



**June 8, 2021**

*Office of the Compliance Advisor Ombudsman (CAO)*

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## **COMPLIANCE INVESTIGATION REPORT**

*Alto Maipo HPP (IFC Project #31632)*

*Chile*

*Complaints 01 and 02*

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

## Overview of CAO's Compliance Process

*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 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; and
- 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](http://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.

For more information about CAO, please visit [www.cao-ombudsman.org](http://www.cao-ombudsman.org)

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## Acronyms

AIP	IFC Access to Information Policy
ARD	Acid Rock Drainage
BCS	Broad Community Support
CAO	Office of the Compliance Advisor Ombudsman for IFC and MIGA
CIA	Cumulative Impact Assessment
CONAF	<i>Corporación Nacional Forestal</i>
D&B	Drill and Blast
DOH	Hydraulic Works Department ( <i>Dirección de Obras Hidráulicas</i> )
E&S	Environmental and Social
EHS	Environmental, Health and Safety
EMP	Environmental Management Plan
ERM	Environmental Resources Management Inc.
ESAP	Environmental and Social Action Plan
ESCR	Environmental and Social Compliance Report
ESDD	Environmental and Social Due Diligence
ESIA	Environmental and Social Impact Assessment
ESMC	Environmental and Social Monitoring Consultant
ESRP	Environmental and Social Review Procedures
ESRS	Environmental and Social Review Summary
FHWA	Federal Highway Administration
GM	Grievance Mechanism
HR	Human Resources
IAM	Independent Accountability Mechanism
ICP	Informed Consultation and Participation
IDB	Inter-American Development Bank
IFC	International Finance Corporation
IUCN	International Union for Conservation of Nature
MICI	Independent Consultation and Investigation Mechanism of the IDB
MIGA	Multilateral Investment Guarantee Agency
NGO	Non-Governmental Organization
OPIC	Overseas Private Investment Corporation
PIIM	Project Induced In-Migration Plan
PM	Particulate Matter
PPDA	Metropolitan Region Air Pollution Prevention Plan ( <i>Plan de Prevención y Descontaminación Atmosférica para la Región Metropolitana</i> )
PS	IFC Performance Standards
RCA	Environmental Authorization ( <i>Resolución de Calificación Ambiental</i> )
SEA	Environmental Assessment Authority ( <i>Servicio de Evaluación Ambiental</i> )
SEIA	Environmental Impact Assessment System ( <i>Sistema de Evaluación de Impacto Ambiental</i> )
SEP	Stakeholder Engagement Plan
SII	Summary of Investment Information
SMA	Environmental Oversight Authority ( <i>Superintendencia Del Medio Ambiente</i> )
TBM	Tunnel Boring Machines
TOR	Terms of Reference
VEC	Valued Ecosystem Component
WBG	World Bank Group

## Executive Summary

This compliance investigation report responds to two complaints regarding the environmental and social impacts of the Alto Maipo SpA hydroelectric power project in Chile, developed by AES Gener S.A. (the project sponsor).

The project involves the construction of a 531 MW Alto Maipo hydroelectric project, with an estimated output of 2,100GWh per year, consisting of two integrated run-of-the-river power plants: Alftalfal II and Las Lajas; related interconnection assets and 17 km of transmission lines. Most of the project infrastructure will be underground, including powerhouses, siphons, access tunnels and water conveyance systems. A total of 67 km of tunnels will comprise the underground infrastructure. The project is located approximately 50km southeast of Santiago, Chile, in the Maipo River Basin area in the upper Volcan River, upper Yeso River and Colorado River.

In October 2013, IFC approved a loan of up to US\$150 million to Alto Maipo SpA. The loan was part of a US\$1.2 billion debt package with parallel financing provided by a syndicate of development and private sector banks,<sup>1</sup> collectively referred to as “the lenders”. The loan was intended to support the construction and operation of the project.

In January 2017, CAO received a complaint submitted by two non-governmental organizations, the *Coordinadora Ciudadana No Alto Maipo* and *Ecosistemas*, on behalf of community members in the Municipality of San José de Maipo (the “Alto Maipo-01 complaint”). The complainants raise concerns about the project’s environmental and social (E&S) impacts. Their concerns include limitations in access to water for neighboring communities and the city of Santiago, erosion of the Maipo riverbed, acceleration of the desertification process in the Cajón del Maipo area, and impacts on protected areas including glaciers, river ecology, and ecosystem services. Additionally, the complainants allege that the environmental and social impact assessment (ESIA) for this project was incomplete and did not meet national regulations. According to the complainants, the ESIA was incomplete in several aspects including: it did not take into account the impact of climate change on the water levels of the Maipo river, did not contain a proper hydrogeological study to assess the impact of the construction of tunnels on water and ecosystems, did not properly identify the project’s area of influence, did not contain an alternatives analysis, and did not assess cumulative impacts of the project.

The complainants allege that communities near the project such as El Alfalfal and Los Maitenes, are impacted by noise and dust from project construction. Finally, the complainants raise concerns about social impacts, including a decrease in tourism and recreational activities, and the creation of divisions within the communities.

In June 2017, CAO received a second complaint in relation to IFC’s investment in the project (the “Alto Maipo-02 complaint”). The complainant worked with the AES Gener Foundation, a not-for-profit organization established by AES Gener, where she alleged her main duties were related to community engagement for the Alto Maipo project. The complainant alleges that from 2013 – 2015 she was sexually harassed by an employee of the project sponsor. The complainant alleges that she and her family suffered retaliatory actions from her former employer as a result of a complaint she presented to the project sponsor’s grievance mechanism. The complainant also alleges that the responses from AES Gener and Alto Maipo SpA to her complaints were inappropriate. As such she raises concerns regarding the effectiveness of their employee complaint mechanisms.

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<sup>1</sup> The Inter-American Development Bank (IDB), Overseas Private Investment Corporation (OPIC), and KfW and commercial banks (Banco de Crédito e Inversiones, Banco del Estado de Chile, DNB, and Itaú).

A complaint similar to the one submitted to CAO was sent by the Alto Maipo-01 complainants to the Independent Consultation and Investigation Mechanism (MICI), the independent accountability mechanism of the Inter-American Development Bank. In responding to this complaint, MICI concluded that a compliance investigation was warranted. CAO worked in collaboration with MICI in conducting this compliance investigation. The collaboration included a joint site visit and sharing external experts to assist in assessing the technical issues covered by both investigations. MICI published its Compliance Review Report on June of 2020. MICI's report found that IDB failed to comply with its operational policies regarding: (i) identification of impacts to the tourist and recreational uses of the rivers intervened by reducing flows and determination of mitigation measures in consultation with those affected; (ii) evaluation of impacts on communities due to a significant increase in the number of workers in the area, including evaluation of gender-differentiated impacts on women and girls; (iii) specific impacts to economic activities and way of life of the community during the construction of the project and (iv) the evaluation of impacts and adaptation of mitigation measures with respect to the community of El Alfalfal, by noise generation, air pollution and social division in the community. On October of 2020, the IDB-IDB Invest management action plan responding to MICI's recommendations was approved and made public. Consequently, MICI will develop a monitoring plan in order to monitor the action plan.

In May 2018 CAO concluded a compliance appraisal of IFC's investment in Alto Maipo. Both complaints (Alto Maipo-01 and 02) were merged for the purpose of the appraisal. CAO found that, among other things, the concerns raised a range of issues regarding project impacts that are serious in nature and therefore a compliance investigation was warranted. During this same period, due to cost overruns and construction difficulties, the financing for the project was restructured, at which point IFC sold the outstanding balance of its loan to another bank and exited the project. Therefore, this CAO compliance investigation considers IFC's review and supervision of the project up to IFC's exit in May 2018.

IFC's E&S pre-investment review of the project started in 2012. At this point IFC and the other lenders engaged a third-party consulting firm, Environmental Resources Management, Inc. (ERM) to conduct the pre-investment E&S assessment of the project. The consultancy reviewed the project's technical documents and studies and identified eight critical gaps. As a result, the lenders requested the client to carry out several complementary studies to be completed prior to financing. An E&S action plan (ESAP) was agreed with requirements for the client to comply with the Lenders' standards, including in relation to any outstanding issues related to the Critical Path Gaps.

CAO finds that IFC's pre-investment review was generally consistent with the requirements of the Sustainability Policy for IFC to conduct a review "appropriate to the nature and scale of the activity and commensurate with the level of E&S risks and/or impacts" (para. 6). However, CAO finds that IFC's pre-investment review and advice, in relation to specific issues, did not ensure compliance with relevant Performance Standards requirements. These included lack of consultation with affected communities during the development of the cumulative impact assessment, lack of a comprehensive alternatives analysis to complement the project's environmental and social impact assessment, and lack of evidence to support the conclusion that the project enjoyed broad community support. Section 3 provides further details regarding these findings.

IFC's supervision of the project commenced in 2014, with ERM acting as the environmental and social monitoring consulting (ESMC) for the Lenders. The ESMC conducted site visits, met with stakeholders, reviewed the client's monitoring reports and issued quarterly supervision reports updating the lenders about the client's compliance with the ESAP, the advancement of the project and other relevant information. CAO finds that the use and reliance on the ESCM's information is in line with IFC's Environmental and Social Review Procedure (ESRP).

The ESMC noted that the project was required by the Chilean authorities to apply an adaptive management approach in relation to certain environmental and social issues. The adaptive management approach provided a framework to address uncertainties regarding project E&S impacts, to provide additional prevention and mitigation measures as project construction advanced. In particular, the issues that would be supervised under this approach were: issues regarding the construction of tunnels and related aspects due to the geological uncertainties of the rocks, as well as issues related to ecological flows, potential cumulative impacts of the project, and social issues through a social indicator monitoring program that was to serve as a tool to identify areas requiring additional management measures. CAO finds that the adaptive management approach allowed IFC to identify and respond to several issues that arose during construction in accordance with good international industry practice (GIIP). These included waste rock disposal; prevention of impacts on the arriero community (mule drivers); preventive actions on potential impacts on protected areas and assessment of risks to avoid damages to sites of cultural heritage value during the time of IFC's involvement in the project.

The objective of an adaptive management approach is to address project risks and impacts which were not fully assessed or planned for in the ESIA or to adapt the project where circumstances changed. The use of an adaptive management is consistent with PS1 (para. 16). However, CAO finds that IFC's supervision did not ensure that the adaptive management approach was applied consistently to all issues during the time of its involvement in the project. CAO further notes that adaptive management is not substitute for prior assessment of project E&S risks and impacts in accordance with good international industry practice as required by PS1 (para.7). In relation to its investment in the Alto Maipo, CAO finds that the adoption of the adaptive management approach led to IFC's overlook to a number of project E&S risks and impacts in relation to this large and technically complex project.

A description of project risks and impacts considered in this report, along with a brief summary of the complaint in relation to each, is provided below:

#### **Infiltration of groundwater during tunneling:**

The complainants raised concerns that tunneling for the project would cause infiltration and consequently contamination of ground water, wells, and pumps on which villages and towns in the areas surrounding the project, rely on. CAO notes that during pre-investment assessment, the ESMC acknowledged that the hydrogeological baseline in the project's ESIA was weak. Thus, the lenders requested the client to commission an additional review of potential contamination of groundwater. Mitigation measures were identified and included in the project's ESAP; however, no additional technical studies were requested to ensure that the impact assessment was based on strong baseline information. Rather it was considered that this would be addressed within a framework of monitoring based on adaptive management. CAO notes that several events of groundwater interception by tunnels demonstrated that water discharges were higher than expected in the ESIA. IFC did not require the client to carry out hydrogeological modelling within the adaptive management approach according to GIIP as required by PS1. Such modelling would provide an accurate estimation of impacts on groundwater and aquifers and allow subsequent development of a monitoring plan for groundwater interception, pollution control and treatment.

Following IFC's divestment, these deficiencies motivated Chilean authorities to order the revision of the project's environmental license to ensure that hydrogeological modelling for groundwater interception was carried out. During the period of IFC's investment, however, the lack of hydrogeological modelling gave rise to risks of unanticipated groundwater contamination.

