected dustfall. The IESC report recommends adding metals analysis of dustfall to the AQNVMP and the EMP.⁷² CAO notes that this issue has been added to the latest version of the project's ESIA.⁷³

Further, IFC's 2016 ESAP for the project requires the client to become a signatory of the International Cyanide Management Code (ICMC), and obtain ICMC certification for the operation of the Amulsar Project, by September 2019.⁷⁴ CAO notes that the client became a signatory of the ICMC in September 2016. By becoming a signatory, Lydian has committed to following the Principles of the Cyanide Code, to implementing its Standards of Practice, and to have verification audits of its operation conducted by independent third-party auditors within one year of its first

⁶⁸ Amulsar ESIA, Chapter 6.18, Potential Impacts and Mitigation Measures, Community Health, Safety and Security, June 2016. <https://goo.gl/Vic1Yp>.

⁶⁹ Amulsar ESIA, Appendix 8.15, Community Health, Safety and Security Plan (CHSP), June 2016. <https://goo.gl/oj8UL5>.

⁷⁰ Amulsar ESIA, Chapter 6.18, Potential Impacts and Mitigation Measures, Community Health, Safety and Security, June 2016. <https://goo.gl/Vic1Yp>.

⁷¹ Amulsar ESIA, Appendix 8.15, Community Health, Safety and Security Plan (CHSP), June 2016. <https://goo.gl/oj8UL5>.

⁷² Knight Piésold, Independent Review of the Amulsar Project Environmental and Social Impact Assessment v10, May 2016. <https://goo.gl/hQ51t5>.

⁷³ Amulsar ESIA, Appendix 8.15, Community Health, Safety and Security Plan (CHSP), June 2016. <https://goo.gl/oj8UL5>.

⁷⁴ IFC, *Environmental and Social Action Plan*, Amulsar Gold Project (#37084), July 29, 2016.

receipt of cyanide and every three years thereafter. Operations will be certified if found in compliance with the Cyanide Code.⁷⁵

CAO's Assessment of IFC's Performance

The ESIA identifies and analyses the issue of contaminated dust. The IESC gap analysis confirmed compliance with international standards on this issue, and the client has addressed its recommendations for additional monitoring activities.

IFC has worked with the client to review the different versions of the ESIA, and took into account the IESC gap analysis as part of its review.

CAO finds that IFC's review of the client's international ESIA in relation to potential impact of contaminated dust was commensurate to risk and resulted in the development of appropriate action plan items.

2. Biodiversity and the Presence of Armenian "Red Book" Species

Issues Raised by the Complainants

The Lydian-01 complaint alleges the presence of a number of Armenia's "Red Book" species at Amulsar based on work undertaken by the World Wildlife Fund (WWF). These include a critically endangered flowering plant (*Potentilla porphyrantha*) and a variety of important fauna (lizards, birds, and mammals). It further alleges that the national EIA does not address this range of concerns, focusing rather on the presence of the Caucasian Brown Bear. The complaint references the Republic of Armenia (RA) mining code and RA law on fauna advising that any activity resulting in a reduction of red-listed flora or fauna is specifically banned.

Relevant Requirements

The complainants' concerns in relation to the project's impacts on endangered species raise a number of questions.

First, there are questions as to IFC's initial review and early supervision of the project under its 2006 Sustainability Framework. As noted in IFC's 2006 Guidance Notes the first stage in the process of E&S assessment involves screening and scoping the project for potential E&S risks and impacts.⁷⁶

Second, there are questions as to IFC's supervision of the international ESIA process, which was conducted under the 2012 Sustainability Framework.

There are significant similarities between the 2006 and the 2012 Sustainability Framework requirements. References below are to the 2012 Framework, unless otherwise noted.

⁷⁵ Lydian Armenia, Press Release, 09.28.2016. <https://goo.gl/dYxHqm>.

⁷⁶ IFC, *Guidance Notes to the Performance Standards*, Guidance Note 1 – Social and Environmental Assessment and Management Systems, GN10 and GN14. Guidance Notes offer guidance on the requirements contained in the Performance Standards, including reference materials, and on good sustainability practices to improve project performance. These Guidance Notes are not intended to establish policy by themselves. More recent international good practice guidance on early stage E&S work for the mining industry also emphasizes the importance of E&S scoping before any ground based exploration work begins (Eg: Prospectors & Developers Association of Canada (PDAC), e3 Plus: A Framework For Responsible Exploration, *Excellence In Environmental Stewardship Toolkit (EES)*, March 2009. <https://goo.gl/yzqmoY>.)

IFC Performance Standard 6 (PS6, Biodiversity Conservation and Sustainable Management of Living Natural Resources) sets out requirements to avoid or mitigate threats to biodiversity arising from client operations. It requires the applicability of PS6 to be established during the E&S Assessment process, while implementation of the actions necessary to meet the requirements of this Performance Standard is managed through the client's E&S Management System, as outlined in PS1 (PS6, para. 4).

The highest levels of protection under PS6 apply to "critical habitats," which include habitats of significant importance to Critically Endangered or Endangered Species (also known as "Red List" species). PS6 para. 17 provides that no project activities may be implemented in a critical habitat unless four criteria are met:

- i. "No other viable alternatives within the region exist for development of the project on modified or natural habitats that are not critical;
- ii. The project does not lead to measurable adverse impacts on those biodiversity values for which the critical habitat was designated, and on the ecological processes supporting those biodiversity values;
- iii. The project does not lead to a net reduction in the global and/or national/regional population of any Critically Endangered or Endangered species over a reasonable period of time;
- iv. A robust, appropriately designed, and long-term biodiversity monitoring and evaluation program is integrated into the client's management program."

PS6 further provides that "where a client is able to meet the requirements defined in para. 17, the project's mitigation strategy will be described in a Biodiversity Action Plan and will be designed to achieve net gains of those biodiversity values for which the critical habitat was designated" (para. 18). This may be achieved through *in situ* efforts to enhance and protect habitat or through the biodiversity offsets (footnote 15).

IFC's Appraisal and Early Supervision of Biodiversity Issues

As noted above, IFC's 2007 appraisal of its initial investment in the client did not include a visit by IFC E&S staff to the Amulsar site. An IFC representative without E&S expertise visited the site in May 2007 and reported that the project would not have any impacts on the environment, and that no natural alpine pastures would be damaged. As a result, the ESRS disclosed by IFC in May 2007⁷⁷ did not identify any issues relating to PS6.

The initial ESAP as agreed between IFC and the client included the requirement for an ESMS, acquisition of appropriate expertise, independent auditing of E&S issues, and a requirement that the client carry out E&S baseline surveys for the Amulsar property.⁷⁸

The ESRS in relation to IFC's follow-on investment in May 2009 noted that baseline biodiversity work conducted by Armenian specialists had identified flora on the Armenian Red Book. The application of PS6, however, was not discussed and no specific action plan items related to PS6 were identified.⁷⁹

⁷⁷ IFC Investment in Lydian Resources Company Ltd., *Environmental and Social Review Summary*, May 2007. <http://goo.gl/3gx7hs>.

⁷⁸ IFC Investment in Lydian Resources Company Ltd., *Environmental and Social Action Plan*, May 2007. <https://goo.gl/rjQeeK>.

⁷⁹ IFC Investment in Lydian International, *Environmental and Social Review Summary*, January 2009. <http://goo.gl/a58vxi>.

Documentation from an August 2009 supervision visit by IFC noted that the client should prioritize the hiring of international expertise to coordinate baseline studies and that E&S baseline and ESIA work should be undertaken according to IFC requirements.

A gap analysis was undertaken by international consultants in June 2010 to review the status of the project against international ESIA requirements. Flora and fauna were regarded as a low to medium risk issue at this point, although the potential presence of protected species and the need for further quantification and field verification were noted.

Documentation from the October 2010 supervision visit noted the engagement of the international consultant to prepare an ESIA to international and IFC standards and recommended a thorough review of biodiversity baseline studies for adequacy.

On commencement of the international ESIA process, analysis of baseline biodiversity data identified the need for further surveys of some biodiversity components. In 2012, the presence of the critically endangered *Potentilla porphyrantha* was noted, resulting in a census of its presence by a specialist.

In June 2013, an IFC supervision visit noted that the project was significantly behind in its development of an environmental, social, health, and safety (ESHS) management system for exploration. As a result, IFC observed that the client's exploration activities had impacted *Potentilla porphyrantha* populations, representing a significant compliance issue under the Performance Standards.

From 2013 onward, CAO notes evidence of a significant and ongoing supervision of biodiversity issues by IFC and the client including more ongoing work on biodiversity and ecosystem services as well as targeted supervision meetings.

ESIA Process and Outcomes

From 2012 to 2015, additional studies were carried out to address biodiversity at the request of relevant shareholders (IFC and EBRD) and later lenders (RCF and Orion). The Amulsar Mountain and its foothills were found to provide habitat for 23 resident raptor species, of which 14 were listed in the Armenian Red Book, with seven breeding in the project-affected area. Two species were listed as Endangered in the IUCN Red List: Egyptian Vulture and Saker Falcon. It was concluded that the project area had a high diversity of bird species, including threatened populations. It was not, however, rated as critical habitat for the individual raptor species or for the migratory species that use the project area. Mammal surveys confirmed the presence of a breeding population of Caucasian Brown Bear on the southern slopes of the Amulsar Mountain. The area is regarded as important for the species, which is protected under the EU Habitats Directive. Further analysis on this bear population were undertaken, as were baseline surveys relating to bats, amphibians, reptiles, invertebrates, fish, and the like. The project area contains areas of tier one critical habitat for *Potentilla porphyrantha*. Subalpine meadows in good condition such as those at Amulsar are rare in Armenia and host a significant presence of regionally-endemic species.⁸⁰

Recognizing the significance of biodiversity in the project area, the client adopted a corporate policy of achieving “no net loss” of biodiversity in natural habitats and a “net gain” outcome for critical habitats. The ESIA undertakes a sophisticated analysis of biodiversity issues and sets out a mitigation strategy recognizing the requirement to offset losses that cannot be mitigated and maintain biodiversity values.⁸¹

⁸⁰ Amulsar ESIA, Chapter 4.10, *Environmental and Social Baseline*, Biodiversity, June 2016. <https://goo.gl/s2Rthz>.

⁸¹ Amulsar ESIA, Appendix 8.20, Biodiversity Action Plan, June 2016. <https://goo.gl/sqskMn>.

The ESIA recognizes that the project infrastructure and its operation will result in a permanent loss of natural habitat, which cannot be avoided through redesign.⁸² Translocation of *Potentilla porphyrantha* plants from these areas has been undertaken. Research aimed at establishing the potential for post-project reinstatement has commenced. A “set-aside” is designed to provide protection to some of the *Potentilla porphyrantha* plants along with important bear habitat, although this will have to be linked to forested areas to the west to be effective, requiring bear (and other mammal) crossing points along the conveyor system. Much reliance is placed on the potential to offset biodiversity losses through the proposed Jermuk National Park, which the company has committed to support.⁸³ Establishing no net loss will be challenging, but the client is pursuing approaches and solutions consistent with current good practice.