#### **Sediment transport:**

The complainants claim that the project will cause erosion, significantly reducing sediment levels, affecting access to water for communities, and riverbank infrastructure. CAO notes that transport

of sediments along streams as a result of projects constructions and discharges can impact ecosystem services. During pre-investment assessment the lenders required the company to conduct an Advanced Sediment Transport Study to better understand the potential impacts of the project on sediment transport dynamics. However, IFC did not ensure that the study included sediment transport measurements in all the rivers and streams of the project area. Rather the study was based on assumptions that did not meet standard methods of analysis. As a result, the study did not ensure that mitigation, management and compensation measures for adverse effects of changes in sediment transport dynamics on ecosystem services were developed in line with GIIP. CAO finds that IFC supervision did not ensure that the sediment transport study complied with GIIP as required by PS 6 giving rise to unassessed risks and potential project impacts on the river ecosystems downstream of the project.

#### **Air quality:**

The complainants expressed concerns that the project is causing air pollution through dust emissions, as well as emissions due to increased road traffic. This applies particularly to the community of El Alfalfal which is a small village located 75 meters from major project construction sites. To protect El Alfalfal from noise and dust, the project built an isolation wall surrounding the community. The project's ESIA identified the generation of dust during construction as well as traffic of heavy equipment and vehicles through unpaved roads as the most significant impacts to air quality. The project's license required the company to implement preventive measures for the minimization of dust, which consisted of weekly inspections of emissions control measures during construction to verify transportation of waste rock via shuttle car wagons and conveyor belts; covering of trucks with canvas and humidification of dirt road surfaces. The ESMC requested the client to submit qualitative monitoring reports including these measures, however no quantitative monitoring was conducted.

CAO finds that the lack of quantitative air monitoring made it challenging to assess the effectiveness of the mitigation measures implemented by the project, especially in sensitive areas, such as El Alfalfal, due to its proximity to the project's construction site. Quantitative air quality monitoring in important receptors in the area of influence of a large-scale construction project represents good international industry practice. In not ensuring such monitoring of air quality in the community of El Alfalfal, CAO finds that IFC's supervision of the project fell below the requirements of PS3 para. 4 and the WBG EHS Guidelines. The absence of quantitative air quality monitoring gave rise to a risk of undetected air pollution and associated impacts on human health during the period of IFC's investment.

#### **Noise:**

The complainants claim that the communities of El Alfalfal and Los Maitenes, located close to construction sites, are affected by noise and vibration due to circulation of trucks and movement of machines. The project's ESIA included noise measurements in specific locations, likely to experience the greatest impacts. CAO notes however that the existing baseline noise indicated in the ESIA already exceeded noise limits in residential areas as described in the Environmental Health and Safety Guidelines (EHS). CAO did not find evidence that IFC discussed with the company such exceedances. Nor did IFC request the company to comply with more stringent standard (EHS guidelines section 1.7 on noise) related to noise as required by PS3 para. 4. This was particularly important to some communities such as El Alfalfal which were expected to be impacted due to their close proximity to construction sites. During supervision, in several instances the ESMC requested the client to compare noise measurements against the EHS guidelines. CAO notes, however, that it took the client 3 years to compare its noise emissions against the EHS guidelines and submit these to the ESMC. The results showed that there were several events of noise exceedances. CAO notes that the project was conducting bi-monthly noise emissions monitoring. As noted above, a wall was built around the community of El Alfalfal

to mitigate noise and dust resulted from the project's construction. However, CAO finds that IFC did not discuss the effectiveness of the wall surrounding the community of El Alfalfal in mitigating noise impacts. CAO finds that adaptive management would require the client to comply with the more stringent noise standards since the beginning of construction and conduct frequent noise monitoring. Bi-monthly monitoring is too sparse to ensure compliance with noise limits. Therefore, CAO finds that IFC did not ensure that the project was taking adequate actions to meet the requirements of PS3 para. 4 in relation to the mitigation and monitoring of noise impacts, particularly on the community of El Alfalfal.

#### **Tourism and recreational activities:**

The complainants allege that the project will cause negative impacts on ecosystem services, including tourism and recreational activities which they state support a significant proportion of local jobs. The project's ESIA considered impacts on recreational river use. However, the lenders requested the company to conduct an additional assessment regarding the impact of the project on recreational water uses in the project area. The requirement for additional assessment in relation to this issue was included in the ESAP. As the time of IFC exit, the study of impacts on recreational water uses was not satisfactorily completed. While there is no immediate impact on recreational activities during the construction period, IFC did not ensure that the issue of potential tourism impacts was assessed and no clear plan to mitigate potential project impacts on these activities was in place. As a result, CAO finds that IFC lacked assurance that the project would comply with PS6 para. 25, which required the project to implement mitigation measures that aim to maintain the value and functionality of priority ecosystem services.

#### **Complaint regarding sexual harassment of a worker:**

The second complaint relates to an allegation of sexual harassment against a woman worker. The complainant worked with the AES Gener Foundation, a not-for-profit organization established the project sponsor. She alleges that from 2013 to 2015, she was sexually harassed by an employee of AES Gener who persistently made unwelcome comments to her as well as touching her inappropriately. The complainant alleges that AES Gener fired her in March 2017 in retaliation for complaining about the sexual harassment. The company's position is that an appropriate internal investigation was completed in relation to this case, and relevant measures were adopted. The company denies that the termination of the second complainant's contract in 2017 was related to her sexual harassment complaint.

CAO has considered IFC's pre-investment review and supervision of the project as relates to PS2 requirements relevant to sexual harassment and worker grievance handling. During pre-investment IFC, and the lenders took steps to ensure themselves that the client had HR policies and a grievance mechanism in place. During supervision, multiple allegations of sexual harassment on the project construction site came to the attention of the ESMC. In response the ESMC repeatedly required the client to take action to address this issue. CAO found no evidence that the actions required by the ESMC and the Lenders in relation to addressing sexual harassment in the workplace had been satisfactorily completed as of IFC's exit in May 2018. In this context, CAO finds that IFC's review of labor issues was commensurate to the risk of sexual harassment. However, CAO finds that IFC's supervision did not ensure that the client took appropriate measures to prevent and address harassment, intimidation, and/or exploitation, especially with regard to women, as required by PS2 (para. 15). CAO further finds that IFC's supervision did not ensure that the client had in place a grievance mechanism for workers of the company and its contractors that was sufficient to address concerns promptly, using an understandable and transparent process, including in relation to the case of sexual harassment brought by the CAO complainant (PS2, para. 20).

Though the complainant's allegations are serious in nature, there is no indication in the documentation made available to CAO that the ESMC and/or IFC reviewed and assessed the adequacy of the grievance handling process of this specific case. Given that the client did not provide CAO with access to its investigation in response to the CAO complainant's allegations of sexual harassment, however, CAO is not in a position to comment on the client's response to the specific issues raised.

### **Disclosure and consultation**

The complainants allege lack of meaningful consultation around the project and claim that stakeholder concerns were not properly responded to during the ESIA process. The complainants state that the project's grievance mechanism is not effective. IFC's pre-investment review of the project's stakeholder engagement and information disclosure process identified substantial gaps with PS1 requirements up to 2013 and considered stakeholder engagement as an overarching 'Critical Path Gap' for the project. IFC provided recommendations for the client to put in place procedures and systems in line with Lenders standards, prior to financing approval. Throughout supervision, the lenders and the environmental and social monitoring consultancy supported the client implementing improvements to stakeholder engagement processes including the improvement of the social indicators monitoring program, implementation of a participatory monitoring program and the dissemination of information regarding the grievance mechanism. CAO finds that the advice provided by IFC up to May 2018 was consistent with the requirements of PS1 for a continued informed consultation and participation process, and implementation of a PS-compliant grievance mechanism.

The complainants allege difficulties in accessing information related to the project. CAO notes that the ESMC advised the client in several instances to disclose information to stakeholders. However, IFC did not follow this advice in relation to its own disclosure practices. IFC based its E&S pre-investment assessment and supervision of this project on several E&S documents that were not disclosed on its website, which is not in accordance with the Access to Information Policy 2012, para. 41. For instance the following were not disclosed: (a) the final version of the Cumulative Impact Assessment, (b) the 'Critical Path Gaps' reports, (c) the Advanced Sediment Transport Study, (d) the Project Induced In-Migration Plan (PIIM), (e) the study on Potential for Contamination of Water from Tunneling Activities and Rock Disposal in Waste Heaps, and associated E&S management plans. Disclosure of these documents, would provide up to date information on the project to interested stakeholders, including the complainants and other project-affected communities.

### **Conclusion:**

In summary, CAO finds that IFC's pre-investment review was generally consistent with the requirements of the Sustainability Policy to conduct a review "appropriate to the nature and scale of the activity and commensurate with the level of E&S risks and/or impacts" (para. 6). However, in relation to a number of specific issues raised by the complainants, IFC did not ensure the client's compliance with the Performance Standards requirements. These include lack of consultation with affected communities during the development of the cumulative impact assessment, lack of a comprehensive project's alternative analysis, and lack of evidence to support the conclusion that the project enjoyed broad community support.

During supervision of the project, CAO finds that the adoption of the adaptive management approach allowed IFC to identify and address several issues in accordance with good international industry practice (GIIP). These include waste rock disposal; prevention of impacts on the arriero community; preventive actions on potential impacts on protected areas and assessment of risks to avoid damages to sites of cultural heritage value during the time of IFC's involvement in the project. However, the adaptive management was not applied systematically to

all project's aspects. Further, CAO finds that such approach should not substitute projects' E&S impact assessment. Therefore, IFC's over reliance on the adaptive management led to oversight in relation to several issues, such as infiltration of groundwater due to tunneling activities, noise and air impacts. A summary of the compliance findings is included in Annex 2.

In light of the findings of 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.

# 1. Background

## 1.1. The Project

In October 2013, the International Finance Corporation (IFC) approved a loan of up to US\$150 million to Alto Maipo SpA (“the client” or “the company”), a subsidiary of AES Gener S.A (“the project sponsor”), the second largest electricity generator in Chile.<sup>2</sup> At the time of IFC’s investment AES Gener was a 71%-owned Chilean subsidiary of Arlington, Virginia-based AES Corporation.<sup>3</sup>

The loan was used to construct the 531MW Alto Maipo hydroelectric project, with a total expected cost of approximately US\$1.9 billion, and an estimated output of 2,100GWh per year. The project comprises two integrated run-of-the-river power plants: (i) Alfalfal II (264MW) and (ii) Las Lajas (267MW), and related interconnection assets and transmission lines (collectively referred to as “the project”).<sup>4</sup>

The project is located approximately 50km southeast of Santiago, Chile, in the Maipo River Basin area on the Upper Volcan River, the Upper Yeso River and the Colorado River. 90% of the project infrastructure will be underground. Underground facilities include powerhouses, siphons, access tunnels and water conveyance systems, including a total of 67 km of tunnels. The project does not require the construction of surface water reservoirs. Surface infrastructure includes intakes, delivery canals, forebays, a new electrical substation, new bridges, access roads and 17 km of transmission lines. Construction of the project was initially expected to take five years.<sup>5</sup> A map of the project area of influence, including project facilities and human settlements, is presented in Annex 1.

IFC’s loan was part of a US\$1.2 billion debt package with parallel financing provided by a syndicate of multilateral and bilateral development banks (Inter-American Development Bank (IDB), Overseas Private Investment Corporation (OPIC), and KfW) and commercial banks (Banco de Crédito e Inversiones, Banco del Estado de Chile, DNB, and Itaú), collectively referred to as “the lenders.”<sup>6</sup>

In late 2016, the client notified the lenders that the project was experiencing large cost overruns as a result of ongoing construction difficulties. A restructuring of the loan was negotiated in 2017 as cost projections were raised to \$2.5 billion.<sup>7</sup> Further loan restructuring was negotiated between the client and the lenders in 2018, at which point IFC sold the outstanding balance of its loan to another bank, therefore exiting the project. IFC finalized the sale of its direct exposure to the project in May 2018. Consequently, at the time of writing, IFC did not have a direct commercial relationship with the client. However, IFC does hold an equity investment in one of the private sector financiers of the project, Itaú Corpbanca.<sup>8</sup> IFC also has an ongoing business relationship with the parent company, AES Corporation through two active power sector projects.<sup>9</sup>

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<sup>2</sup> IFC Summary of Investment Information, Alto Maipo, Project #31632 - <https://bit.ly/2VacSpO>

<sup>3</sup> *Ibid.*

<sup>4</sup> *Ibid.*

<sup>5</sup> IFC Environmental and Social Review Summary, Alto Maipo, Project #31632 - <https://bit.ly/2whHdKK>

<sup>6</sup> IFC Environmental and Social Review Summary, Alto Maipo, Project #31632 - <https://bit.ly/3i451VO>; Revista Energía, “Alto Maipo ingresará en mayo de 2019 y gastos financieros superarán los US\$ 300 millones”, <https://bit.ly/304vfzT>

<sup>7</sup> See La Tercera, “AES Gener sella fondos para Alto Maipo y costo sube a US\$ 2.500 mills” - <https://bit.ly/34cu2Ya>

<sup>8</sup> IFC Summary of Investment Information, Itaú Corpbanca, Project #32316 - <https://bit.ly/3wWCvg4>; AES Gener Estados Financieros Consolidados Intermedios (September 2020) - <https://www.aesgener.cl/investors/wp-content/uploads/2020/11/AES-Gener-3Q-2020-Estados-financieros.pdf>

<sup>9</sup> IFC Summary of Investment Information, AES Geo Energy Project #26836 - <https://bit.ly/3snmxYE>; Kribi Power Development Company S.A., Project # 25978 - <https://bit.ly/3adBWol>

## 1.2. Complaints and CAO Assessment

### 1.2.1. Alto Maipo-01 Complaint

In January 2017, CAO received a complaint submitted by two non-governmental organizations (NGOs), the *Coordinadora Ciudadana No Alto Maipo* and *Ecosistemas* on behalf of community members in the Municipality of San José de Maipo (the “Alto Maipo-01 complaint”).<sup>10</sup> The signatories to the complaint are community members living in the area of influence of the project.<sup>11</sup>

The complainants allege breaches of IFC Performance Standards 1, 2, 3, 4, 5, 6 and 8. They raise concerns about project environmental and social (E&S) impacts, including limitations in access to water for neighboring communities and Santiago, erosion of the Maipo riverbed, acceleration of the desertification process in the Cajón del Maipo area, and impacts on protected areas including glaciers, river ecology, and ecosystem services.

Additionally, the complainants allege that the environmental and social impact assessment (ESIA) for this project was incomplete, inadequate, and did not meet national regulations. According to the complainants, the ESIA did not take into account the impact of climate change on the water levels of the Maipo river, did not contain a proper hydrogeological study to assess the impact of the construction of tunnels on water and ecosystems, did not properly identify the project’s area of influence, did not contain an alternatives analysis, and did not assess cumulative impacts of the project.

The complainants also allege that some communities, particularly El Alfalfal and Los Maitenes, suffer from dust and noise pollution from construction works of the project.

Finally, the complainants raise concerns about social impacts, including poor working conditions onsite, a decrease in tourism and recreational activities, and the creation of divisions within the communities.

### 1.2.2. Alto Maipo-02 Complaint

CAO received a second complaint in relation to IFC’s investment in the project in June 2017 (the “Alto Maipo-02 complaint”).<sup>12</sup> The complainant worked with the AES Gener Foundation, a not-for-profit organization established by AES Gener, the project sponsor.<sup>13</sup> She states that her work for the Foundation included development and implementation of community development programs for the project. She alleges that from 2013 to 2015, she was sexually harassed by an employee of AES Gener who persistently made unwelcome comments to her as well as touching her inappropriately. She reports that the harassment caused her psychological harm including triggering a bout of depression. She claims that when she decided to report these issues to the company in December 2016, an internal investigation was conducted, but concluded that the perpetrator of alleged harassment would not be dismissed, for reasons that she believes were inappropriate.

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<sup>10</sup> Alto Maipo-01 complaint available on CAO’s website at <https://bit.ly/2SXsbkP>

<sup>11</sup> The complainants also received support from international NGOs: the Center for International Environmental Law (CIEL), International Rivers (IR), Natural Resources Defense Council (NRDC) and Patagonia Inc.

<sup>12</sup> Summary of the Alto Maipo-02 complaint available on CAO’s website at <https://bit.ly/2vM9zwc>

<sup>13</sup> The AES Gener Foundation, formerly known as *Fundación Maitenes*, was established in 1993 to develop education and training programs for the community of San Jose de Maipo. With the construction of the project, the foundation has diversified its activities and focused on community development programs related to the development of the project. The objective of the foundation is to strengthen the elaboration and implementation of the social programs of AES Gener in three areas: education, community infrastructure and employment. The AES Gener Foundation has a General Counsel composed of senior officers and staff of the AES Gener that supervise the fulfillment of its objectives, as well as administration of resources. Source: AES Gener, Annual Report 2016

The complainant alleges that AES Gener fired her in March 2017 in retaliation for raising a complaint. She also alleges that the company awarded a contract her father bid for through a tender process to another company shortly after her dismissal, by way of retaliation. The complainant alleges that the responses from AES Gener and Alto Maipo SpA to her complaints were inappropriate. As such she raises concerns regarding the functioning of their complaint mechanisms.

### **1.2.3. Company's Perspective**

The client states that it conducted a detailed ESIA and held a constructive process of dialogue with the local community of San José de Maipo. As a result, the client points to the signing of a Social Agreement in 2009 between the company, the Municipality of San José de Maipo, and the Community Union of Neighborhood Boards (*Unión Comunal de Juntas Vecinales de San José de Maipo*). The company states that the agreement was reached with a very wide base of local support. In August 2010, the Rules of Procedure for this agreement were signed, establishing two programs for the benefit of the community: (i) a program to promote local employment and the contracting of local suppliers; and (ii) a social program to support existing organizations and provide scholarships to support students from vulnerable families. The company states that it also created a program for participatory monitoring covering topics of concerns to the communities, based stakeholder feedback, including: water and environment, local employment and suppliers, road safety, and social welfare commitments. CAO's Assessment Report documents in further detail the company's perspective on the technical issues raised by the complainants.<sup>14</sup>

In relation to the Alto Maipo-02 complaint the client's position is that an internal investigation was completed in relation to this case, and relevant measures were adopted. Additionally, the client emphasized that CAO should not have jurisdiction regarding this claim because the Alto Maipo-02 complainant was employed by a foundation affiliated with the client, AES Gener, and not the recipient of the IFC loan to Alto Maipo SpA. The client further contends that it terminated the complainant's employment in March of 2017 due to the reorganization of the Foundation where she worked, and not because of her claims.<sup>15</sup>

CAO notes that the Alto Maipo-02 complaint was deemed eligible for consideration by CAO, on the basis that the complainant was working for an organization established by the project sponsor and directly involved in activities related to the project, regardless of the contractual relationships governing the complainant's employment.

### **1.2.4. Complaints to Other Development Banks**

A complaint similar to the one submitted to CAO was sent by the Alto Maipo-01 complainants to the Independent Consultation and Investigation Mechanism (MICI), the independent accountability mechanism (IAM) of the Interamerican Development Bank (IDB).<sup>16</sup> In responding to this complaint, MICI concluded that a compliance investigation was warranted and submitted Terms of Reference to the IDB Board for approval of the compliance review in March 2018.<sup>17</sup> The IDB Board approved MICI's recommendation for a compliance review in May 2018.<sup>18</sup>

Considering the similarity of the Alto Maipo-01 complaint and the complaint submitted to MICI, in conducting this compliance investigation, CAO coordinated with MICI for the purpose of this

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<sup>14</sup> CAO Assessment Report, Alto Maipo-01, October 2017 – <https://bit.ly/3dXVFbO>

<sup>15</sup> CAO Assessment Report, Alto Maipo-02, December 2017 – <https://bit.ly/3aRgnZ8>

<sup>16</sup> See case page: Alto Maipo Hydroelectric Power Project, MICI-BID-CH-2017-0115 – <https://www.iadb.org/en/mici>

<sup>17</sup> MICI, Recommendation for a Compliance Review and Terms of Reference – <https://bit.ly/2xOVQWl>

<sup>18</sup> MICI, Decision by the Board of Executive Directors regarding the Recommendation – <https://bit.ly/2ReZ4cH>

compliance investigation. This collaboration was established in accordance with the Principles for Cooperation among IAMs of the IAM Network, of which both CAO and MICI are members.<sup>19</sup>

The collaboration between CAO and MICI involved a joint field visit, as well as sharing three external experts to assist in assessing the technical issues covered by both investigations. This collaboration took place while maintaining both CAO and MICI's independence, impartiality, and objectivity, and did not involve exchange of information that was confidential to either IFC or IDB.

On June 2020, MICI published its Compliance Review Report, along with their findings and recommendations, and as of October of the same year the IDB-IDB Invest action plan in response to MICI's report was taking place. This action plan is being monitored by MICI.

### **1.3. CAO Compliance Review Process**

#### **1.3.1. CAO Compliance Appraisal**

In May 2018, CAO released a compliance appraisal report regarding IFC's pre-investment review and supervision of the E&S impacts of the project.<sup>20</sup> CAO's appraisal identified a number of compliance questions relating to the adequacy of IFC's review and supervision of the project, relevant to the issues raised in the two complaints. As result CAO determined that a compliance investigation was merited. For the purpose of the CAO compliance process, the Alto Maipo-01 and -02 complaints were merged.

#### **1.3.2. Scope of CAO Investigation**

The scope of this investigation is defined in Terms of Reference (TOR) issued by CAO in August 2018.<sup>21</sup>

As outlined in the TOR, this compliance investigation considers whether IFC's investment in Alto Maipo was appraised, structured and supervised in accordance with applicable IFC policies, procedures and standards.

More specifically, given the issues raised by the complainants and the outcomes of CAO's appraisal, CAO's compliance investigation questions include:

1. Whether IFC's pre-investment review of the project was commensurate to the level of risks and impacts, particularly its review of the project's Environmental and Social Impact Assessment (ESIA) and additional studies, including an assessment of cumulative impacts.
2. Whether the criteria used by IFC to determine Broad Community Support (BCS) for the project were consistent with the requirements of IFC's Sustainability Policy (para. 30), and whether IFC adequately monitored the client's community engagement process as part of its supervision activities.
3. What steps were taken by IFC and whether these steps were adequate to assure itself of the client's commitment to prevent (and respond to allegations of) harassment, intimidation, and/or exploitation on the workplace, especially in regard to women, as per the requirements of Performance Standard 2 on non-discrimination and equal opportunity, and worker grievance mechanism.

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<sup>19</sup> Principles for Cooperation among Independent Accountability Mechanisms (IAMs), December 2013 – <https://bit.ly/3bZKy0q>

<sup>20</sup> CAO, Compliance Appraisal Report, Alto Maipo-01&02, May 2018 – <https://bit.ly/2udvGex>

<sup>21</sup> CAO, Terms of Reference for Compliance Investigation of IFC, Alto Maipo-01 & 02, August 2018 – <https://bit.ly/2vJd06J>

4. What steps were taken by IFC and whether these steps were adequate to assure itself that the client was compliant with Performance Standard 3 requirements on Resource Efficiency and Pollution Prevention, particularly as relates to the management of waste rock disposal to prevent air and water pollution.
5. What steps were taken by IFC and whether these steps were adequate to assure itself of compliance with Performance Standard 4 requirements on Community Health, Safety and Security, including potential impacts from noise and vibration, impacts of labor influx, and risks of water scarcity to communities.
6. What steps were taken by IFC and whether these steps were adequate to assure itself of the client's compliance with Performance Standard 5 requirements on Land Acquisition and Involuntary Resettlement, particularly regarding the client's approach to resettlement, economic displacement, and restrictions on land use.
7. What steps were taken by IFC and whether these steps were adequate to assure itself of the client's compliance with Performance Standard 6 on Biodiversity Conservation and Sustainable Management of Living Natural Resources, particularly regarding impacts on protected areas, endangered species, ecosystem services including impacts on tourism and recreation, impacts on river ecology arising from reduced environmental flow, sedimentation regimes, and impacts on glaciers.
8. Whether IFC's assessment of the applicability of Performance Standard 8 to the project was adequate given the information available at the time of project appraisal.