Nevertheless, the ESIA notes areas of residual impact on biodiversity that will need to be monitored, with a review of offset options if necessary. These include impacts on:

- The tier 1 critical habitat for *Potentilla porphyrantha*
- Brown Bear (*Ursus arctos*) which is listed as vulnerable in the RA Red Book, threatened throughout the region, and triggers critical habitat under EBRD’s PR6, because the species is listed in Annex IV of the EU Habitats Directive
- Lesser kestrel (*Falco naumanni*) and other bird species in the RA Red Book that breed in the project-affected area
- The species-rich subalpine meadows of the area more broadly

The May 2016 IESC Review gives a positive assessment that the biodiversity elements of the ESIA are largely compliant with relevant requirements. To the extent that gaps are identified, these relate to the completion of studies on the impact of the project on the Caucasian Brown Bear and an accompanying Species Action Plan.

The IESC notes the importance of the client making time-bound and resourced commitments to the biodiversity offset. Considering the “practical challenges” in successful implementation of the offset, the IESC also notes the importance of the development of a comprehensive biodiversity monitoring plan for the site.⁸⁴

These recommendations are reflected in the IFC ESAP for the project.⁸⁵

CAO’s Assessment of IFC’s Performance

Neither IFC’s initial appraisal nor its early supervision of the project identified biodiversity as an important issue and IFC did not trigger the application of PS6 to the project. As a consequence, IFC’s appraisal and early supervision did not provide assurance that the client was in a position to meet the requirements of PS6 in relation to critical habitats. The lack of an early E&S risk scoping study, to inform the ESAP, was problematic. Scoping would have provided opportunity for screening and scoping potential E&S risks and impacts as envisaged by IFC Guidelines, including identification of important natural and critical habitats.

Baseline studies undertaken to support the Armenian environmental permitting process did not meet the needs of an international quality ESIA. This was rectified in late 2010 with the engagement of international ESIA consultants, after which the significance of biodiversity impacts, including during exploration, became increasingly apparent.

⁸² Amulsar ESIA, Chapter 6.11, Biodiversity and Ecosystems, June 2016. <https://goo.gl/r5aTil>.

⁸³ IFC Investment in Amulsar, *Environmental and Social Action Plan*, July 2016. <https://goo.gl/xQXsbe>.

⁸⁴ Knight Piésold, *Independent Review of the Amulsar Project Environmental and Social Impact Assessment v10*, May 2016. <https://goo.gl/hQ51t5>.

⁸⁵ IFC Investment in Amulsar, *Environmental and Social Action Plan*, July 2016. <https://goo.gl/xQXsbe>.

IFC's requirement that the client undertake independent E&S audits was never fulfilled and was dropped from the ESAP in 2010. IFC's assessment of the client's capacity and commitment to undertake exploration activities in accordance with the requirements of PS1 lacked depth. In this context, it is notable that IFC did not have assurance that the client had a suitable ESMS for exploration in place until 2013.

CAO thus finds that IFC's review and supervision of the project risks to biodiversity during the period 2007–13 were insufficient.

As a result, IFC did not have assurance that the client was in a position to meet the requirements of PS6 in relation to critical habitats. In this context, IFC observed in 2013 that the client's exploration activities negatively impacted Tier 1 critical habitat for the population of a critically endangered species, *Potentilla porphyrantha*. Once impacts on endangered species were identified, however, IFC responded by requiring biodiversity assessments and action plans as required by PS6 as part of the ESIA process.

During the post 2013 period, CAO finds that IFC's supervision was commensurate to risk and resulted in the development of appropriate action plan items designed to minimize, mitigate and offset potential impacts of the project on biodiversity as required by the Performance Standards.

B. Analysis of Social Issues

This section assesses IFC's performance in relation to a range of social issues raised by the complainants. These issues relate to the company's management of social risks and impacts, the quality of the project ESIA, and consultation processes around the project. In particular, the complainants raised concerns regarding:

- The transparency and adequacy of consultation for the land acquisition process and whether negotiations to purchase lands from Gndevaz residents were conducted under duress because of the threat of expropriation
- The risk of impacts to the tourism sector in Jermuk from negative perceptions of mining with respect to health tourism, damage to the "brand," and failure to include Jermuk in the initial area of influence of the project
- The risk of impacts on the Gndevaz community and its population from the location of the project facilities and impacts on health, livelihoods, and well-being for the community
- The adequacy of processes of consultation and engagement, access of concerned stakeholders to public hearings, and extent to which complaints have been registered or addressed

1. Land Acquisition and Livelihood Restoration

Issues Raised by the Complainants

The Lydian-01 complaint alleges that information about land acquisition in Gndevaz was unclear as to what was to be constructed on the land. The Lydian-02 complaint alleges that land acquisition was done under duress because of threat of expropriation by the government. It also alleges that information on land acquisition has not been clear and that there has been manipulation of the sellers through acts such as collecting ownership certificates without advising owners as to why they were being collected. CAO's compliance appraisal found that the complaint raised issues concerning the project's approach to land acquisition: specifically, whether owners are being dealt with in a transparent manner. Further concerns were raised during CAO's

investigation site visit that sale of land was not freely negotiated because negotiations took place under threat of expropriation.

Relevant Requirements

This section applies the requirements of IFC's 2012 Sustainability Framework because these are referenced in the ESIA and most of IFC's supervision of Land Acquisition and Livelihood Restoration activities in the discussion that follows was carried out under the 2012 Framework.

Performance Standard 5 (PS5, Land Acquisition and Involuntary Resettlement) has as an objective to avoid or at least minimize involuntary resettlement and to mitigate adverse social and economic impacts from land acquisition or restrictions in land use (PS5, Objectives). PS5 is specifically directed to the management of involuntary resettlement, which is relevant for expropriations as well as cases when land sales take place under threat of expropriation (para. 5).

PS5 encourages private sector actors to "use negotiated settlements" even where appropriation is an option (para. 3). However, in such instances, PS5 is clear that negotiated settlements must meet PS5 requirements. Doing so involves provision of "compensation for loss of assets at full replacement cost" as well as "other assistance to help [displaced persons] improve or restore their standards of living or livelihoods" (para. 9).

In terms of process, two broad issues are key. First, resettlement activities should be implemented with informed participation of those affected (PS5, Objectives). Second, resettlement should take place in accordance with a Resettlement Action Plan or Livelihood Restoration Plan, which will guide the process from initial planning through the collection of socioeconomic baseline data on persons being displaced to the validation of successful completion (paras. 14 and 15).

IFC's Pre-Investment E&S Review

Documentation of IFC's pre-investment site visit to Amulsar in May 2007 reported that no land-related impacts were anticipated as nothing grows on the project site. The ESRS published in May 2007 indicated that the relevance of PS5 (Land Acquisition and Involuntary Resettlement) would be "confirmed upon completion of the mine Feasibility Study and the subsequent investment decision."⁸⁶ The ESRS states that no impacts to food security or loss or scarcity of farmlands are expected and that there is no agricultural land and no privately held land within the license area.

IFC's Supervision

The project as initially defined was located within the Vorotan Valley, affecting primarily land owned by the community of Gorayk. Minimal if any infrastructure was located within the Gndevaz administrative area until 2013.

After a supervision visit in 2008, IFC's documentation mentioned that communities were far from the exploration site. Following another site visit in 2009, IFC's documentation noted that herders traditionally rented land in the area from the "municipalities" for grazing their animals. The company's activities were not considered to have an impact on the traditional land users based on the assertions that herders were not affected by exploration activities. After this site visit, IFC added to the ESAP the need for immediately initiating baseline socioeconomic studies.

In 2010, IFC identified potential use of the project area by seasonal herders and the need for social baseline studies to be carried out in relation to PS5 to ensure identification of anyone potentially affected, including "nomadic herders." IFC advised the client to use this information to

⁸⁶ IFC Investment in Lydian Resources Company Ltd., *Environmental and Social Review Summary*, May 2007. <http://goo.gl/3qx7hs>.

inform site selection for mine infrastructure.

The July 2010 ESIA gap analysis identified the need for information on current land use and for an assessment of a “stand-alone” compensation plan to be included in the Environmental and Social Management Plan. This issue, however, was not advanced in IFC’s supervision documentation in the years that followed.

In 2011, socioeconomic baseline studies were ongoing. In 2012, a census of seasonal herders was carried out as part of the baseline studies. This work was further updated in 2014–15 through focus groups and interviews as part of an ecosystems services review.

In the period 2012–14, the planned location for project infrastructure changed significantly, including relocation of the HLF—with anticipated impacts on more intensively used lands, including agricultural plots, hay fields, and apricot orchards belonging to residents of Gndevaz. In May 2013, IFC noted that the client had hired a dedicated resettlement specialist to lead the land acquisition process. IFC raised concerns and provided recommendations about compliance with PS1 and PS5, because of the absence of consultation with potentially affected landowners as input for the alternatives assessment for the siting decision of the HLF at the new site—and more generally the lack of information being provided to landowners.

In late 2013, the HLF site was changed again for legal reasons. At this point, the current location for the HLF was identified and additional studies were undertaken to revise the ESIA. A Land Acquisition Road Map to guide the process was finalized in May 2014 by an independent expert, advising that a full Resettlement Action Plan (RAP) was not required.

In October 2014, IFC noted that a Guide to Land Acquisition and Compensation (GLAC)⁸⁷ for landowners and land users had been disclosed in June 2014 and that consultation regarding acquisition was underway with 21 landowners. IFC noted concerns about the lack of clear guidance on the determination of compensation rates and more generally about the alignment of the process with PS5 requirements. At this point, IFC also stressed the importance of livelihood restoration in meeting the objectives of PS5 and that the Land Access and Livelihood Restoration Plan (LALRP) was to be disclosed prior to land acquisition taking place.

In September 2015, IFC conducted a combined supervision and appraisal visit, anticipating a potential upcoming investment for construction of the mine. IFC noted that land acquisition was initiated in January 2015, with 141 affected households. IFC interviewed a limited number of community members affected by the land acquisition process and reported, based on this visit and the outcome of an independent audit regarding the land acquisition process, “...the general view that the process was adequate, people had been consulted prior to the acquisition was initiated and were well informed about the process, valuations were adequate and in line with or beyond market value, and the individuals who had already received payment were satisfied with the timing of the transactions.”

ESIA Outcomes

The GLAC was originally released in July 2014 and an updated version was disclosed in February 2015. The GLAC was developed into a full Land Access and Livelihood Restoration Plan (LALRP) as part of the ESIA process. The LALRP addresses impacts to herders, Gndevaz landowners, and other land users affected by the project. The LALRP was disclosed in April 2015 and includes

⁸⁷ Amulsar ESIA, Appendix 6.16.1, Guide for Land Owners and Land Users – Land Acquisition and Compensation (2014), February 2015.

information on the right to expropriation as a last resort should private land acquisition not be possible.⁸⁸

A third-party audit regarding the land acquisition process was carried out in August 2015. The audit found the company's land acquisition process to have been in line with the requirements of PS5, even though the requirement of PS5 is that the LALRP should have been available prior to land acquisition taking place.⁸⁹ The audit addressed the issue of access to information at the time of land acquisition negotiations and found that sellers interviewed felt that they had good information and could access the company for answers to questions. The audit identified a gap in information regarding the land acquisition process in early 2014. However, it noted that when land consultations and negotiations began in early 2015, sellers had received adequate information and they felt that they were well informed.