As in all cases, the scope of the investigation includes developing an understanding of the immediate and underlying causes for any non-compliance identified by the CAO.

In considering IFC's E&S performance in relation to this investment, CAO has been conscious not to expect performance at a level that requires the benefit of hindsight. Rather, the question is whether there is evidence that IFC applied relevant requirements considering sources of information available at the time.

CAO's compliance mandate is focused on IFC's E&S performance. In accordance with CAO's Operational Guidelines, this report documents investigation findings with respect to IFC's compliance with relevant requirements and adverse environmental and/or social outcomes, including the extent to which these are verifiably related to the project.

The CAO investigation covers IFC's involvement in the project from concept stage until May 2018, when IFC sold its exposure to the project to another bank.

### **1.3.3. Methodology**

The CAO investigation team, including CAO staff and three external experts,<sup>22</sup> reviewed IFC's documentation of the investment and gathered information through interviews with IFC staff with direct knowledge and responsibilities for the project, and through a field visit to Chile in December 2018. The investigation team met with:

- Representatives of the complainants (*Coordinadora Ciudadana No Alto Maipo* and *Ecosistemas*);

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<sup>22</sup> The external experts included a civil engineer with expertise in hydrology, sediment transport, and ecological flows; an environmental specialist with expertise in the management of environmental impacts of large infrastructure projects and experience working with international standards; and a senior social development specialist with significant experience in the design, management, evaluation and provision of technical support to international development projects.

- Approximately 10 groups of complainants supporting the Alto Maipo-01 complaint, and representing different categories of stakeholders (water users, irrigation associations, tourism operators, women, restaurant owners, etc.);
- The Alto Maipo-02 complainant;
- The IFC project team;
- The project's independent E&S monitoring consultant staff; and
- The IFC client management and staff on site in the *Cajon del Maipo* and in Santiago, Chile.

Relevant secondary materials were provided by some of the interviewees. As noted above, in the context of the collaboration between CAO and MICI, the three experts on the investigation team were hired by CAO and MICI, and the field visit to Chile was conducted jointly.

## 2. IFC's E&S Review and Supervision of the Project

This section provides an overview of IFC's appraisal and supervision of the project against the relevant standards. CAO's analysis and findings in relation to the specific issues raised in the complaints and included in the TOR for this investigation, are provided in section 3 of this report.

### 2.1. Applicable IFC Policy and Performance Standards

As set out in its Operational Guidelines (2013),<sup>23</sup> CAO conducts investigations of IFC's E&S performance by ensuring compliance with IFC policies, Performance Standards, guidelines and procedures (para 4.3).

IFC's commitment to sustainable development is articulated in its Sustainability Framework and includes IFC's Policy on Environmental and Social Sustainability (the "Sustainability Policy");<sup>24</sup> the IFC Performance Standards (PS),<sup>25</sup> which an IFC client is expected to meet throughout the life of an IFC investment; and the Access to Information Policy (AIP).<sup>26</sup> IFC's E&S appraisal and supervision requirements are further elaborated in its Environmental and Social Review Procedures (ESRP).<sup>27</sup>

IFC's investment in the project was made in the context of the 2012 Sustainability Framework. The investment was approved under ESRP version 7 (April 2013)<sup>28</sup> and supervised under subsequent versions of the ESRP. CAO has analyzed IFC's performance against the requirements of the above framework.

The Sustainability Policy sets out IFC's high level commitments in the following terms, emphasizing the importance of the mitigation hierarchy when applying the Performance Standards:

*Central to these requirements is the application of a mitigation hierarchy to anticipate and avoid adverse impacts on workers, communities, and the environment, or where avoidance is not possible, to minimize, and where residual impacts remain, compensate/offset for the risks and impacts, as appropriate. (para. 6)*

According to the Performance Standards and the Sustainability Policy, IFC's responsibility for E&S oversight commences prior to making an investment in a company and continues throughout the period of an investment.

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 the Sustainability Policy and Performance Standards. As required by the 2012 Sustainability Policy, IFC's E&S review should be "appropriate to the nature and scale of the activity" and "commensurate to the level of environmental and social risks and/or impacts" (para. 6). IFC's E&S review involves the investigation of the capacity, maturity, and reliability of the client's E&S corporate management system to effectively manage E&S performance, including its ability to enable current and future project compliance with IFC's PS.<sup>29</sup> A central principle of the

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<sup>23</sup> CAO Operational Guidelines, 2013 – <https://bit.ly/3aOVEoI>

<sup>24</sup> IFC, Policy on Environmental and Social Sustainability, January 2012 – <https://bit.ly/2UL3B8G>

<sup>25</sup> IFC, Performance Standards on Environmental and Social Sustainability, January 2012 – <https://bit.ly/2V0IfTC>

<sup>26</sup> IFC, Access to Information policy, January 2012 – <https://bit.ly/34g57CP>

<sup>27</sup> IFC, Environmental and Social Review Procedures (several versions available) – <https://bit.ly/3bXNieg>

<sup>28</sup> IFC, Environmental and Social Review Procedures, April 2013 update – <https://bit.ly/2JKouL0>

<sup>29</sup> ESRP 3, para.2.1, version 7, April 2013.

Sustainability Policy is that “IFC will only finance investment activities that are expected to meet the requirements of the Performance Standards within a reasonable period of time” (para. 22).

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 supervision is to obtain information to assess the status of project’s compliance with the PS and other specific E&S requirements agreed at commitment; to assess the current level of E&S risk; to provide advice to clients on how to address critical E&S issues.”<sup>30</sup> The 2012 Sustainability Policy further states that “if the client fails to comply with its environmental and social commitments as expressed in the legal agreements and associated documents, IFC will work with the client to bring it back into compliance, and if the client fails to reestablish compliance, IFC will exercise its rights and remedies, as appropriate” (para. 24).

Specific requirements of the Sustainability Policy and/or Performance Standards related to the issues being investigated are presented in each of the sections below.

## 2.2. IFC’s Pre-Investment E&S Review of the Project

IFC, IDB, and OPIC jointly initiated their E&S due diligence process for the project in 2012.<sup>31</sup> The Lenders were assisted by a third-party consulting firm, Environmental Resources Management, Inc (ERM), to conduct their appraisal of the project.

An ESIA for the project was prepared in May 2008, and together with its subsequent addenda (November 2008, January 2009 and March 2009), approved by the various authorities consulted with as part of the Chilean E&S impact assessment system. Subsequently, an environmental authorization for the project was issued (*Resolución de Calificación Ambiental - RCA*) in March 2009.<sup>32</sup> The ESIA was available for consultation and each comment from stakeholders was responded to and documented as part of the RCA.<sup>33</sup>

### **Chilean Regulation on Environmental Impact Assessment**

Under the Chilean environmental impact assessment system (SEIA), all projects have to submit an ESIA to national authorities for approval, which is granted in the form of a *Resolución de Calificación Ambiental* (RCA). Any designs or engineering adjustments to a project require further environmental assessment and regulatory processes to update the relevant permits for the project. Project sponsors can submit *Consultas de Pertinencia* (CdP) – queries – on a voluntary basis, prior to initiating project-related activities, in order to receive advice from national authorities as to whether an activity or its modification requires filing through the national SEIA. Depending on the scope of changes, project sponsors may be required to carry out a new ESIA, an ESIA addendum, or simply to justify any changes in project design.<sup>34</sup>

Following the early disclosure process for projects with significant potential E&S impacts, in May 2012 IFC disclosed a brief description of the project being considered for investment, together

<sup>30</sup> ESRP 6, para.1, version 7, April 2013.

<sup>31</sup> IFC Environmental and Social Review Summary, Alto Maipo, Project #31632 - <https://bit.ly/2whHdKK>

<sup>32</sup> *Resolución Exenta* N°256/09, March 2009 - <https://bit.ly/2uKCjVO>

<sup>33</sup> According to the complainants around 8000 comments and questions were sent to the EIA process.

<sup>34</sup> For more information, see Servicio de Evaluación Ambiental (SEA) website: <https://bit.ly/2RSeSCo>

with the preliminary versions of an alternatives analysis and a cumulative impact assessment (CIA), which had been conducted as a result of the Lenders' preliminary due diligence.<sup>35,36</sup>

Based on stakeholder feedback and the preliminary findings of ERM's due diligence process (the Environmental and Social Due Diligence or "ESDD"), the Lenders determined eight 'Critical Path Gaps' that the client was expected to address as a condition for financing approval. Details on the Lenders' expectations related to each of these Critical Path Gaps were communicated to the client in October 2012, and included specific recommendations to address the following gaps:

- Gap #1 - Identification and Assessment of Potential Impacts on Water Uses and Establishment of a Management/Compensation Plan
- Gap #2 - Identification and Assessment of Potential Impacts on Riverbed Sediments and Establishment of a Management/Compensation Plan
- Gap #3 - Identification and Assessment of the Conversion or Degradation of Aquatic Habitats and Establishment of an Ecological Flow Management Strategy
- Gap #4 - Identification and Assessment of Impacts from Land and Right of Way Acquisition and Establishment of a Land and Right of Way Acquisition Report
- Gap #5 - Identification and Assessment of Impacts to Legally Protected and Internationally Recognized Areas
- Gap #6 – Cumulative Impact Assessment
- Gap #7 – Alternatives Analysis
- Gap #8 – Stakeholder Engagement (identified as an overarching gap)

Complementary studies and plans were prepared by the client between May 2012 and June 2013 to address each of the Critical Path Gaps, as well as a Climate Change study (included within Gap #1). The client also produced summary documents of each of the Critical Path Gaps to be disclosed to project stakeholders.

ERM reviewed the technical documents and studies and prepared individual memos assessing the alignment of the information produced with the requirements in the Critical Path Gaps. The information was then updated in a final ESDD report in August 2013, which comprised an Environmental and Social Action Plan (ESAP) with requirements for the client to comply with the Lenders' standards, including in relation to any outstanding issues related to the Critical Path Gaps.

IFC's disclosed an Environmental and Social Review Summary (ESRS) for the project in July 2013, documenting IFC's pre-investment E&S review process for the project, summarizing project E&S issues and mitigation measures, and disclosing the ESAP agreed between the Lenders and the client.<sup>37</sup> The ESRS was prepared on the basis of two field appraisal missions, in April and October 2012, and an extensive review of documentation conducted jointly with IADB and OPIC, with the assistance of thematic experts from ERM. Based on the results of this review, IFC classified the project as Category A, considering that it had potential significant adverse E&S risks and impacts.<sup>38</sup> The ESRS notes this categorization was mainly due to "implications on natural resources" including, inter alia, "potential significant hydrological changes in over 100 km of

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<sup>35</sup> Early disclosure was conducted following IFC Access to Information Policy, para. 36: "For projects or investments with potential significant adverse environmental or social risks and/or impacts, disclosure of the ESIA should occur early in the environmental and social assessment process. For these projects, IFC will also endeavor to provide access to the draft ESIA prepared by the client even before IFC has completed, or in some cases even started, the review of its investment." - <https://bit.ly/34g57CP>

<sup>36</sup> IFC, Early Disclosure, AES Gener, May 2012 - <https://bit.ly/2uKgmGn>

<sup>37</sup> IFC Environmental and Social Review Summary, Alto Maipo, Project #31632 - <https://bit.ly/2whHdKK>

<sup>38</sup> Per IFC's 2012 Sustainability Policy, a project is categorized A when it involves "business activities with potential significant adverse environmental or social risks and/or impacts that are diverse, irreversible, or unprecedented." (para. 40)

streams and rivers, as well as relevant implications affecting the natural landscape of a touristic area of the Andes Mountains.”<sup>39</sup>

As part of the ESRS, IFC disclosed the project’s 2008 ESIA and its addenda, the March 2009 RCA, the final version of the alternatives analysis as approved by the Lenders, and the first version of the CIA.<sup>40</sup>

The ESRS describes IFC’s review of information received by key stakeholders.<sup>41</sup> It states that the series of studies prepared by the client to ensure that the scope, content, and quality of the assessment of E&S risks and impacts, was consistent with the Lenders’ requirements, international good practice, and took into consideration the concerns of potentially affected stakeholders. The ESRS also notes that these studies were developed in close consultation with the independent consultants, and representatives from IFC and other Lenders.

Relevant to the issues raised in the complaints, the ESRS notes that the investment was expected to have impacts which must be managed in a manner consistent with Performance Standards 1 to 6. With regards to potential impacts of the project on cultural heritage, the ESRS states that PS8 does not apply, as the project will not affect any known archeological, cultural heritage or paleontological sites.<sup>42</sup>

According to the ESRS, IFC established there to be broad community support (BCS) for the project. IFC further noted that continuation of this level of support would be dependent on (i) a continuous high-quality engagement process; (ii) managing expectations regarding local employment; (iii) effective contractor management; (iv) effective influx management; and (v) participatory monitoring.<sup>43</sup> IFC’s determination of BCS is further discussed in section 3.3 of this report.

Along with the ESRS, IFC disclosed the ESAP agreed with the client, which sets out actions to be undertaken by the client during construction and operation of the project.<sup>44</sup>

In October 2013, the project was presented to the IFC Board and approved. A loan agreement was signed in December 2013. The financing agreement between the client and the lenders required compliance with lenders E&S requirements, including the IFC Performance Standards, E&S reporting from the client to the lenders and E&S compliance monitoring by an Environmental and Social Monitoring Consultant (ESMC). The ESAP was also included in the financing agreement, and compliance with the deadlines stated in it were conditions of disbursement requiring an Environmental and Social Compliance Certificate to be delivered by the ESMC. IFC’s first disbursement was processed in March 2014.<sup>45</sup>

At the time of first disbursement, a number of ESAP items which were initially anticipated to be completed before disbursement, or before the start of construction, were pending. However, most items were later completed as project construction started. Regarding actions to be taken in

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<sup>39</sup> IFC Environmental and Social Review Summary, Alto Maipo, Project #31632 - <https://bit.ly/2whHdKK>

<sup>40</sup> *Ibid.* – Available under “Client Documentation”

<sup>41</sup> According to the ESRS, stakeholders included representatives of 16 of the 28 communities represented by the *Union Communal* of San José de Maipo, who are located in the project’s area of influence, and representatives of those that publicly expressed opposition to the project at the time of the appraisal visit in April 2012 (i.e. *Coordinadora Ciudadana Rios del Maipo, Asociacion de Canalistas del Rio Maipo, Comunidad de Agua de Riego* from the Community of Manzano, *Junta de Vigilancia del Rio Maipo*). The visit also included interviews with families located along the access road to the *El Volcan* area.

<sup>42</sup> IFC Environmental and Social Review Summary, Alto Maipo, Project #31632 - <https://bit.ly/2whHdKK>

<sup>43</sup> *Ibid.*

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

<sup>45</sup> IFC Summary of Investment Information, Alto Maipo, Project #31632 - <https://bit.ly/2VacSpO>

anticipation of the project's operational phase, completion dates were updated as the project was experiencing delays on the timeline that was initially envisaged.

### **Conclusion**

IFC's pre-investment E&S review of the project involved the support of a third-party consultancy with relevant expertise, as well as coordination with other lenders, which included sharing information and resources. In the context of large and complex projects like the Alto Maipo HPP, this approach to E&S due diligence was consistent with guidance of IFC's Environmental and Social Review Procedures (ESRP) for IFC staff to "consider whether additional E&S review resources are needed beyond those provided by [IFC staff]."<sup>46</sup> CAO notes that, consistent with guidance from the ESRP, IFC's pre-investment review relied on the external consultant's due diligence findings, particularly to identify the 'Critical Path Gaps', which were expected to be addressed prior to financing, based on a preliminary review of the project against international standards and stakeholder feedback. Also consistent with the ESRP and with the requirements of the IFC Sustainability Policy (para. 28),<sup>47</sup> IFC developed an ESAP which was included in the financing agreements between the client and the lenders. The ESAP was prepared on the basis of the external consultant's due diligence findings and in coordination with other lenders. Thus, with specific exceptions noted in section 3, CAO finds that IFC's pre-investment E&S review of the project met the Sustainability Policy requirement of being "appropriate to the nature and scale of the activity and commensurate with the level of environmental and social risks and/or impacts." (para. 6)

### **2.3. IFC's Supervision of the Project**

IFC's supervision of the project commenced in 2014, with the assistance of ERM acting as the ESMC for the Lenders. Throughout supervision, the ESMC provided quarterly reports to the Lenders, based on the client's reporting through Environmental and Social Compliance Reports (ESCR), site visits and meetings with various stakeholders. The ESMC provided updates on the advancement of the project, its compliance with the ESAP, and recommendations to ensure ongoing compliance and/or corrective measures when necessary. IFC's supervision is also documented in IFC's own supervision site visits back-to-office reports and reviews of the ESMC's reports and the client's ESCR.

IFC conducted its first supervision visit to the project in March 2014, after its first disbursement and as project construction was starting. Other IFC supervision visits were conducted in December 2014, May 2015, March 2017, and June 2017. Details of IFC's supervision activities in relation to the issues covered within the scope of this compliance investigation are further discussed in section 3 of this report.

Of relevance to this investigation, CAO notes that in July 2015, the *Coordinadora Ciudadana Ríos del Maipo* and *Ecosistemas* (Alto Maipo-01 complainants) sent a letter to the Lenders raising concerns about the E&S risks and impacts of the project. In response to this letter, in August 2015, the Lenders and the ESMC prepared a point-by-point assessment of the concerns raised, noting that these concerns had been previously identified as potential project impacts or raised by stakeholders, and had been investigated and analyzed in detail. The response further notes that specific meetings were held with the *Coordinadora* as well as with directly affected stakeholders in the project area to obtain a better understanding of the issues raised. Moreover, it outlines specific technical studies that were conducted by the client as well as by members of

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<sup>46</sup> IFC ESRP 3, para. 2.1, version 7, April 2013

<sup>47</sup> IFC, Sustainability Policy, para. 28: "To ensure the business activity meets the Performance Standards, IFC makes these supplemental actions (Environmental and Social Action Plan) necessary conditions of IFC's investment."

the *Coordinadora*, all of which were reviewed independently on behalf of the Lenders. In particular, it addresses concerns related to the following issues:

- Impacts on glaciers and desertification;
- Impacts on water rights;
- Impacts on riverbed erosion;
- Impacts on underground water;
- Impacts on tourism and protected areas;
- Impacts from increased traffic;
- Concerns regarding the ESIA approval process, including consultation.

From 2015 onwards, acknowledging that continued opposition to the project and protests by certain groups as a concern that could cause delays in construction, IFC flagged the issue of managing organized opposition to the project as an important topic for future supervision, as well as the implementation of several studies required from the client.

Relevant to the issues raised in the Alto Maipo-02 complaint, in its review of the client's reporting for 2016, IFC noted that several cases of sexual harassment in the workplace had been reported by project employees or contractors. The client also confirmed that allegations of sexual harassment had been raised and not reported through the Grievance Mechanism. IFC noted that the client had committed to conduct a pro-active investigation of sexual harassment on the worksites. IFC's performance in relation to the issues raised in the Alto Maipo-02 complaint are further discussed in section 3.5 of this report.

In January 2017, the client advised the Lenders that Chile's Environmental Oversight Authority (*Superintendencia del Medio Ambiente* – SMA) had initiated administrative procedures against the project related to a list of 14 alleged non-compliances. These alleged non-compliances were the result of several audit processes carried out by the SMA over a period of four years, and related to the terms and conditions of the RCA. Non-compliances identified by the SMA included some construction works initiated without adequate authorization, excess cutting of trees and insufficient revegetation, exceedances in volumes of industrial waste in some treatment plants, vehicle movements outside the approved hours under the RCA, events of use of explosive charges without an approved monitoring program for noise and vibrations, among others. Although the client disagreed with several charges and claimed several others had already been resolved, it agreed to file a compliance program with the SMA to avoid further proceedings.

The ESMC reported that, in February 2017, the client submitted a compliance program to SMA to address these claims. Corrective actions proposed in the compliance plan were considered acceptable by the ESMC and the Lenders, and were pending approval by the authorities. IFC drew similar conclusions following a supervision visit in June 2017, finding that the E&S management of the project was overall in compliance with IFC standards and at-approval ESAP requirements.

CAO notes that the compliance program was approved by the SMA in April 2018. The compliance program, which was negotiated between the client and the SMA, consists of 64 actions and includes a plan for continuous monitoring.<sup>48</sup>

In 2018, IFC made a decision to sell its exposure to the project to another bank. This decision was made in the context of significant cost overruns and delays in construction.<sup>49</sup> Also in 2018, additional costs overruns resulted in another financing restructuring, in which IFC decided not to

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<sup>48</sup> SMA, Sistema de Reporte de Programas de Cumplimiento, AES Gener – Alto Maipo Programa de Cumplimiento, April 24, 2018 - <https://bit.ly/2UOLbEf>

<sup>49</sup> See La Tercera, "AES Gener sella fondos para Alto Maipo y costo sube a US\$ 2.500 mills" – <https://bit.ly/34cu2Ya>

participate.<sup>50</sup> In light of concerns about the potential for additional cost overruns due to the uncertainty regarding the project's construction schedule, IFC sold its outstanding exposure and therefore exited the project in May 2018.

This CAO compliance investigation considers IFC's performance in relation to the project up to IFC's exit in May 2018. Any later events or actions by the clients and/or other Lenders fall out of the scope of this compliance investigation.

### **Conclusion**

IFC's approach to supervision including coordination with other lenders and the support of a group of external experts acting as the Environmental and Social Monitoring Consultant (ESMC) for the lenders. The ESMC was responsible for conducting field visits to the project area, reviewing the client's E&S reporting, and assessing the client's performance against lenders requirements and the ESAP. These activities were summarized in quarterly reports to the lenders.

The guidance provided by IFC's ESRP notes that "When several lenders are financing large and/or complex projects they often agree on hiring E&S consultants to conduct independent supervision activities on their behalf. [Lenders] follow up on any outstanding issues with the client as necessary. [IFC staff] can rely on this source of supervision information to fulfill [their] responsibilities."<sup>51</sup> IFC's decision to rely on the use of an ESMC to carry out supervision activities was in line with ESRP guidance. A key premise for this compliance investigation is that such an approach is consistent with IFC supervision requirements only provided that IFC reviews the ESMC's reporting against the requirements of the Performance Standards, follows up with the client on matters of compliance with IFC requirements and the ESAP, and continues to fulfil its supervision duties as required by the Sustainability Policy, including the possibility of exercising remedies in response to non-compliance. As such, while CAO's analysis relies to a large extent on reporting from the ESMC to the lenders, conclusions and findings are reached as to IFC's performance in reviewing and supervising the project.

CAO further notes that IFC's advice to the client throughout supervision relied on an "adaptive management" framework in relation to a number of E&S risks and impacts. The adaptive management approach was designed to monitor – and reassess as needed – in particular issues regarding the construction of tunnels and related geological uncertainties, as well as issues related to aquatic ecology and ecological flows, labor influx and potential cumulative impacts of the project. The adaptive management approach left the possibility for the client to implement additional prevention and mitigation measures as project construction advanced, and later on, during operation, should changing project conditions, risks or impacts become evident. Provisions for adaptive management were also included in the RCA granted by Chilean authorities to the project. An adaptive management approach is consistent with PS1 (para. 16) which provides for the client's management program to "recogniz[e] the dynamic nature of the project [and] be responsive to changes in circumstances, unforeseen events, and the results of monitoring and review" and can be applied when aspects of project E&S risks or impacts cannot reasonably be fully assessed and planned for at the time an ESIA is prepared. As further detailed in section 3, however, CAO finds that this approach was not applied consistently to a range of issues during the time of IFC's involvement in the project. CAO further notes that adaptive management is not substitute for prior assessment of project E&S risks and impacts in accordance with good international industry practice as required by PS1 (para.7).