In summary, the ESIA identified the land requirements and addressed potential impacts. In supervising this process, IFC took reasonable steps to assure itself that land acquisition and compensation for Gndevaz lands were being evaluated, planned, and executed consistent with the requirements of PS5, with indications that prices were above market value and considered fair by sellers. Compensation valuation and prices were disclosed after some negotiations had taken place. While this may not have been fully consistent with PS5 requirements for transparency and informed participation, there is no evidence that this led to material shortcomings in land acquisition outcomes such that would require further action from IFC.

Consultation Processes for Land Acquisition and Compensation

As noted by IFC, there were gaps in consultation with potentially affected landowners during the alternatives analysis for HLF sites until 2013. The first direct engagement with people affected by economic displacement took place in September 2013, when a meeting with potentially impacted herders occurred, according to the 2016 version of the SEP.⁹⁰ The first documented consultation with Gndevaz landowners affected by the final HLF took place in May 2014 when, according to the 2016 SEP, the client presented the new project design at a public meeting.⁹¹

A list of consultation and disclosure activities specific to the land acquisition process is provided in the LALRP⁹² and further verified by the third-party audit.⁹³ The main documents and their timing are reported as:

- Public disclosure in July 2014 of the GLAC in English and Armenian, at the Gndevaz Information Center, on the client's website, and through distribution to 1,000 households in four communities
- Disclosure of the final GLAC in January 2015
- Disclosure of the LALRP on April 21, 2015 in English and Armenian, at the Gndevaz Information Center, and on the client's website
- A question-and-answer sheet available during early consultations

The third-party audit included a detailed review of consultation processes. Consultation was included as a focus of the audit in part due to concerns from IFC and another lender about the adequacy of disclosure and consultation around the land acquisition process. The audit found

⁸⁸ Amulsar ESIA, Appendix 8.23, Land Access and Livelihood Restoration Plan (LALRP), page 7, February 2015. <https://goo.gl/TL7diz>.

⁸⁹ Knight Piésold, LALRP Audit, 2015, pages ES-2,3.

⁹⁰ Amulsar ESIA, Appendix 8.6, Stakeholder Engagement Plan (SEP), June 2016.

⁹¹ *Ibid.*, page 25

⁹² Amulsar ESIA, Appendix 8.23, Land Access and Livelihood Restoration Plan (LALRP), page 42, February 2015. <https://goo.gl/TL7diz>.

⁹³ Knight Piésold, LALR Audit, 2015.

that, although the project was initially not fully compliant due to the failure to disclose information prior to the commencement of land acquisition, the objective of adequately informing stakeholders was eventually met through consultation and disclosure of the GLAC.⁹⁴ CAO notes that, according to the audit, IFC had emphasized the need to disclose the LALRP prior to initiating land acquisition activities.⁹⁵

According to IFC's 2016 ESRS and ESAP, the Livelihood Restoration Plan (LRP) was to be "enhanced" based on initial experience in providing livelihood restoration activities and disclosed to affected communities.⁹⁶ CAO notes that PS5 requires not only disclosure but also consultation and informed participation of affected people. Given the concerns raised by complainants and previously by IFC about the adequacy of consultation processes, CAO notes that it is incumbent on IFC to ensure that the LRP is updated with appropriate consultation and participation on the part of the affected communities.

CAO's Assessment of IFC's Performance

Overall PS5 Compliance

The client could have pursued land expropriation but chose, consistent with PS5 objectives, to acquire land through negotiated agreements. When shortcomings in the client's approach to land acquisition were identified early in the process, IFC worked with the client to address these, with a focus on ensuring outcomes consistent with the objectives of PS5.

CAO finds that IFC's supervision provided reasonable assurance of compliance with the substantive requirements of PS5.

Engagement, Consultation, and Information Disclosure Relative to Land Acquisition

Uncertainties in project land acquisition needs caused by changes in the location of project infrastructure resulted in a significant period of uncertainty for the client as well as for affected communities. IFC identified the need for stronger consultation, including in relation to land acquisition in 2013 and 2014. IFC worked with the client to address these issues in supervision, including through a third-party audit of the land acquisition process, which was conducted in 2015 and concluded that consultation and disclosure requirements had been met.

CAO finds that IFC's supervision provided reasonable assurance of compliance with the consultation and disclosure requirements of PS5.

2. Impacts on Jermuk Tourism

Issues Raised by the Complainants

The Lydian-01 complaint alleges that the project will have adverse impacts on the economy of the spa town of Jermuk, located 12km from the mine site. Parts of the Jermuk tourism zone, the complaint states, are as close as 2km to 4km from the mine. The complaint notes that Jermuk is a tourism center known for its hot springs, mineral water, and health facilities. Specifically, the complaint states that residents think that the project will have adverse effects on Jermuk's "brand as a resort." The complaint further alleges that the town's exclusion from the area of influence for

⁹⁴ *Ibid.*

⁹⁵ *Ibid.*

⁹⁶ IFC, *Environmental and Social Review Summary*, Amulsar Gold Project (#37084), July 29, 2016.

the original EIA meant impacts to the town were not being considered and residents' opposition to the mine was not being heard.

Relevant Requirements

The complainants' concerns regarding the project's future impacts on the tourist economy of Jermuk raise issues as the adequacy of IFC's review and supervision of the client's E&S assessment process. The requirements of PS1 are of relevance in this context. In particular, CAO notes the requirement that the client's E&S assessment consider "all relevant environmental and social risks and impacts of the project" (PS1, para. 7) in manner that is "adequate, accurate and objective" (PS1, para. 19) and consistent with good international industry practice.

E&S risks and impacts are to be assessed in the context of the project's "area of influence" (PS1, para. 8), defined as the area likely to be affected by the project. The definition of the area of influence should be carried out iteratively with the definition of stakeholders and refining of the identification of potential impacts.⁹⁷

Once impacts are identified, the "mitigation hierarchy" requires "avoidance of impacts over minimization and where residual impacts remain, compensation [or] offset, wherever technically and financially feasible" (PS1, para. 14).

IFC's Appraisal and Early Supervision

The issue of the area of influence of the project was not expressly considered during the E&S review for IFC's 2007 and 2009 investments. As a consequence, no early socioeconomic risk scoping was conducted. Risks posed by the development of a mine to tourist economy, as well as potential community concerns, were thus not identified and relevant requirements in relation to these issues were not triggered.

The 2007 ESAP commits the company to carry out baseline studies in accordance with IFC requirements. Initial environmental baseline work started in 2008 but was aimed at the national requirements and permitting process and did not include Jermuk in the area of influence. Social baseline work was not carried out initially because it was not required for the national EIA process.

Following its 2009 supervision visit, IFC recommended that the client initiate the socioeconomic baseline studies. IFC recommended that the company consider whether Jermuk should be considered in the ESIA because of potential impacts from visual changes and noise. IFC also recommended that social baseline work should be carried out at a level to meet IFC requirements.

Documentation from IFC's 2011 supervision visit noted that Jermuk was still not part of the area of influence, and that there were growing concerns from the mayor of Jermuk about the potential impacts of the project on the town. As a result, the client established a Community Liaison Committee (CLC) in Jermuk and an ESIA update for the mayor. The international ESIA process, initiated in 2011, included Jermuk as an impacted community.

ESIA Process and Outcomes

Discussion of the ESIA's assessment of project impacts on tourism can be broken into two parts. On the one hand, there are concerns that the project would have an adverse impact on the quality of the spa waters of Jermuk, in particular through surface and ground water contamination and radioactive contamination. As noted in section VII.A.1., CAO finds that IFC assured itself that stakeholder concerns about these issues were responded to and considered as part of the ESIA process.

⁹⁷ *Guidance Notes to IFC Performance Standards*, Guidance Note 1, G15, July 2007.

On the other hand, there are documented concerns about the potential impacts of the project on the “brand” of Jermuk as a center for wellness-based tourism. Such impacts could be anticipated, for example, from:

- Visual impacts of the project
- Impacts from noise and blasting overpressure
- Labor influx
- Negative perceptions related to proximity of the project to Jermuk
- A variety of concerns including potential environmental impacts and loss of the natural character of the landscape

The table below summarizes the outcomes of the ESIA in relation to each of these potential sources of impact.

Source of impact	Impact assessment	Residual impact	Impact on Jermuk brand
Visual impact	ESIA includes a visual and landscape impact assessment considering the impact of the mine on Jermuk and nearby tourist sites. (Chapter 6.5)	The project is identified as having adverse visual impacts, visible from Jermuk and nearby tourist sites. Recreational users and tourists are identified as experiencing the most significant impacts. Visual impacts on tourists are found to range from minor to major during operation and minor to moderate in the long term (post closure). Visual impacts are also noted in the ESIA section on ecosystem services (Chapter 6.20).	Not assessed
Noise and blasting	ESIA considers noise impacts of the project. Includes analysis of air overpressure (shock waves) from blasting. (Chapter 6.7)	Noise impact during construction is considered to be minor or negligible in all affected communities (including Jermuk). Blasting will occur up to three times a week. Blasting noise predictions indicate air overpressure of up to 94 decibels in the Jermuk area. This is considered a negligible impact against international safety standards for use of explosives. However, all blasts are expected to be audible.	Not assessed
Labor influx	ESIA considers impacts of worker accommodation on local communities, including Jermuk. (Chapter 6.21)	Negative change in people’s view of Jermuk as a spa town due to labor influx noted as having potential “long-term effects in terms of number of visitors arriving in the town and on overall economic activity and opportunities for tourist sector growth.” This seen as “one of the most serious possible impacts which the Project will have to manage with a suite of measures and monitor appropriately.”	Identified
Negative perceptions	Though direct environmental impacts are found to be unlikely, the	Not assessed	Not assessed

	issue of negative perceptions of Jermuk due to the presence of the mine is not assessed.		
--	--	--	--

More general discussion of project impacts on tourism is contained in a number of client documents.

The first version of the Stakeholder Engagement Plan (SEP v1, 2011) mentions potential impacts on Jermuk, and that “as a tourism center that relies upon physical beauty, there may be some concern from the city residents about the visual amenity [sic.] of the project.”⁹⁸

An early version of the 2013 SEP (v8) mentions stakeholder concerns about the project’s impacts on tourism and on the spa waters of Jermuk. It also includes a commitment that “mitigation plans will include measures to reduce negative impacts and promote positive impacts and opportunities related to tourism.” This commitment is not present in the final (2016) version.⁹⁹

The 2016 SEP notes community concerns about negative impacts of the project on tourism. In response, the SEP notes the client’s view that “visual impact mitigation measures are being developed” and that “it is unlikely that dust, blasting or noise [will] affect Jermuk.”¹⁰⁰

The ESIA chapter on economic impact also discusses tourism, concluding that the project will have a positive impact on the town of Jermuk, supplementing tourist income during off seasons, when hotel occupancy is low. On the other hand, it is acknowledged that the potential of project spending to crowd out existing tourism activity should be mitigated. Impacts on the Jermuk brand are not discussed.

The ESIA considered tourism as a valued ecosystem component in the cumulative impacts assessment (CIA), evaluating the resilience of both the mineral water and the tourism industries relative to other (non-mine) external impacts. However, the CIA does not consider the potential cumulative nature of the impacts on Jermuk from the multiple sources of impacts and how that might affect the brand value as a destination resort.

Finally, the Worker Accommodation Management Plan (WAMP) notes that “the high risk associated with Jermuk’s perceived compromised image as a health and recreation tourism destination applies regardless of where Project personnel are accommodated.”¹⁰¹ However, this issue is not the subject of assessment in that document.

Specific measures to address directly the potential adverse impacts to Jermuk’s tourism brand in the client’s ESMP are limited to the following:

- Identification of “tourism development” as a potential area for social investment¹⁰²
- Measures to minimize the impact of labor influx on the status of Jermuk as a tourism destination¹⁰³

⁹⁸ Amulsar, Stakeholder Engagement Plan, v1, October 2011.

⁹⁹ Amulsar, Stakeholder Engagement Plan, v8, May 2013.

¹⁰⁰ Amulsar ESIA, Appendix 8.6, Stakeholder Engagement Plan, V12, June 2016. <https://goo.gl/H5J4jz>.

¹⁰¹ Amulsar ESIA, Appendix 8.25, Environmental and Social Management Plan, Worker Accommodation Management Plan, page 53, June 2016. <https://goo.gl/ac8pMH>.

¹⁰² Amulsar ESIA, Appendix 8.16, Community Development Plan, V2, page 26, June 2016. <https://goo.gl/LYGga6>.

¹⁰³ Amulsar ESIA, Appendix 8.25, Worker Accommodation Management Plan, V1, page 53, June 2016. <https://goo.gl/S8FNDN>.

CAO notes that the brand impact is mentioned in the discussion of visual and landscape assessment by the IESC gap analysis. The IESC also notes that it is critically important that adequate consultation continues to be undertaken to inform and assess the reaction of Jermuk residents to a substantial presence of workers which could alter the character and reputation of the town as a tourism and recreational center. However, these issues were not translated into specific action plan requirements.¹⁰⁴

CAO's Assessment of IFC's Performance

There are well-documented community concerns regarding potential adverse impacts of the project on tourism. The reputation of Jermuk as a spa town is acknowledged to be associated with wellness, fresh air, and tranquility. Adverse impacts on perceptions of the town are also acknowledged as potentially leading to reductions in visitor numbers.¹⁰⁵

In this context, analysis of the project's impact on tourism was required. While Jermuk was not initially considered to be within the area of influence of the project, CAO finds that IFC took appropriate measures to ensure that this was the case when the client prepared its international ESIA.

CAO finds that IFC assured itself that the risk of project-related environmental impacts on Jermuk was low, as outlined in section VII.A.1. of this report.

To date, assessment of impacts to Jermuk's brand has been undertaken only in relation to the issue of labor influx through the worker accommodation impact assessment (WAIA). As a result, CAO finds that IFC does not have assurance that impacts that may affect Jermuk's brand as a tourist center—such as blasting noise, visual disturbance, and more general perceptions that arise from the project's proximity to the town—have been adequately assessed. It follows that IFC does not have assurance that this issue has been treated in accordance with the mitigation hierarchy.

As a result, CAO finds that IFC's supervision of the ESIA process in relation to potential impact of the project on Jermuk's brand as a resort town has not been commensurate to risk.

3. Adequacy of Assessment of Impacts on the Village of Gndevaz

Issues Raised by the Complainants

The Lydian-02 complaint is signed by 148 residents of Gndevaz and identifies as concerns the impacts to livelihoods from animals not eating contaminated hay, loss of markets for agricultural goods due to being associated with mining, the risks to human health and the environmental risks associated with the proximity of the HLF, the deposition of dust with heavy metal content on pastures, crops and residential areas, and the alleged rise in radioactivity. Concerns regarding the impacts of labor influx are also mentioned in CAO's assessment report regarding this complaint.

The CAO team, during its visit to the Amulsar Project area, spoke to over 30 individuals in Gndevaz that supported, opposed, and were skeptically neutral about the mine. These

¹⁰⁴ Knight Piésold, Independent Review of the Amulsar Project Environmental and Social Impact Assessment v10, May 2016. <https://goo.gl/hQ51t5>.

¹⁰⁵ Amulsar ESIA, Chapter 6.21, Potential Impacts and Mitigation Measures, Worker Accommodation, June 2016. <https://goo.gl/DILma8>.

discussions confirmed community concerns in relation to the issues raised in the complaint. A number of residents expressed fears of impoverishment, loss of livelihoods and abandonment of the village by those not working for the company or selling land and moving elsewhere. There were specific concerns about impacts to beekeepers and other informal economic activities, the loss of the Gndevaz 'brand' for apricots and other products, and about changes to the community way of life from mine development—converting it from a farming village into an industrial village.¹⁰⁶

While it is acknowledged that the project will also bring specific benefits and opportunities to the area, as identified in the ESIA, it was notable that most of those interviewed by CAO focused on their fears and concerns rather than on the anticipated benefits. Residents interviewed recognized that employment and other economic benefits would accrue, but these did not assuage their concerns that their lifestyle was about to be dramatically changed in ways they did not fully understand.

To address these aspects of the complaint, this section considers whether IFC had reasonable assurance that the assessment of project impacts on the community of Gndevaz met Performance Standards requirements. This section also considers the adequacy of the IFC Performance Standards' current guidance in terms of requirements for integrated assessments and cumulative impacts.

Relevant Requirements

The issues raised in the complaints are directly related to compliance with the E&S assessment components of PS1. At issue is whether there was full consideration of the potential E&S risks and impacts of the project. In this case, the risk profile for Gndevaz increased significantly due to changes to the project footprint in a late stage of project planning. As required by the Sustainability Policy, negative impacts on workers, communities and the environment should be avoided, or if avoidance is not possible, they should be reduced, mitigated or compensated for as appropriate (para. 6). In addition, IFC is committed to ensuring that the cost of economic development should not fall disproportionately on those who are poor or vulnerable (para. 9).

PS1 sets out requirements for the scope of a client E&S Assessment. The client should conduct an ESIA "that will consider in an integrated manner the potential social and environmental risks and impacts of the project" (para. 4). It should consider "all relevant E&S risks and impacts" of a project and be "consistent with good international industry practice (GIIP)" (para. 7). It should also consider "unplanned but predictable developments caused by the project" and "cumulative impacts that result from the incremental impact, on areas or resources used or directly impacted by the project, from other existing, planned or reasonably defined developments..." (para.8). Impacts considered should be those generally recognized as important on the basis of "scientific concerns and/or concerns from Affected Communities" (PS1, FN 16).

Guidance for PS1 clarifies that cumulative impacts can be from one or several projects, including "secondary or induced social impacts" (PS1, GN39). In relation to cumulative impacts specifically, the Guidance Notes provide that "where the project involves specifically identified physical elements, aspects and facilities that are likely to generate impacts, the risks and impacts identification process should include an assessment of the combined effects of the multiple components associated with the project (e.g., quarries, roads, associated facilities) in the context of the project's area of influence" (PS1, GN38).

In the case of Gndevaz, the community is the receptor for the combined impacts of the HLF and ADR plant, haul roads, the conveyor belt and associated crusher facilities, a relatively closely located worker accommodation camp, road traffic near the village, and significant loss of or change in use of village agricultural and grazing lands. Impacts derived from the 'combined effects

¹⁰⁶ For more details, see section V of this report (CAO's Observations of the Gndevaz Community).

of [these] multiple components' can be expected as the project induces processes of change in the local social context.

IFC's Supervision

IFC identified the need to initiate the socioeconomic baseline studies after its supervision visit in 2009 and recommended that this work take place to the level of an IFC-compliant baseline. Social baseline work and identification of land users and potential impacts took place initially in 2010.

IFC's 2013 supervision visit noted the decision to change the location of the HLF to an area with high economic value to Gndevaz community members, raising concerns that consultation with potentially-affected landowners was inadequate at that time and was necessary as part of the alternatives analysis. Shortly after this site visit, legal action by the government of Armenia required a further change in location of the HLF. IFC's documentation demonstrates appropriate supervision to address client performance gaps relative to community consultation about potential impacts from siting design, as previously reviewed by CAO in this document.

Following the change in the project footprint, IFC's supervision documentation does not reflect any specific review of or attention by IFC to the changed nature and level of impacts to Gndevaz due to the change in the project design. IFC's supervision of the client's identification and management of impacts to Gndevaz was through the review of the adequacy of the ESIA version 9 (disclosed in 2015) and version 10 (disclosed in 2016).

From mid-2013 to mid-2015, as the project experienced ongoing changes to design, IFC's supervision documentation focused on the company developing an adequate ESMS to address current impacts during exploration. At the same time, IFC supported the client in engaging an Independent Environmental and Social Consultant (IESC) with international expertise to review the ESIA against international standards.

IFC reported to CAO that it carried out a review of the ESIA version 9 and version 10, that the impacts to Gndevaz were covered by that review and considered appropriate, and that, in addition to specific mitigation measures in the ESIA, the client's Community Development Plan¹⁰⁷ provides overall support to the affected communities. IFC also reported that various meetings and workshops were held between IFC and the company to address the outcomes of the IESC audits. However, there is no clear evidence in IFC's supervision documentation to suggest that changes in the nature or intensity of the impacts of the project on the community of Gndevaz were considered as part of these processes. Supervision has remained ongoing during the period of this CAO review.

The ESIA Process

At the time the baseline work and impact assessment were designed, the bulk of the project was located in medium to high alpine areas. Until project redesign in 2013, limited impacts were anticipated for Gndevaz. The key design changes came in 2014–15, which led to re-siting of nearly all of the project infrastructure and footprint (other than the mine pits and waste dump) to lands pertaining to Gndevaz. As a result, in 2014 the project was determined to affect more than 75 percent of Gndevaz households directly through land acquisition and restrictions to access, with additional impacts expected because of proximity to installations, labor influx, and other potential environmental impacts.¹⁰⁸

¹⁰⁷ Amulsar ESIA, Appendix 8.16, Community Development Plan, June 2016. <https://goo.gl/LYGa6>.

¹⁰⁸ Amulsar ESIA, Appendix 8.23, Land Access and Livelihood Restoration Plan (LALRP), February 2015.