Finally, CAO notes that a number of additional assessments required by the lenders were expected to be carried out by the client during the construction phase of the project – i.e. after project approval by IFC – in anticipation of the operational phase. This was the case, for example,

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<sup>50</sup> See Reuters, "AES Gener to restructure Chile hydro project for over \$3 billion", May 8, 2018 – <https://bit.ly/360Ste5>

<sup>51</sup> IFC ESRP 6, para. 2.8, version 7, April 2013

in relation to the assessment of impacts on recreational water users, the assessment of changes in sediment transport dynamics, and the assessment of impacts of labor-influx on affected communities. IFC's Sustainability Framework does not prevent the inclusion of specific components of the E&S assessments as ESAP items to be carried out during project supervision so long as: (a) they do not deal with E&S risks of such magnitude as might prevent IFC from investing in the project or otherwise effect the viability of the project,<sup>52</sup> and (b) they are carried out within a timeframe that supports the application of the "mitigation hierarchy" to identified impacts.<sup>53</sup> In the case of the Alto Maipo project, however, as discussed further in section 3, some of these assessments have been delayed by several years and were ongoing at the time of IFC's exit from the project in May 2018. In relation to these issues, CAO thus found that IFC had not ensured that the required assessments were carried out and appropriate management measures defined prior to its exit.

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<sup>52</sup> See Sustainability Policy (2012) para. 22.

<sup>53</sup> See Sustainability Policy (2012) para. 6.

### 3. CAO Compliance Analysis and Findings

The previous section of this report described in general terms IFC's pre-investment review and supervision of the project. This section provides CAO's analysis and findings about IFC's performance in relation to the issues raised by the complainants and included in the scope of this compliance investigation, as per the TOR published by CAO in August 2018.<sup>54</sup>

This section describes IFC's pre-investment review and supervision of each issue included within the scope of this investigation, and makes compliance findings as to IFC's performance regarding:

- IFC's review of the ESIA process: area of influence, alternatives analysis and cumulative impact assessment
- IFC's review and supervision of the project's compliance with national law
- IFC's determination of Broad Community Support (BCS), review and supervision of the project's consultation and information disclosure activities, and grievance mechanism
- IFC's review and supervision of the project's approach to climate change impacts
- Harassment on the workplace and worker grievance mechanism
- Impacts of waste rock disposal on soil and water pollution
- Impacts of tunneling activities on groundwater
- Impacts on air quality
- Impacts of noise and vibrations
- Impacts of labor influx on project-affected communities
- Resettlement, economic displacement, and restrictions on land use
- Habitat classification, endangered species, and ecological flow
- Impacts on protected areas, including glaciers
- Impacts on ecosystem services, including recreational water users
- IFC's determination of applicability of Performance Standard 8 on cultural heritage

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<sup>54</sup> CAO, Terms of Reference for Compliance Investigation of IFC, Alto Maipo-01 & 02, August 2018 – <https://bit.ly/2vJd06J>

### 3.1. IFC's Review of the Environmental and Social Impact Assessment (ESIA) Process: Area of Influence, Alternatives Analysis and Cumulative Impact Assessment

Issues Raised by the Complainants	IFC Requirements
<ul style="list-style-type: none"> <li>• Claim that the ESIA defines a narrow area of influence, which does not consider impacts downstream of the restitution point and broader impacts on the Maipo river basin and Santiago Metropolitan Region's water system.</li> <li>• Claim that the ESIA fails to assess alternatives, including the "no project" alternative, and that it does not assess cumulative impacts.</li> <li>• Allegations of lack of independence of the consultancy which carried out additional studies because it was paid by the company.</li> </ul>	<ul style="list-style-type: none"> <li>• "...[E&amp;S] risks and impacts will be identified in the context of the project's area of influence. This area of influence encompasses, as appropriate:               <ul style="list-style-type: none"> <li>- The area likely to be affected by: (i) the project and the client's activities and facilities that are directly owned, operated or managed (including by contractors) and that are component of the project (ii) impacts from unplanned but predictable development caused by the project that may occur later or at a different location; or (iii) indirect project impacts on biodiversity or on ecosystem services upon which Affected communities' livelihoods are dependent.</li> <li>- Associated facilities, which are facilities that are not funded as part of the project and that would not have been constructed or expanded if the project did not exist and without which the project would not be viable.</li> <li>- 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 at the time the risks and impacts identification process is conducted." (PS1, para.8)</li> </ul> </li> <li>• "For greenfield developments or large expansions with specifically identified physical elements, aspects, and facilities that are likely to generate potential significant [E&amp;S] impacts, the client will conduct a comprehensive [ESIA], including an examination of alternatives, where appropriate." (PS1, para. 7, fn11)</li> <li>• "The process of identification of risks and impacts will consist of an adequate, accurate, and objective evaluation and presentation, prepared by competent professionals. ... clients may be required to involve external experts to assist in the risks and impacts identification process." (PS1, para. 19)</li> </ul>

#### CAO Analysis and Findings

##### Area of Influence

The project ESIA defines the area of influence of the project as the geographical and territorial surface of each of the components that can potentially be affected by the project. As per the requirements of Chilean law on environmental impact assessment, it distinguishes a direct and an indirect area of influence.<sup>55</sup> However, this distinction does not necessarily imply different courses of action when it comes to identifying and mitigating E&S risks and impacts. The area of influence includes all project-related infrastructure (new access roads, bridges, intake structures, stream crossings, forebays, access tunnel openings, etc.), temporary facilities (worker camps, construction zones), as well as ten settlements and villages located along the

<sup>55</sup> The direct area of influence generally encompasses the aboveground areas physically affected by construction works and project operations

Volcán, Maipo, Yeso, and Colorado rivers between the project intake and discharge structures, and/or located in the vicinity of construction zones and worker camps.<sup>56</sup>

Following an initial review of the ESIA, the Lenders required the client to expand the area of influence of the project in the context of the preparation of a Cumulative Impact Assessment (CIA), to ensure that the total area of influence of the project would meet the Lenders' requirements, and therefore complement the identification of potential project risks and impacts. It was required that the area of influence as defined in the ESIA, plus 5km downstream of the project discharge, would be considered. This was based on the definition provided by IFC PS1 para. 8,<sup>57</sup> which includes the project's direct footprint, ancillary facilities and associated components, any indirect effects and any cumulative impacts from existing or future planned projects, with a basin-wide approach.<sup>58</sup>

As indicated in the ESDD, the area of influence, which extends 5 km downstream of the project discharge, was considered adequate based on the characteristics of the Maipo river watershed. It was noted that the flow of the Maipo river is significantly reduced approximately 4.5 km downstream of the project discharge due to intake structures for the *Aguas Andinas* water system (water utility providing for the city of Santiago) and two irrigation associations intake structures. As such, it was considered that any downstream effects generated by the project would be restricted primarily to the 4.5 km immediately downstream of the project discharge.

***While the definition of the project's area of influence under Chilean standards identified a direct and an indirect area of influence, this distinction is not a requirement from the Lenders standards perspective, which require the project to consider the total area of influence when identifying potential project risks and impacts and proposing mitigation measures. After an initial review of the ESIA, the Lenders requested that the client expand the project area of influence to meet the definition of IFC PS1 para. 8, including the area downstream of the restitution point, in order to include downstream impacts in the project's cumulative impacts assessment. A rationale was provided in the ESDD as to why extending the area of influence to 5 km downstream of the project discharge was considered adequate. CAO thus finds that IFC's review and advice to the client in relation to the definition of the project's area of influence was consistent with PS1, para. 8 requirements.***

#### Cumulative Impact Assessment

As noted above, the Lenders required that the client prepare a CIA prior to financing approval, considering it as one of the 'Critical Path Gaps' to be addressed. An initial draft of the CIA report was disclosed on the Lender's websites in October 2012 and later updated to address comments from IFC and from stakeholders.<sup>59</sup> The lenders requested the client to include the CIA results in the "Critical Gap Disclosure, Consultation and Dialogue Plan" and therefore share its results with the community in 2013. The CIA report noted that the process involved the participation of an international consultant with extensive experience assessing projects' cumulative effects. IFC further reported to CAO that the Lenders contributed to the preparation of TOR and the hiring process for the consultant.

<sup>56</sup> These communities include San Jose de Maipo, El Canelo, El Manzano, San Gabriel, El Alfalfal, Los Maitenes, El Volcan, Lo Valdes, El Romeral, and Banos Morales.

<sup>57</sup> See IFC Performance Standard 1, para. 8 - <https://bit.ly/3dv52i0>

<sup>58</sup> The Lenders noted that the new geographic boundaries of the project include: (i) the Alto Maipo Basin and project components; (ii) project and other projects; (iii) protected areas and project; (iv) socio economic area of influence; (v) surface water and sediments area of influence; (vi) traffic impact area of influence and (vii) general map combining all the above.

<sup>59</sup> IFC Environmental and Social Review Summary, Alto Maipo, Project #31632 - <https://bit.ly/2whHdKK>; AES Gener, Proyecto Hidroelectrico Alto Maipo, Evaluacion de Efectos Acumulativos, June 2013 – Available at <https://bit.ly/2UJcC1Z>

The CIA identifies a list of valued ecosystem components (VEC) and prioritizes the assessment of cumulative effects on the following VECs of importance: surface hydrology, sediment dynamics, local community, and landscape. Three criteria had to be met for VECs to be selected for assessment: VEC of regional importance; VEC affected by the project; and VEC affected by other activities. The CIA report states that the exclusion of some VECs, such as air quality, did not imply that they were not important in the context of the project or that the project has no effects over that VEC, but is justified by the VEC not meeting one of the three criteria for assessment of cumulative effects. The CIA further evaluated the effects of climate change as a cross-cutting topic for all VECs.<sup>60</sup>

The ESDD report concluded that the CIA follows a methodology that is internationally accepted, and includes a quantitative and qualitative analysis of cumulative impacts, taking into consideration issues raised by stakeholders during the ESIA process (though noting that no further consultation was conducted in the context of the CIA), as well as recommendations from the Lenders' preliminary ESDD. It is noted that the CIA confirmed many of the existing and proposed mitigation measures for the potential project impacts identified.

However, it was also noted that the effects of future project expansions, as well as 'known' and 'reasonably expected' future projects described in the CIA would need to be further assessed as more technical information about such projects becomes available. The ESDD report recommended that additional assessments and monitoring program be carried out to complement the findings of the CIA, particularly in relation to project impacts on water uses, sediment transport, ecological flow, and ecosystem services.

***Noting shortcomings in the identification and assessment of potential project risks and impacts, the Lenders required the client to conduct a CIA to meet international standards. The Lenders participated in the selection of a competent external expert to carry out the CIA, as required by PS1 para. 19. However, CAO notes that no additional consultation with relevant stakeholders was done in the context of the CIA study to identify any recent or recurring issues of concern. PS1 Guidance Notes indicate that “a CIA enlarges the scale and timeframe of the assessment”, and that “because a CIA transcends a single project development, the resulting potential management or mitigation measures typically require participation from a larger and more diverse number of stakeholders ... Furthermore, the active participation of government authorities is typically required to assess the incremental contribution of each project to the cumulative impacts” (PS1, GN40). IFC did not require the client to carry out further consultation in the context of the preparation of the CIA, therefore in relation to the CIA, CAO finds that IFC did not ensure compliance with PS1 requirements for the client to “undertake a process of consultation in a manner that provides the Affected Communities with opportunities to express their views on project risks, impacts and mitigation measures, and allows the client to consider and respond to them.” (PS1, para. 30)***

#### Alternatives Analysis

The ESIA did not include a documented alternatives analysis, and the Lenders identified this shortcoming as one of the 'Critical Path Gaps'. The client was required to prepare an alternatives analysis study to document the five alternatives that had been considered over 22 years of the project development phase (plus seven alternatives for the transmission line project), and to include a no-project scenario. An initial report was shared by the client with the Lenders in June 2012, and the final Alternatives Analysis Report was completed in June 2013 taking into consideration comments from the Lenders and providing detailed explanation of the alternatives considered.<sup>61</sup> The ESDD report concludes that the Alternatives Analysis Report is aligned with Lenders standards and provides sufficient evidence that alternative design, location, and technology options have been studied and modified to avoid or minimize E&S and cultural heritage impacts, and address stakeholder concerns. Further, it was noted that between 2006

<sup>60</sup> *Ibid.*

<sup>61</sup> AES Gener, Proyecto Hidroeléctrico Alto Maipo, Análisis de Alternativas para el Proyecto, May 2013 – Available under “Client Documentation” at IFC Environmental and Social Review Summary, Alto Maipo, Project #31632 - <https://bit.ly/2whHdKK>

and 2008 the client made significant changes to the project design based on input received during ESIA consultations. IFC also indicated that engineering modifications were made to the Las Lajas forebay responding to concerns regarding impacts on the El Alfalfal community, in order to increase the distance of project facilities from the community to 75 meters instead of 35 meters as originally planned.