Additional assessment work was conducted in Gndevaz from 2013 to 2015 to update the baseline information and the impact assessment relative to actual project design. Of relevance to potential impacts on Gndevaz, this included:

- Focus group discussions on ecosystem services, identifying multiple uses of ecosystem services in addition to grazing, such as foraging, wood collecting, bee keeping, and recreational use, including hunting and fishing¹⁰⁹
- Household surveys for the land acquisition process, covering households selling land¹¹⁰
- Additional surveys of land users (seasonal as well as daily herders) affected by the revised project design¹¹¹
- Focus groups in each village to consult on the potential biological set-aside at Arshak¹¹²

ESIA Outcomes

Final ESIA documentation posted online in June 2016, identifies a range of impacts both positive and negative that are of particular relevance to Gndevaz, as presented in the table below.¹¹³

Potential social and economic impacts on Gndevaz	
Positive impacts	Negative impacts
Employment – estimated 195 locals expected to obtain jobs with skills training for life of project; potentially 390 2-year jobs during construction.	Livelihood impacts of land acquisition; economic displacement of herders.
Increased procurement of locally based goods and services – supply camp, respond to increased spending power of locals.	Restrictions to access to land, disturbance and physical barriers to land.
Improved health services.	Inflation due to local procurement for goods & services, & accommodation – same level prior and post mitigation.
	Influx into Gndevaz.
	Health impacts from influx, pressure on services, transportation
	Positive and negative impacts to social determinants of health
	Income inequality as outcome of land acquisition, limited employment capacity
	Social ills; crime, sexually transmitted infections.

The ESIA addresses impacts individually through 23 management plans, which comprise mitigation measures responding to anticipated impacts. A Community Development Plan¹¹⁴

¹⁰⁹ Amulsar ESIA, Appendix 6.20.1, Ecosystem Services (<https://goo.gl/CdGsF5>); and Appendix 6.20.2, Report on Focus Group discussion (2014) (<https://goo.gl/y86zph>)

¹¹⁰ Amulsar ESIA, Chapter 4.17, Environmental and Social Baseline, Livelihood Activities and Employment Opportunities, May 2016. <https://goo.gl/7iKV1R>.

¹¹¹ *Ibid.*

¹¹² Amulsar ESIA, Appendix 8.20, Biodiversity Action Plan, June 2016. <https://goo.gl/sqskMn>.

¹¹³ Adapted from Amulsar ESIA Chapter 6.22 Impact Assessment Summary – <https://goo.gl/Cpcwzc>

¹¹⁴ Target areas for community projects include improved rural environment (pasture management, livestock infrastructure); local capacity building (agriculture, local co-operatives, SMEs, skills training related to agriculture and

(CDP) was also developed and envisages additional investments in community projects. However, IFC reported to CAO that the CDP should not be seen as mitigating impacts on the Gndevaz community. The objective of the CDP is to provide overall support to the affected communities in addition to specific mitigation measures.

Community Health and Safety Related to Proximity to the HLF, Dust, and Other Risks

As noted above, the ESIA recognizes future potential health impacts from specific hazardous chemical substances such as cyanide utilized in the HLF, mercury (a byproduct of the HLF), and environmental exposure to heavy metals. The ESIA also describes safety and security risks associated with the worker camp in the vicinity of the village, influx impacts including exposure to infectious or vector borne diseases, and increased traffic. Given the location of the project, much of this risk will be borne by the residents Gndevaz. Appropriate mitigation and monitoring measures have been developed in relation to these impacts, as noted previously in this report. Nevertheless, remaining uncertainties due to limits to knowledge, plus the mistrust of information, contribute to concerns and fears for the future expressed by many Gndevaz residents interviewed by CAO.

Socioeconomic and Cultural Impacts

The social assessments in the ESIA look in general terms at the socioeconomic and other conditions across the rural communities and Jermuk, without particular attention to impacts specific to Gndevaz. Gndevaz will suffer a loss of 15 percent of its total land base, but more than 35 percent of designated gardens, 20 percent of other agricultural lands, and 12 percent of hay lands. The orchards represent the most productive activity in Gndevaz and there are limited additional orchard lands available.¹¹⁵

The sections of the ESIA that address Gndevaz's impacts as distinct from those of the other rural communities are the health impact assessment (HIA) and the Ecosystem Services Review. There are impacts and risks specific to this community that set it apart from the other rural communities, namely:

- Loss of or reduced access to a significant portion of the village's land area, including high economic value apricot orchards¹¹⁶
- Potential food security and related nutritional impacts¹¹⁷
- Proximity to the construction workers camp and potential for mixing of this single male population with the village population, with associated public safety and health risks, particularly to girls and women¹¹⁸
- Potential loss of, or anticipated loss of, brand value for agricultural products because of proximity to the cyanide heap leach facility¹¹⁹
- Proximity to the construction site's access roads, with increased traffic and safety risks¹²⁰
- Probable pressures from population influx¹²¹

livestock); economic development (primarily agriculture and tourism); and education and awareness (healthy lifestyle, waste management, support for technical education and schools).

¹¹⁵ *Ibid.*

¹¹⁶ Amulsar ESIA, Chapter 6.16, Potential Impacts and Mitigation Measures, Livelihoods, June 2016. <https://goo.gl/eGSNkf>.

¹¹⁷ Amulsar ESIA, Chapter 6.18, Potential Impacts and Mitigation Measures, Community Health, Safety and Security, June 2016. <https://goo.gl/Vic1Yp>.

¹¹⁸ *Ibid.*

¹¹⁹ Not included in the ESIA.

¹²⁰ Amulsar ESIA, Chapter 6.18, Potential Impacts and Mitigation Measures, Community Health, Safety and Security, June 2016. <https://goo.gl/V+ic1Yp>.

¹²¹ *Ibid.*

- Risks of induced poverty due to food, accommodation, and land price inflation for those not benefitting directly¹²²
- Social tensions from increased inequality and social change within the community, including potential decline of the traditional population base, loss of social cohesion, and decline in community or individual well-being¹²³

The analysis of social impacts associated with demographic change recognizes the stresses put on social capital and well-being from an increase in economic inequality, which the ESIA identifies in the case of employees versus traditional residents.¹²⁴

The client has adopted a social policy to promote good social management, and commits to managing social impacts and to establishing sustainable relationships with stakeholders. The ESIA includes management plans to address impacts, including the CHSSP. The Community Development Plan (CDP) is intended to align with project risks to deliver benefits, but “it is not the role of the community development activities to mitigate social impacts.”¹²⁵ Both plans are extensive and lay out considerable commitments to carry out proposed actions, including the requirement for considerable staffing to implement programs for the CHSSP. The CDP identifies a range of programs relevant to the project’s impact on Gndevaz, but only at the level of a general framework, i.e. without an implementation plan, budgets, or programming details, and is not targeted at mitigating impacts on Gndevaz.¹²⁶

In the absence of an integrated approach to the impacts to this community, the risks and impacts have been addressed within the ESIA at the level of each distinct impact, with 23 distinct management plans to individually address mitigation measures.

Cumulative Impacts

The ESIA includes a chapter on cumulative impact assessment (CIA). The CIA addressed impacts of the project and of other activities on “valued ecosystem components” (VEC) identified by the client and preparers of the ESIA. VECs are the environmental and social attributes that are considered important to affected people as well as to experts.¹²⁷ A number of the VECs identified for the CIA are associated with impacts to Gndevaz, including high-quality grazing lands, natural habitat, foraging, and daily herding. Cumulative impacts on Gndevaz community *per se*, as the “receptor,” are not assessed. One exception to this is the assessment of cumulative impacts to Gndevaz residents from the cumulative losses of a number of ecosystem services, which taken together represent a specific additional risk to livelihoods and food security. The CIA states that “... seasonal herders, local herders and villagers without livestock all depend on multiple ecosystem services, not all of which were identified as priority services when considered on an individual basis. Risks of cumulative impacts are particularly high for these groups.”¹²⁸ Specific measures were recommended to consult further and monitor the actual level of cumulative loss. The ecosystem services recommendations were integrated into the Biodiversity Management Plan, as recommended in the IESC gap analysis.¹²⁹

¹²² Amulsar ESIA, Chapter 6.13, Potential Impacts and Mitigation Measures, Economics, June 2016. <https://goo.gl/xDXmA0>.

¹²³ Not included in the ESIA.

¹²⁴ *Ibid.*

¹²⁵ Amulsar ESIA, Appendix 8.16, Community Development Plan, June 2016. <https://goo.gl/LYGga6>.

¹²⁶ *Ibid.*

¹²⁷ IFC, *Good Practice Handbook on Cumulative Impact Assessment and Management*, August 2013. <https://goo.gl/yS15MS>.

¹²⁸ Amulsar ESIA, Chapter 6.20, Potential Impacts and Mitigation Measures, Ecosystem Services Review, June 2016. <https://goo.gl/ldWC14>.

¹²⁹ Knight Piésold, *Independent Review of the Amulsar Project Environmental and Social Impact Assessment v10*, May 2016. <https://goo.gl/hQ51t5>.

There was no consultation with directly-affected communities, including Gndevaz, as to whether the VECs considered were those that the affected communities/people would have prioritized. It is notable that there were no social or economic VECs identified for Gndevaz, while the tourism economy of Jermuk was identified as a VEC.

The CIA process assesses predicted cumulative impacts on each identified VEC and comes to a determination of the impact to the sustainability or viability of the VEC due to the cumulative impacts and describes proposed actions based on the impacts associated with the Amulsar project. The responses to discreet cumulative impacts identified in the CIA appear appropriate and consistent with good international industry practice.

What is not discussed in the CIA or elsewhere in the ESIA, however, is the potential for the project of having multiple impacts which affect the overall resilience of the Gndevaz community in terms of social cohesion, social capital, or the vulnerability of specific groups. These issues and related social dimensions of well-being were not identified as VECs. IFC's handbook on CIA puts consultation on VECs as central to the process of CIA.¹³⁰ Because there was no consultation on the VECs, IFC and the client cannot be assured that the identification of the VECs was appropriate or complete.

CAO's Assessment of IFC's Performance

CAO finds gaps in IFC's approach to the supervision of the ESIA process in relation to risks and concerns of the population of Gndevaz, and the potential for the combined impacts of mine development to affect the well-being and resilience of the community as a whole.

The ESIA and management plans have captured or addressed many of these impacts on a discreet basis and the HIA, Ecosystem Services Review, and LALRP, among others, are recognized as achieving a high international standard. In addition, CAO recognizes potential positive impacts for the community.

Nevertheless, CAO finds that changes to the project design after 2013 led to a potentially significant increase in impacts on the residents of Gndevaz. These changes required assessment of the combined or cumulative risks and impacts of the various project components on the town and its people—with associated consultation, mitigation, and monitoring measures, beyond those which are contained in the current ESIA.

CAO thus finds that IFC lacks assurance that project impacts on the community of Gndevaz have been subject to an integrated assessment which considers "all relevant E&S risks and impacts" as required by PS1 (para. 7). This is a prerequisite for the development of mitigation plans as required by PS1 (para. 15).

CAO also finds gaps in IFC guidance associated with the Performance Standards in that it does not elaborate on how to ensure that a full and integrated assessment of the combined or cumulative social effects of a project is undertaken.

¹³⁰ IFC, *Good Practice Handbook on Cumulative Impact Assessment and Management*, August 2013. <https://goo.gl/yS15MS>.

4. Consultation and Engagement Processes, Access of Concerned Stakeholders to Public Hearings, and Extent to Which Complaints Have Been Registered and Addressed

Issues Raised by the Complainants

The Lydian-01 complaint alleges that the company has not conducted adequate public consultations, that complainants have been intimidated, and that IFC would not respond to their concerns. The Lydian-02 complaint alleges that the concerns of complainants are not being registered, specifically at the Gndevaz public hearings, and that information from the company is manipulative.

The complaints about information disclosure and consultation associated with the land acquisition and site selection processes (both related to PS5) are addressed separately in section VII.B.1. This section focuses on the issues of the adequacy of consultation and whether complainants were able to participate in, and have their concerns registered and addressed, through the consultation and ESIA process, including the adequacy of the company's grievance process.

Relevant Requirements

The 2006 Sustainability Framework applies to IFC's 2007 pre-investment review and early supervision. However, IFC's supervision of consultation and engagement processes from 2012 until disclosure of the ESIA is assessed against the 2012 Sustainability Framework.

Pre-investment, the 2006 Sustainability Policy requires IFC to carry out a review of the client's E&S assessment to identify risks and potential impacts of a proposed investment. Effective engagement is central to the objectives of the Sustainability Policy, which requires IFC to ensure that free, prior, and informed consultation of the affected communities has taken place, both through review of the client's documentation as well as through its own assessment. When the project is anticipated to have significant impacts, IFC is required to determine whether the client's community engagement enables the informed participation of the affected communities, leading to broad community support (BCS) (para. 20).

In relation to IFC's early supervision, PS1 (2006) requires the client to carry out effective stakeholder engagement during the life of the project, and to inform and consult with affected communities and stakeholders more generally. Consultation should include information on both risks and opportunities, and should be "conducted on the basis of timely, relevant, understandable and accessible information" (PS1, para. 19).

In relation to the ESIA process, the 2012 Performance Standards require that the client carries out effective consultation: it should begin early in the ESIA process and continue on an ongoing basis; be free of external manipulation, interference, coercion, or intimidation; enable meaningful participation; and be documented (PS1, para. 30). PS1 further requires that, for a project with potentially significant adverse impacts on affected communities, the client will conduct an Informed Consultation and Participation (ICP) process. ICP involves a more in-depth exchange of views and information and an organized and iterative consultation, leading to the client incorporating into their decision-making process the views of affected communities on matters that affect them directly, such as mitigation measures (para. 31).

PS1 requires that the client establish a grievance mechanism to receive and facilitate resolution of affected communities' concerns about the project's E&S performance. The grievance mechanism should be scaled to the risks and adverse impacts of the project and use an understandable and transparent consultative process that is culturally appropriate (para. 35).

IFC's Pre-Investment E&S Review

Prior to investing, IFC considered that the client had a strong commitment to consultation and community engagement. Notably, the project was presented to IFC's Board as having broad community support (BCS)—although no social analysis had been conducted at this stage. This statement was derived from an observation of the investment staff who visited the project as part of IFC's appraisal of the Amulsar site.

IFC's 2007 ESRS included disclosure of the client's Public Consultation and Disclosure Strategy (PCDS), which set out corporate commitments to consultation and disclosure in line with the requirements of PS1. IFC noted that the client had a Public Consultation and Disclosure Plan (PCDP) for its most advanced prospects, which included Amulsar; however, this was not publicly disclosed. The ESRS stated that the client was committed to community engagement and consultation activities in line with Performance Standards requirements.¹³¹ At the same time, IFC noted that the client had limited internal E&S resources and was actively seeking IFC's guidance on how to address E&S issues and build up management capacity.

The ESAP that was agreed between IFC and the client at this point included a requirement for the client to report annually on progress regarding public consultation and community development. More specific actions to support implementation of the PCDP were, however, not included.¹³²

IFC's Supervision of General Engagement Processes

IFC's review of the client's engagement with communities is evident in supervision documentation from 2008 onward. An IFC supervision visit in 2009 involved a more in-depth review of community engagement. At that time, four communities had been defined as directly impacted by the project: Saravan, Gorayk, Gndevaz and Kechut. IFC's 2009 supervision documentation noted gaps in the client's approach to community engagement. In particular, it specified the need to:

- Scale up and formalize the community engagement process
- Expand consultation beyond village heads
- Expand consultation to other communities, with IFC identifying Jermuk as well as downstream communities as potentially impacted
- Ensure that the client's grievance mechanism was disclosed and available to all four impacted villages and to workers
- Hire a Community Liaison Officer (CLO), as agreed.

Noting the need for the client to develop a more formalized ESMS, IFC also observed that the client was not implementing its PCDP. CAO notes that IFC's supervision did not specifically consider client performance against the requirements of the PCDP that had been prepared and that was supposed to guide the client's approach to consultation and disclosure. The delinking of IFC's supervision from the PCDP allowed IFC's evaluation of client performance to remain informal and *ad hoc*, rather than ensuring that structured, formalized, and planned consultation and disclosure activities were carried out.

IFC first reviewed the client's grievance mechanism for Amulsar in 2009 and provided guidance on improving its functioning, accessibility, and scope.

IFC's documentation following a supervision visit in 2010 indicated advances in community engagement, with the hiring of a CLO, establishment of the first Community Liaison Committees

¹³¹ IFC Investment in Lydian Resources Company Ltd., *Environmental and Social Review Summary*, May 2007. <http://goo.gl/3qx7hs>.

¹³² *Ibid.*

(CLC) in the rural villages,¹³³ improved promotion of the grievance mechanism to communities, and production of a monthly newsletter. However, IFC continued to recommend a more structured approach to consultation and disclosure, in relation to the ESIA process and more generally. As a result, IFC and the client agreed that the client should contract an E&S specialist familiar with IFC requirements to support the development of its approach to E&S issues including community engagement.

Following this supervision visit, IFC noted that the PCDP had not been updated and required that the client replace the PCDP with a Stakeholder Engagement Plan and a Community Investment Plan. The updated ESAP mentions the ongoing absence of formal procedures or ability to submit anonymous complaints as gaps in the grievance mechanism.

In the 2010 scoping study conducted by the external ESIA consultant, 12 of 28 (40 percent) of the actions identified under heading of socioeconomics were targeted at addressing gaps in stakeholder consultation.

Discussion of the functioning of the client grievance mechanism is covered in IFC's reviews of the client's reporting to IFC in 2011 and 2012, as is identification of concerns from consultation meetings. Notes on community concerns were first included in client reporting in 2011 and include cyanide use, dust, noise, radiation, visibility, and water. IFC documentation also reports such concerns for the first time in 2011. The CLCs are reported as functioning as an additional mechanism to channel community grievances to the client for resolution.

After IFC's 2011 supervision visit, two items related to the development of participatory monitoring programs were added to the ESAP, including involvement of representatives from Jermuk in the process. IFC's documentation later noted that the client opened an information center in Gndevaz in 2013, local liaison assistants were hired, and the client developed a website in Armenian as well as a monthly newsletter.

No complaints were recorded by the client in 2010–12, but the client reported two grievances in 2013, received through the existing grievance mechanism (suggestion boxes). These were reported as having been resolved. No verification of this is documented, and the client's reporting to IFC does not identify the nature of grievances. IFC's documentation does not include any review of the effectiveness of the grievance mechanism *per se*.

After the CAO complaints were submitted in 2014 and against a backdrop of ongoing negative press, IFC's supervision documentation, while stating that the company was progressing on stakeholder engagement though increased focus and increased resources, observed that community support may be fragile. However, this did not lead IFC to require additional outreach, verification of opinions of the broader community, or development of different engagement processes to bring new information into the stakeholder analysis.

CAO notes that the client's reporting of meetings with NGOs commenced with a meeting with the group representing the Lydian-01 complainants (Ecolur) in 2010. However, engagement with civil society outside the project area was not included in the Stakeholder Engagement Plan until development of the Broad Stakeholder Engagement Action Plan in 2014.¹³⁴

ESIA Process and Outcomes

¹³³ IFC's documentation notes that these CLCs, which include community representatives and Lydian's CLO, meet on a monthly basis to provide updates on the project and discuss any concerns from the communities.

¹³⁴ Knight Piésold, *Independent Review of the Amulsar Project Environmental and Social Impact Assessment* v10, pages 5–45, May 2016. <https://goo.gl/hQ51t5>.

In parallel to the general engagement process, two additional formal consultation processes were carried out. The international ESIA consultation program resulted in ten meetings between 2011 and 2016.¹³⁵ Meanwhile, 12 national-level EIA public hearings that were held at various stages of the project's development starting in 2009, as required by the national regulatory process for the granting of permits during the development of the project. As noted in IFC's supervision documents, early public hearings are likely to have suffered from the lack of consultation experience of the project team and absence of expertise that was later incorporated both as staff and as external consultants.

The intent of the ESIA consultations, in addition to informing affected people about the potential risks and impacts, is to identify concerns and integrate them into the ESIA so that they are assessed adequately. As identified in the assessment of environmental-related complaints in section VII.A.1. of this report, the ESIA process picked up, assessed and provided findings in relation to the key environmental concerns identified in the complaints. Where required, the ESIA developed appropriate mitigation measures.

CAO notes, however, that the cumulative impact assessment was carried out as a desktop study and was not accompanied by any stakeholder engagement and consultation to ensure that the process had captured the priority valued ecosystem components as identified by the affected communities. This issue is discussed in the previous section on Gndevaz.

CAO notes that there are indications that the concerns raised by critics were identified by the company in the course of the ESIA consultation process, with the exception of specific issues identified previously in this report. Specific responses to questions raised in meetings are found in community newsletters and in printed material available at the Gndevaz Information Center, providing further confirmation that the company has in many cases registered and responded to issues and concerns raised. Further, in the meetings held by the CAO investigation team with complainants, complainants mentioned attendance at public meetings and various questions they had raised at that time.

CAO's Assessment of IFC's Performance

IFC's Pre-Investment E&S Review

CAO finds that IFC did not include in the ESAP sufficient requirements (deadlines, need for adequate expertise, documentation, and reporting) to ensure that implementation of the PCDP would be consistent with the objectives of PS1. CAO also notes that IFC's assertion that the project had broad community support was not supported by social analysis or expert opinion.

CAO finds that IFC's pre-investment review of issues related to consultation was not commensurate to risk, thus being noncompliant with the requirements of the 2006 Sustainability Policy.

IFC's Supervision of the Client's General Consultation and Engagement Process

The shortcomings in IFC's pre-investment review contributed to gaps later identified in the client's approach to consultation, including non-implementation of the PCDP during IFC's early supervision of the project.

However, IFC identified gaps in the client's performance during supervision and has worked with the client to bring it into compliance. In this context, CAO notes IFC's role in emphasizing the

¹³⁵ Three additional hearings were scheduled for review of the final ESIA, and took place after the CAO site visit and after the ESIA documentation was finalized.

need to broaden the reach of the client's consultation activities. CAO also notes IFC's role in raising questions as to the quality of the information being shared, and pushing for improved capacity through use of external support.