***For projects including “specifically identified physical elements, aspects, and facilities that are likely to generate potential significant E&S impacts”, PS1 requires that the ESIA process includes an examination of alternatives where appropriate (PS1, para. 7, fn11). The analysis of alternatives is essential to the application of the mitigation hierarchy which requires “the avoidance of impacts over minimization, and, where residual impacts remain, compensation/offset, wherever technically and financially feasible” (para. 14). As required by PS1, the Lenders required an alternatives analysis as none was included in the project ESIA. The study was completed in June 2013 and its content was considered by the Lenders to meet international standards. This conclusion was reached on the basis of the ESDD report, which provides details regarding changes in project design that were made based on stakeholder feedback, economic analysis of project alternatives, technology options, and alternative transmission line routes. CAO notes that marginal modifications were made to the design of the Las Lajas forebay in order to reduce impacts on the community of El Alfalfal. However, the Alternatives Analysis Report does not consider alternative locations for the Las Lajas forebay which may have further reduced or avoided the otherwise significant impact that the project was expected to have on the community during the construction phase. CAO notes IFC’s view that this design change was based on a comprehensive review of alternatives, however, no documentation of this analysis was provided. In not ensuring a comprehensive alternatives analysis for this specific and potentially high impact element of the project, CAO finds that IFC’s review of the client’s ESIA process fell short of good international industry practice and thus did not meet the requirements of PS1 para. 7.***

### 3.2. IFC's Review and Supervision of the Project's Compliance with National Law

Issues Raised by the Complainants	IFC Requirements
<ul style="list-style-type: none"> <li>Claim that changes in project design were made after the RCA was granted by national authorities, and that new construction was initiated without being adequately permitted.</li> </ul>	<ul style="list-style-type: none"> <li>“In addition to meeting the requirements under the Performance Standards, clients must comply with applicable national law, including those laws implementing host country obligations under international law.” (PS1 para. 5)</li> <li>“If the client fails to comply with its environmental and social commitments as expressed in the legal agreements and associated documents, IFC will work with the client to bring it back into compliance, and if the client fails to reestablish compliance, IFC will exercise its rights and remedies, as appropriate.” (Sustainability Policy, para. 24)</li> </ul>

#### CAO Analysis and Findings

##### Pre-Investment Review

IFC's pre-investment review documentation indicated that all key permits required for the construction and operation of the power plant and transmission lines had been granted through the RCA, including environmental and civil works permits from the water authority. All water rights required for the project had been secured and consolidated. IFC also noted that various lawsuits had been brought against the project, its water rights and the environmental licensing process.

During the last quarter of 2012, project opponents presented claims to various authorities. This resulted in three inspections by national authorities to the project site, and a commitment from the company to respond, in particular by ensuring the company would regularize the permits being disputed. Subsequently, the Lenders and the client agreed to include in the ESAP a requirement for the client to establish and maintain a registry of permits and monitor their compliance with national legal requirements. This was aimed at ensuring that the project obtains all necessary permits prior to initiating activities.

***At pre-investment stage, IFC was aware that the client carried out some activities prior to obtaining the necessary permits. As a consequence, the Lenders included an ESAP requirement for the client to put in place a permit registry to monitor the project's compliance with national law. This registry was implemented by the agreed deadline, i.e. financial closing. CAO thus finds that IFC's review of the project's approach to compliance with national law, and measures taken to monitor it, were consistent with PS1, para. 5 requirements.***

##### Supervision

During early supervision, the ESMC confirmed that the client had established and maintained a permit registry with the status of all permits and authorizations required. It further recommended that the client develop a procedure to evaluate the steps to be taken from a permitting perspective as the project advanced, particularly considering that some project adjustments were expected to require consultation with national authorities (through *Consultas de Pertinencia* – CdP, see section 2.1), and potentially addendums to the ESIA. This was a high priority recommendation. By the following supervision exercise, the ESMC reported that the client hired a professional responsible for maintaining the permit registry, and aligning

permitting requirements to the project execution plan and schedule. Additionally, the client carried out an assessment of project changes that would require a CdP. By 2015, the client had developed and was implementing a compliance tracking matrix for monitoring compliance of the over 700 requirements contained in the RCA requirements and permits, and the Lenders included in the ESAP a requirement for the client to confirm in writing if a CdP would be needed for certain activities. Following ESMC supervision reports indicate that the client had informed the Lenders and the ESMC of the submission of CdP to the SEA.

Nevertheless, throughout much of project supervision, the ESMC reported multiple concerns that the client was initiating activities prior to having adequate permits in place:

- In Q2 2014, the client reported some construction activities were conducted without a permit. The ESMC required the client to provide a detailed report explaining where activities were underway or completed and permits pending. The client was expected to propose an action plan to regularize the process and the legal risk of non-compliances, if any.
- In Q3 2014, the ESMC noted that legal action was filed against the client alleging installation of office containers without a permit. Regarding regularization of permits for work already carried out (construction of El Yeso, Aucayes and Manzanito bridges), the client indicated that authorization by some agencies was not required at the time of construction and that permitting later became a requirement. The client further indicated that it was normal practice to start construction works before formal authorizations are granted, with no risk of losing existing environmental sectoral permits within the RCA.
- In Q3 2016, the ESMC reported that some facilities had been operating without the required permit, such as a storage facility, and urged the client to address the issue with relevant authorities.
- In Q4 2016, the ESMC reported that the client received several sanctions from Ministerial Regional Secretary (SEREMI) and Environmental Oversight Authority (*Superintendencia del Medio Ambiente* – SMA), including some related to operating activities without the necessary permits (e.g. waste water treatment plant, equipment transport and construction works in 2015). As indicated in section 2, The ESMC noted that the client agreed with SMA on a compliance program containing corrective actions to be implemented to address the non-compliances.

***CAO recognizes the Lenders' efforts to ensure that the client put in place a permit registry and a compliance tracking system for monitoring the compliance with RCA and permitting requirements. From pre-investment stage and throughout supervision, however, the Lenders were made aware of repeated instances of project activities being carried out prior to obtaining necessary permits. These issues were flagged by the ESMC to be addressed as high priority items, and several non-compliances were confirmed by national authorities. Though actions were taken to strengthen the client's permit tracking systems in 2015, these were not sufficient to prevent further construction permitting breaches in 2016. As a result CAO finds that during the period 2014 to 2016, IFC did not have assurance that the client was full compliant with national legal requirements in relation to permitting as required under PS1, paras 5 and 24. CAO notes that no further permitting noncompliance was reported in 2017 through to IFC's exit from the project in May 2018.***

### 3.3. IFC's Determination of Broad Community Support (BCS), Review and Supervision of the Project's Consultation, Information Disclosure Activities, and Grievance Mechanism

Issues Raised by the Complainants	IFC Requirements
<ul style="list-style-type: none"> <li>• Lack of meaningful consultation around the project, and claim that stakeholder concerns were not properly responded to during the ESIA process</li> <li>• Difficulties in accessing information related to the project</li> <li>• Lack of an effective grievance mechanism</li> <li>• Claim that the project negatively affected social cohesion within the affected communities</li> </ul>	<ul style="list-style-type: none"> <li>• “The client will undertake a process of consultation ... based on prior disclosure ... of relevant, transparent, objective, meaningful and easily accessible information ... [in a format that is] understandable to affected communities” (PS1, para. 30).</li> <li>• “For projects with potentially significant adverse impacts on Affected Communities, the client will conduct an Informed Consultation and Participation (ICP) process [that] involves [an] in-depth exchange of views and information, and an organized and iterative consultation, leading to the client’s incorporating into their decision-making process the views of the Affected Communities on matters that affect them directly” (PS1, para. 31).</li> <li>• “The client will establish a grievance mechanism to receive and facilitate resolution of concerns and grievances. ... It should seek to resolve concerns promptly, using an understandable and transparent consultative process, ... and at no cost.” (PS1, para. 35).</li> <li>• “Through its own investigation, IFC will determine whether the client’s community engagement is one that involves [ICP] and enables the participation of the Affected Communities, leading to Broad Community Support for the business activity by Affected Communities.” (Sustainability Policy, para. 30).</li> <li>• “[BCS] is a collection of expressions by Affected Communities, through individuals or their recognized representatives, in support of the proposed business activity. There may be BCS even if some individuals or groups object to the business activity” (ESRP 4 para . 2.12, Version 7, April 2013)</li> <li>• “IFC will disclose a summary of how it made its BCS determination with the ESRS. ... After Board approval, ... IFC continues to monitor the client’s ICP process as part of its portfolio supervision” (ESRP 4 para . 2.12, Version 7, April 2013)</li> <li>• “For each investment...IFC updates the ESRS or SII with the following environmental and social information, as it becomes available: For Category A and B investments, IFC will also make available, if applicable: ... (d) Third-party monitoring reports, where required by IFC, in accordance with the Performance Standards” (AIP 41 (d)).</li> </ul>

#### CAO Analysis and Findings

##### Pre-Investment Review

The ESRS notes that consultations and disclosure activities during the preparation of the ESIA included 40 meetings with government authorities, 70 meetings with communities and their representatives within the area of influence as defined in the ESIA, and meetings with key civil society stakeholders. All consultation and disclosure meetings were recorded in a Consultation and Disclosure Report, as per Chilean procedures. As a result of public consultation and disclosure activities, parts of the project design were modified to incorporate stakeholder feedback. The ESRS further notes

that a community relations office was established in San Jose de Maipo to serve as the primary point of contact between the project and stakeholders in the area of influence.<sup>62</sup>

During the ESDD, however, it was noted that some stakeholders felt that the company had not meaningfully engaged with stakeholders subsequent to obtaining the RCA. From 2008 to 2012, the company engaged with stakeholders in an *ad hoc* fashion. In 2012, as a result of the continued expression of concerns and opposition to the project by some stakeholders, as well the Lenders identification of stakeholder engagement as an overarching 'Critical Path Gap', the company developed a Stakeholder Engagement Strategy to improve communication with key stakeholders.

The ESDD report indicated that, prior to the ESDD process, stakeholder identification, assessment, engagement planning and public communication procedures for the project were lacking. As a result of the ESDD, the project has conducted and established the following stakeholder engagement planning tools: (i) a stakeholder mapping and analysis; (ii) a stakeholder engagement plan (SEP); and (iii) a grievance mechanism (GM). These three elements were completed in August 2012, reviewed by the Lenders and the ESDD consultant, and considered in line with international standards.

As part of the client's commitments to stakeholder engagement and to monitor social performance, the project's social management system included three monitoring programs: (1) a social indicators monitoring program (*Monitoreo de Indicadores Sociales*) as required by the RCA; (2) a recreational water users monitoring program (further discussed in section 3.14); and (3) a participatory monitoring program to review compliance with key E&S indicators.

The ESDD report included key recommendations from the Lenders to increase the scope, utility and credibility of the respective components of the social monitoring program. In particular, it was recommended that: (1) the social indicators monitoring program include additional indicators related to the potential socio-economic impacts of the 'critical gap' issues, particularly impacts to water uses and water rights, sediment transport and land acquisition, and that results be disclosed; (2) the recreational water users consultation process and monitoring be initiated; and (3) the scope of participants in the participatory monitoring program be expanded and indicators relevant to the 'critical gaps' issues be included as part of the monitoring program.