CAO thus finds IFC compliant with its supervision requirements in relation to the client's community engagement and consultation activities.

IFC's Supervision of the Client's Grievance Mechanism

While CAO notes that IFC should have been more proactive to ensure inclusion of and responsiveness to all perspectives, CAO finds that IFC's supervision showed appropriate oversight of the company's grievance mechanism when the CLCs were put in place and the CLO was hired. IFC provided advice to the client in relation to the CLO's function and ensured that the CLCs represented an effective mechanism that was culturally appropriate and functioned in addition to the formal process for channeling community concerns and getting responses.

CAO finds that IFC took adequate steps to ensure that the client's grievance processes were compliant with the requirements of PS1.

IFC's Supervision of the ESIA Consultation Process

CAO finds that across the range of consultation activities, IFC has worked with the client to ensure that concerns from stakeholders were captured by the ESIA process and included in the final ESIA. In particular, CAO notes that environmental concerns raised during the consultation process were picked up and addressed in the ESIA, as presented in section VII.A.1.

CAO finds that IFC took adequate steps to supervise and provide guidance to the client in relation to consultation and stakeholder engagement around the ESIA process.

VIII. Conclusion and Observations

This report considers IFC's performance in relation to a range of community concerns regarding the E&S impacts of the Lydian Amulsar mine in Armenia.

CAO finds that the majority of these concerns were the subject of appropriate supervision by IFC. CAO notes IFC's support to the client in preparing an ESIA that addressed the risks and potential impacts of the mine in a manner that reflects good international industry practice. This is a significant achievement for an inexperienced client working in a challenging country context.

At the same time, this report identifies shortcomings in IFC's appraisal and supervision of the project.

CAO finds that IFC's pre-investment E&S review of the project was not commensurate to risk. In particular, CAO notes a lack of early expert scoping of E&S risks and an overestimation of the client's commitment and capacity to address E&S risks associated with mining projects in the exploration phase. Given the complexity of the project, acknowledged gaps in client capacity, and its lack of E&S track record, CAO finds that a more detailed and structured E&S action plan would have been appropriate.

Weaknesses in IFC's pre-investment review translated into problems during the initial years of supervision. CAO finds that IFC did not effectively supervise the client's delivery of agreed E&S requirements during the period between 2007 and 2013: in particular, the requirement to develop an ESMS for exploration activities. Similarly, during this period IFC lacked assurance that the client's E&S assessment process was being conducted to IFC's standards.

From 2013 onward, however, CAO notes a marked advance in IFC's supervision of the project. The result was significant improvement in client E&S performance: particularly through the development of an exploration phase ESMS and an international standard ESIA.

This report also considers a range of specific environmental and social concerns raised by the complainants.

From an environmental perspective these included:

- Risks of ground and surface water contamination
- Seismic risks
- Radiation risks
- Risks of contaminated dust deposition
- Risks of impacts on rare and endangered species

In relation to each of these issues, CAO finds that IFC's review of the international ESIA process was commensurate to risk.

In relation to project impacts on biodiversity during exploration, however, CAO finds IFC's supervision was insufficient. As a result, IFC did not have assurance that the client was in a position to meet the requirements of PS6 in relation to critical habitats. In this context, IFC observed in 2013 that the client's exploration activities had negatively impacted Tier 1 critical habitat for the population of a critically endangered species, *Potentilla porphyrantha*.

Specific social concerns addressed in the report include the following:

- Land acquisition and livelihood restoration
- Potential impacts of the project on the brand of the nearby resort of Jermuk
- Impacts of the project on the village of Gndevaz

- Consultation and engagement processes, access of concerned stakeholders to public hearings, and whether complaints have been registered and addressed

Regarding land acquisition, CAO finds that IFC provided appropriate guidance to the client in relation to a land acquisition program that prioritized negotiated purchases. CAO also finds that IFC's supervision provided reasonable assurance of compliance with the requirements of the Performance Standards in relation to livelihood restoration planning, which is required when projects cause physical or economic displacement.

In relation to the resort town of Jermuk, CAO notes well-documented community concerns regarding potential adverse impacts of the project on tourism. While Jermuk was not initially considered to be within the area of influence of the project, CAO finds that IFC took appropriate measures to ensure that this was the case when the client prepared its international ESIA. Further, CAO finds that IFC assured itself that the risks of project-related environmental impacts on Jermuk were low.

The reputation of Jermuk as a spa town is acknowledged to be associated with wellness, fresh air, and tranquility. Project impacts—for example, those from blasting, visual disturbance, and more general perceptions that arise from the mine's proximity to the town—were not subject to an assessment that took Jermuk's reputation as a tourist center into consideration. At the time of the CAO report, an assessment of impacts on Jermuk's brand as a tourist destination has been undertaken only in relation to the issue of labor influx and not in relation to the broader potential impacts associated with the town's proximity to the mine. As a result, CAO finds that IFC does not have assurance that potential impacts on Jermuk's brand as a tourist center have been assessed and mitigated in accordance with the requirements of PS1.

CAO finds similar shortcomings in IFC's approach to the supervision of project impacts on the village of Gndevaz. Gndevaz is the village most significantly impacted by the project because of the location of project infrastructure on its lands and the proximity of the village to the infrastructure. CAO finds gaps in IFC's approach to the supervision of the ESIA process in relation to risks to and concerns of the population of Gndevaz and the potential for the combined impacts of mine development to affect the well-being of the community as a whole, as well as that of particular vulnerable groups. These risks relate to social cohesion, socioeconomic inequality, and potential pressures and health impacts from induced poverty as the village experiences influx, land/livelihood loss, inflation, and social change due to the presence of nonlocal workers and new economic beneficiaries.

The ESIA and management plans have captured or addressed many of these impacts on a discreet basis, through the HIA, Ecosystem Services Review, and LALRP, among others. In addition, CAO recognizes potential positive impacts for the community.

Nevertheless, CAO finds that changes to the project design after 2013 led to a potentially significant increase in impacts on the residents of Gndevaz, such that required an assessment of risks and impacts, with associated consultation, mitigation, and monitoring measures, beyond that contained in the current ESIA.

In relation to consultation and stakeholder engagement processes, and implementation of a grievance mechanism, CAO finds that IFC's pre-investment review was not commensurate to risk. However, CAO notes that IFC identified gaps in the client's performance during supervision and has worked with the client to bring it into compliance.

In light of the findings contained in this report, CAO will keep this investigation open for monitoring, and will issue a monitoring report no later than one year after publication of this investigation. CAO will monitor the situation until actions taken by IFC assure CAO that IFC is addressing its findings of non-compliance.

Appendix A. IFC Investments in Lydian International Ltd.

Investment date	Currency	Cost in local currency (millions)	Cost in U.S. dollars (millions)
Aug-07	£	1.000	2.024
Nov-07	£	0.037	0.078
Dec-07	Can\$	1.250	1.242
May-09	Can\$	1.391	1.183
Jan-10	£	0.047	0.075
Apr-10	Can\$	1.779	1.772
Sep-10	Can\$	0.400	0.389
Nov-10	Can\$	3.253	3.188
Dec-11	£	1.250	1.952
Mar-13	Can\$	1.954	1.901
Mar-14	Can\$	1.731	1.543
Mar-15	Can\$	1.363	1.084
Total investments			16.430

Note: The company was originally listed on the London Stock Exchange. Hence the initial investments, as well as related warrants exercises, were in British pounds (£). Because of a move from the United Kingdom to Canada as part of the company's listing on the Toronto Stock Exchange, follow-on investments and corresponding warrants exercises were in Canadian dollars (Can\$). The table shows actual cash costs in both the local disbursement currency (£ or Can\$) and U.S. dollars.

Appendix B. CAO Investigation Terms of Reference

January 8, 2016

...The focus of the CAO compliance process is on IFC/MIGA's appraisal and supervision of an investment, and whether or not IFC/MIGA complied with its own policy provisions to assure itself of the environmental and social performance of its investments. CAO does not undertake a compliance investigation of IFC/MIGA's client.

CAO discloses the findings of its compliance investigation in an investigation report to inform the President and Board of the World Bank Group, senior management of IFC/MIGA, and the public about its decisions and reasoning...

Scope of the Compliance Investigation

In its 2015 appraisal reports related to the Lydian-01¹³⁶ and Lydian-02¹³⁷ complaints, CAO found that a review of certain aspects of this project which relate to its nature as an early equity mining investment might better inform the application of policies to this project as well as future projects.

In this context, CAO has decided to consider the issues raised by both the Lydian-01 and Lydian-02 complaints together. The two cases were thus merged for the purpose of this compliance investigation.

Given CAO's mandate, the focus of the CAO compliance investigation is on IFC, and how IFC assured itself of the environmental and social performance of its investment at appraisal and during supervision.

The approach to the compliance investigation is described in the CAO Operational Guidelines (March 2013),¹³⁸ and states that the working definition of compliance investigations adopted by CAO is as follows:

An investigation is a systematic, documented verification process of objectively obtaining and evaluating evidence to determine whether environmental and social activities, conditions, management systems, or related information are in conformance with the compliance investigation criteria.

As set out in CAO's appraisal reports, CAO will conduct a compliance investigation of IFC's investment in the client in relation to the issues raised in the complaint. In reaching the decision to conduct a compliance investigation, CAO noted that IFC has, to date, only funded activities that are preparatory to the construction of the mine, and that no decision on whether to fund construction of the mine had been made. Nevertheless, CAO noted that IFC's investments in the company had the clear objective of enabling construction of the mine. Subsequent to release of the CAO compliance appraisals, agreements to finance construction of the mine have been reached.

In the context of IFC's E&S policies, Performance Standards, and procedures, CAO has identified the following specific questions in relation to the investment to include:

- Was IFC's definition of the project and its pre-investment review commensurate with the level of E&S risks and impacts of the project?

¹³⁶ CAO Compliance Appraisal Report, Lydian-01, April 2015. <http://goo.gl/GWpgZm>.

¹³⁷ CAO Compliance Appraisal Report, Lydian-02, April 2015. <http://goo.gl/ddr6fv>.

¹³⁸ CAO Operational Guidelines, 2013. <http://goo.gl/Hc46c8>.

- Did the structure of this investment adequately consider the potential long-term E&S risks impacts of the project and the likely changing risk profile over time?
- Was IFC's supervision of the evolving risk profile of the project adequate?

The scope of the compliance investigation also includes developing an understanding of the immediate and underlying causes for any non-compliance identified by the CAO...¹³⁹

¹³⁹ The complete Terms of Reference are available on CAO's website: <http://goo.gl/7zW4pg>.

Appendix C. Project Timeline

Date	Milestones, Events and Documents
2006	
--	Amulsar Exploration License granted
2007	
May	IFC appraisal site visit for initial investment (Kosovo sites and Amulsar site) Public Disclosure (ESRS and SPI)
June	IFC Investment Review Meeting Board approval – Project #25924
August	First disbursement
November	Additional investment
December	Additional investment
2008	
January	Lydian listed on TSX Main Board (Toronto Stock Exchange)
June	IFC first supervision site visit
2009	
January	ESAP update IFC Investment Review Meeting-Project #27657
March	Public Disclosure (ESRS and SPI) Board approval – Project #27657
May	Additional investment – Project #27657
August	IFC supervision site visit ESAP update – deadlines extended
2010	
January	Additional investment
April	Additional investment The Kosovo project is dropped. Lydian purchases Newmont's interest in the Armenian joint venture.
May	ESIA Gap Analysis carried out by the international consultant
September	Additional investment
November	ESAP update IFC supervision site visit Additional investment
2011	
August	Project Pre-Feasibility Study released
October	IFC supervision site visit
December	Additional investment
2012	
--	Lydian acquires 100% ownership of Amulsar Gold Project
September	First Feasibility Study released
2013	

March	Additional investment
June	IFC supervision site visit
July	IFC letter to Lydian's management regarding weak E&S performance
2014	
March	Additional investment
April	First complaint received by CAO from 2 residents of Gndevaz and Jermuk, with the support of 9 national NGOs
July	Second complaint received by CAO from 150 residents of Gndevaz
October	Updated Feasibility Study released
	IFC supervision visit
November	Mining rights approved for Amulsar operations
2015	
March	Additional investment
April	CAO releases appraisal report in relation to Lydian-01 complaint
May	Lydian discloses Amulsar ESIA v9
October	IFC Supervision/Appraisal site visit
	CAO releases appraisal report in relation to Lydian-02 complaint
November	Lydian finalizes value engineering process
December	Lydian announces \$325 construction financing for Amulsar gold mine (with Orion and Resource Capital Funds)
2016	
May	Lydian discloses updated Amulsar ESIA (v10)
	Final IESC review of the ESIA completed
June	Government of Armenia approves amendments to mining right
	Lydian announces formal construction decision at Amulsar
July	IFC discloses SPI and ESRS (Project #37084)
October	Lydian starts site earthworks at Amulsar

Appendix D. Summary of CAO Findings

IFC's Appraisal and Supervision	
Pre-Investment E&S Review	<p><u>CAO finds that IFC's E&S review did not meet the standard of being commensurate to risk.</u></p> <p>In the absence of E&S information from the client and lack of a site visit by an IFC E&S specialist, expert scoping of E&S risks at Amulsar would have been appropriate. CAO also notes an overreliance by IFC on statements of commitment by the client's management. Given the complexity of the project, acknowledged gaps in client capacity, and its lack of E&S track record, a more detailed and structured action plan would have been appropriate.</p>
	<p><u>CAO finds that IFC's E&S review was not compliant with requirements of the Sustainability Policy (2006) para. 17.</u></p> <p>As a consequence of the shortcomings in IFC's pre-investment E&S review, CAO finds that IFC did not have sufficient basis to conclude that the company would be in a position to comply with all IFC requirements by 2008, as presented to the Board.</p>
	<p><u>In the context of IFC's initial investment, CAO finds that a "B" categorization was appropriate.</u></p>
Supervision	<p><u>CAO finds that IFC's supervision of the client's exploration activities during the period 2007–13 did not provide assurance of compliance. IFC's commitment of additional funds to the project during this period was inconsistent with the requirement under the Sustainability Policy that IFC consider remedies in response to ongoing noncompliance.</u></p> <p>IFC did not effectively supervise the client's delivery of several critical ESAP requirements during the period 2007–13: in particular, requirements to develop an ESMS for exploration activities and to carry out independent HSEC audits. Shortcomings in IFC's supervision of the project over this period contributed to adverse impacts during exploration. It was not until 2013 that IFC made it clear to the company that further investments would be contingent on the development of an appropriate ESMS for exploration phase activities.</p>
	<p>IFC's supervision of the project improved significantly from 2013 onwards. The result has been a clear improvement in the level of the client's E&S performance, in particular through the development of an exploration phase ESMS. From this point on CAO finds IFC's supervision of the client exploration activities provided adequate assurance of compliance.</p>

Environmental Issues	
Specific risks of groundwater contamination affecting the “spa” waters (thermal springs) of Jermuk, and increased risk of contamination due to fracturing from the pit and other blasting activities	<u>CAO finds that IFC’s review of the client’s international ESIA in relation to potential groundwater contamination was commensurate to risk and resulted in the development of appropriate action plan items.</u>
Risks of water pollution from the mine operations to the Vorotan and Arpa Rivers, to Kechut and Vorotan Reservoirs, and the Lake Sevan catchment	<u>CAO finds that IFC’s review of the client’s international ESIA in relation to potential water pollution issues was commensurate to risk and resulted in the development of appropriate action plan items.</u>
Seismic risks to the security of the heap leach facility	<u>CAO finds that IFC’s review of the client’s international ESIA in relation to potential seismic risks was commensurate to risk and resulted in the development of appropriate action plan items.</u>
Potential for uranium to be present in mined material, causing radioactive contamination and radiation risks from radon	<u>CAO finds that IFC took adequate steps to supervise the ESIA process in relation to risks of radioactive contamination.</u>
Risks of contaminated dust deposition on agricultural land and on the village of Gndevaz due to prevailing wind direction	<u>CAO finds that IFC’s review of the client’s international ESIA in relation to potential impact of contaminated dust was commensurate to risk and resulted in the development of appropriate action plan items.</u>
Biodiversity and the presence of Armenian “Red Book” species	<p><u>CAO finds that IFC’s review and supervision of the project risks to biodiversity during the period 2007–13 were insufficient.</u></p> <p>IFC did not have assurance that the client was in a position to meet the requirements of PS6 in relation to critical habitats.</p> <p>Baseline studies undertaken to support the Armenian environmental permitting process did not meet the needs of an international quality ESIA. This was rectified in late 2010 with the engagement of international ESIA consultants after which the significance of biodiversity impacts, including during exploration, became increasingly apparent.</p> <p>In this context, IFC observed in 2013 that the client’s exploration activities had negatively impacted Tier 1 critical habitat for the population of a critically endangered species, <i>Potentilla porphyrantha</i>.</p>
	<p><u>During the post 2013 period, CAO finds that IFC’s supervision was commensurate to risk and resulted in the development of appropriate action plan items designed to minimize, mitigate and offset potential impacts of the project on biodiversity as required by the Performance Standards.</u></p> <p>Once impacts on endangered species were identified, IFC responded by requiring biodiversity assessments and action plans as required by PS6 as part of the ESIA process.</p>

Social Issues	
Land acquisition and livelihood restoration	<p><u>CAO finds that IFC’s supervision provided reasonable assurance of compliance with the substantive requirements of PS5.</u></p> <p>IFC worked with the client to identify and address shortcomings in the client’s approach to land acquisition early in the process, with a focus on ensuring outcomes consistent with the objectives of PS5.</p>
	<p><u>CAO finds that IFC’s supervision provided reasonable assurance of compliance with the consultation and disclosure requirements of PS5.</u></p> <p>IFC identified the need for stronger consultation, including in relation to land acquisition in 2013 and 2014. IFC worked with the client to address these issues in supervision, including through a third-party audit of the land acquisition process, which was conducted in 2015 and concluded that consultation and disclosure requirements had been met.</p>
Impacts on Jermuk tourism	<p><u>CAO finds that IFC’s supervision of the ESIA process in relation to potential impacts of the project on Jermuk’s brand as a resort town has not been commensurate to risk.</u></p> <p>Adverse impacts on perceptions of the town are acknowledged as potentially leading to reductions in visitor numbers. In this context, analysis of the project’s impact on tourism was required. While Jermuk was not initially considered to be within the area of influence of the project, CAO finds that IFC took appropriate measures to ensure that this was the case when the client prepared its international ESIA. However, CAO finds that IFC does not have assurance that impacts that may affect Jermuk’s brand as a tourist center—for example blasting noise, visual disturbance, and more general perceptions that arise from the project’s proximity to the town— have been adequately assessed.</p>
Adequacy of assessment of impacts on the village of Gndevaz	<p><u>CAO thus finds that IFC lacks assurance that project impacts on the community of Gndevaz have been subject to an integrated assessment which considers “all relevant E&S risks and impacts” as required by PS1. This is a prerequisite for the development of mitigation plans as required by PS1.</u></p> <p>CAO finds gaps in IFC’s approach to the supervision of the ESIA process in relation to risks and concerns of the population of Gndevaz, and the potential for the combined impacts of mine development to affect the well-being and resilience of the community as a whole.</p> <p>The ESIA and management plans have captured or addressed many of these impacts on a discreet basis, and the HIA, Ecosystem Services Review, and LALRP, among others, are recognized as achieving a high international standard. In addition, CAO recognizes potential positive impacts for the community.</p> <p>Nevertheless, CAO finds that changes to the project design after 2013 led to a potentially significant increase in impacts on the residents of Gndevaz. These changes required assessment of the combined or cumulative risks and impacts of the various project components on the town and its people—with associated consultation, mitigation, and monitoring measures, beyond those which are contained in the current ESIA.</p> <p>CAO also finds gaps in IFC guidance associated with the Performance Standards in that it does not elaborate on how to ensure that a full and integrated assessment of the combined or cumulative social effects of a project is undertaken.</p>

<p>Consultation and engagement processes, access of concerned stakeholders to public hearings, and extent to which complaints have been registered and addressed</p>	<p><u>CAO finds that IFC’s pre-investment review of issues related to consultation was not commensurate to risk.</u></p> <p>IFC did not include in the ESAP sufficient requirements (deadlines, need for adequate expertise, documentation, and reporting) to ensure that implementation of the PCDP would be consistent with the objectives of PS1.</p>
	<p><u>CAO finds IFC compliant with its supervision requirements in relation to the client’s community engagement and consultation activities.</u></p> <p>IFC identified gaps in the client’s performance during supervision and has worked with the client to bring it into compliance. In this context, CAO notes IFC’s role in emphasizing the need to broaden the reach of the client’s consultation activities. CAO also notes IFC’s role in raising questions as to the quality of the information being shared, and pushing for improved capacity through use of external support.</p>
	<p><u>CAO finds that IFC took adequate steps to ensure that the client’s grievance processes were compliant with the requirements of PS1.</u></p> <p>IFC’s supervision showed appropriate oversight of the company’s grievance mechanism when the Community Liaison Committees (CLCs) were put in place and the Community Liaison Officer (CLO) was hired. IFC provided advice to the client in relation to the CLO’s function, and ensured that the CLCs represented an effective mechanism for channeling community concerns and getting responses, in lieu of a formal process.</p>
	<p><u>CAO finds that IFC took adequate steps to supervise and provide guidance to the client in relation to consultation and stakeholder engagement around the ESIA process.</u></p> <p>CAO finds that across the range of consultation activities, IFC has worked with the client to ensure that concerns from stakeholders were captured by the ESIA process and included into the final ESIA. In particular, CAO notes that environmental concerns raised during the consultation process were picked up and addressed in the ESIA.</p>