***CAO notes that IFC's pre-investment review of the project's stakeholder engagement and information disclosure process identified substantial gaps with PS1 requirements in the client's approach to stakeholder engagement up to 2013, considering stakeholder engagement as an overarching 'Critical Path Gap' for the project. The ESDD provided recommendations for the client to put in place procedures and systems in line with Lenders standards, prior to financing approval. CAO finds that the Lenders' recommendations for the client to strengthen the project's community relations capacity, to formalize an approach to stakeholder engagement through a SEP and a social management system, and to develop and implement a GM for the project and its contractors, were consistent with the requirements of PS1.***

#### *IFC's Determination of Broad Community Support*

As required for category A projects, IFC conducted a review of Informed Consultation and Participation (ICP) and Broad Community Support (BCS) prior to Board approval. This consisted in a review of documentation provided by the client, the ESDD report, and interviews with key stakeholders during a field visit in August 2013, including water users, land owners, chamber of commerce and tourism, representatives from communities within the area of influence, and elected leaders. The BCS assessment was conducted by IFC staff with the support of an external consultant.

<sup>62</sup> IFC Environmental and Social Review Summary, Alto Maipo, Project #31632 - <https://bit.ly/2whHdKK>

Following IFC Guidance, a BCS review entails two streams: (1) an assessment of whether the client's engagement with affected communities involved free prior informed consultation leading to informed participation; and (2) an assessment of the level of support and dissent related to the project among affected communities.<sup>63</sup>

IFC's assessment found that the records of the consultation process related to the project indicate that the process was in line with the principles of ICP. IFC considered that the reengagement process initiated in 2013 is well documented and indicates that despite significant consultation, community members and stakeholders within the area of influence have questions and concerns mainly related to the project induced impacts during construction such as influx management, traffic noise and dust and during operation such as impact on availability of water and water levels. IFC indicated that the consultation process has led to changes in project design, and that the project had incorporated stakeholder feedback in the proposed mitigation, management and compensation framework. IFC noted that the establishment of a community relations team was recognized by affected stakeholders, and seen as an improvement on the company's perceived legacy of insufficient information disclosure. IFC found that stakeholders increasingly recognize they have access to detailed information regarding the project and its potential impacts. IFC found no evidence of external manipulation, incentives, interference, coercion or intimidation in consultation and disclosure activities, or in the GM.

IFC further reported that in 2013, a written agreement was signed with representatives from the community of El Alfalfal and with the irrigation association El Manzano, both located within the area of influence. These agreements outline the scope of impacts, mitigation measures and compensation. Similar agreements were reported to be in the process of being negotiated with other affected communities.

Considering the consultation and information disclosure records reviewed as part of its BCS assessment, IFC concluded that the communities within the area of influence of the project largely supported the project despite concerns related to project-related impacts during construction. It also acknowledged, however, that there was a well-established opposition to the project through civil society organizations, who beyond raising concerns about the E&S impacts of the project, state that they are opposed to its development under any circumstances. IFC indicated that it had met with the leadership of *La Coordinadora Ciudadana Rios del Maipo* in April 2012, and their key concerns had been communicated to IFC and the client on a regular basis. Some of the 'Critical Path Gaps' were based on these concerns. The project had further tried to initiate a dialogue through the engagement of a third-party facilitator, but it was reported that there had been no interest from these groups to enter into a dialogue.

IFC's assessment noted that ongoing efforts would therefore be needed to maintain this level of support and potentially increase the overall support through (i) continuous high-quality engagement process, (ii) managing expectations regarding local employment, (iii) effective contractor management, (iv) effective influx management and (v) participatory monitoring. These requirements were included in the ESAP.

IFC's BCS assessment is clear in concluding that the communities within the project area of influence are largely in support of the project. Those opposing the project are described variously as a minority and a small group of local stakeholders. However, IFC's assessment provides little detail in terms of the "collection of expressions of support for" the project that are expected to form the basis of IFC's assessment of the level of support for the project among affected communities (BCS review stream 2).

***CAO finds that IFC provided a reasoned decision leading to a conclusion that the client conducted a process of ICP, leading to BCS for the project, in line with the requirements of PS1 para. 30. While IFC's conclusions in relation to ICP (BCS stream 1) were supported by evidence in line with IFC guidance to staff, less detail was provided under the heading of "key evidence of support and/or objection to the project" (BCS stream 2). CAO further notes that IFC disclosed a summary of its determination of BCS as part of the ESRS as required, albeit in a form that is so limited as to provide little useful information to the reader (ESRP 4 para. 2.12, Version 7, April 2013).***

<sup>63</sup> IFC, Environmental and Social Review Procedures, 4.2.12, 2013 – <https://bit.ly/2X17JBy>

## Supervision

Throughout supervision, a number of improvements in relation to stakeholder engagement in line with the requirements of the ESAP were reported by the ESMC:

- The project strengthened its social indicators monitoring program by integrating additional issues beyond the requirements of the RCA, consisting in quarterly monitoring of issues relevant to the critical gaps identified during the ESDD.
- Potential negative impacts of construction on *arrieros*<sup>64</sup> were identified through the social indicator monitoring program, which led to a more structured and organized dialogue between the project and the *arriero* community from 2016 onwards (see section 3.11 of this report).
- The participatory monitoring program was developed in 2014 and initiated in 2015, with four panels created on issues considered critical for affected communities: (i) water and environment; (ii) road safety; (iii) social commitments; and (iv) local providers. All thematic groups monitor the project in their areas of interest, receive information from the project on relevant studies and are expected to share the results of their work with other community members. The ESMC indicated over the years that the company invested in improving the program, with measures such as integrating subject-matter experts into the panels as of 2016 to support program outputs.
- Progressive efforts were made to develop the GM through dissemination of information in communities further away from the project office in San José del Maipo, and integration of anonymous complaints in 2014. This led to an increase in the number of complaints and queries received from early 2015 onwards. It was also reported that a rapid response system (*Consultas Flash*) was put in place in the same period. Reports from the company to the Lenders over the years indicate that the number of *Consultas Flash* by far surpasses complaints and grievances processed by the GM. The ESMC indicated the GM was well aligned with Lenders requirements.
- The client engaged a third-party facilitator, the Consensus Building Institute (CBI) to conduct additional stakeholder mapping, propose dialogue mechanisms, and facilitate dialogue with a view to possible agreements between the project and opposition stakeholders. A report with recommendations for engagement was completed in December 2013. The ESMC reported that the recommendations would be included in the project's community relations work plan, however, it was later noted that follow-up work on the CBI report was stalled as of 2014.

While acknowledging the above-mentioned progress to meet ESAP requirements, the ESMC also reported a number of areas for improvement for the project to meet the Lenders requirements. These included:

- Since the second half of 2015, the ESMC and the Lenders repeatedly pointed to the need for a holistic review and evaluation of the project's communication and disclosure efforts to ensure that the right information is reaching relevant stakeholders. They note that the project shares a lot of information on issues of importance, but without always covering controversial topics. The Lenders continuously indicate that the project needs to adopt a proactive information sharing approach to warrant transparency and build relationships of trust – especially with those opposing the project.
- Early supervision reported that the social indicator monitoring data was not utilized for decision-making or disclosed to other internal project stakeholders involved in the management of project-level impacts (e.g. environmental management team, construction supervisors, etc.). It was recommended that the company explore ways to take advantage of data produced by the program toward the ongoing goal of continuous improvement in impact avoidance, mitigation and management measures, and in the context of the participatory monitoring process. From 2016 onwards, the ESMC noted that social indicator monitoring reports were made publicly available, analyzed, and proactively shared with participatory monitoring panel members to inform the program.

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<sup>64</sup> *Arrieros* are “muleteers”, i.e. people who traditionally transports goods using pack animals. *Arrieros* in the project area have also developed horseback riding tourism activities.

- The ESMC noted that further utilization of the participatory monitoring program as a venue for disclosure of information and a mechanism for implementation, was required in order to ensure systematic and broad dissemination of project information at community level.
- While the focus of early supervision was on the dissemination of information regarding the GM, as of 2017 the Lenders recommended that the client put in place a process of monitoring and analysis of grievances addressed through the GM to track and record relevant information regarding the resolution of the grievance, responsibilities, timeliness of response, root causes, etc. Such information was expected to help identify and manage reoccurring issues or unidentified risks and impacts.

***CAO notes that throughout supervision, with an important level of engagement by the Lenders and the ESMC to support the client, improvements to stakeholder engagement processes were documented, including the improvement of the social indicators monitoring program, implementation of a participatory monitoring program and the dissemination of information regarding the GM. It was also reported, however, that the project needed to adopt a more open approach in relation to information sharing and to better utilize monitoring data from the social indicator monitoring system and GM to inform the project's management of E&S risks and impacts.***

***CAO notes that, as of IFC's exit from the project in May 2018, a number of recommendations were pending implementation by the client. Nevertheless, CAO finds that the advice provided by IFC up to May 2018 was consistent with the requirements of PS1 for a continued ICP process, and implementation of a PS-compliant GM.***

***Finally, CAO notes that IFC did not consistently apply its own disclosure requirements to this project. In particular, IFC's Access to Information Policy requires that IFC updates the ESRS with E&S information as it becomes available, including any additional E&S assessments conducted for the project, and "third-party monitoring reports where required by IFC, in accordance with the Performance Standards." (AIP 2012, para. 41). For instance, disclosure of the final versions of the CIA, the 'Critical Path Gaps' reports, the Advanced Sediment Transport Study, the PIIM, the study on Potential for Contamination of Water from Tunneling Activities and Rock Disposal in Waste Heaps, and E&S management plans, were required under these provisions and would have provided up to date information on the project to interested stakeholders, including the complainants and other project-affected communities. CAO notes IFC's assertion that the ESMC reports are confidential in nature and were not disclosed on this basis. However, the ESMC were also disclosable under the AIP as third-party monitoring reports.***

### 3.4. IFC’s Review and Supervision of the Project’s Approach to Climate Change Impacts

Issues Raised by the Complainants	IFC Requirements
<ul style="list-style-type: none"> <li>• Claim that the project will exacerbate climate change impacts on water flow and local desertification, and that this was not assessed as part of the ESIA.</li> <li>• Claim that the annual flow of rivers in the Maipo basin decreased significantly over the past decade and that this was not considered by the project.</li> </ul>	<ul style="list-style-type: none"> <li>• “IFC ... recognizes the importance of ecosystem services and their role in climate change mitigation as well as adaptation. It is committed to minimizing business activities-related impacts on areas providing such services.” (Sustainability Policy, para. 11)</li> <li>• “Communities that are already subjected to impacts from climate change may also experience an acceleration and/or intensification of impacts due to project activities. While acknowledging the public authorities’ role ... [PS4] addresses the client’s responsibility to avoid or minimize the risks and impacts to community health, safety, and security that may arise from project related-activities. (PS4, para. 1)</li> <li>• “The diminution or degradation of natural resources, such as adverse impacts on the quality, quantity, and availability of freshwater, may result in health-related risks and impacts. ... The client will identify those risks and potential impacts on priority ecosystem services that may be exacerbated by climate change. Adverse impacts should be avoided, and if these impacts are unavoidable, the client will implement mitigation measures in accordance with paragraphs 24 and 25 of Performance Standard 6.” (PS4, para. 8)</li> </ul>

#### CAO Analysis and Findings

##### Pre-Investment Review

On the basis of stakeholder concerns raised during the course of the ESDD, ERM conducted an in-depth review of supplemental information provided by stakeholders in relation to the climate change related impacts of the project.<sup>65</sup> The ESDD indicated that stakeholders raised concerns about whether the project adequately accounted for the potential effects of climate change as described in two documents: (1) an April 2012 document presented by the *Coordinadora Ciudadana Rios del Maipo*, and (2) a more detailed study on climate change implications for the Maipo river watershed and water rights regime, commissioned by the organization *Chile Sustentable* (CAO notes that this study was also referred to in the complaint submitted to CAO).<sup>66</sup> It was noted that this study raised legitimate concerns about the potential future decline in flow rates of the river due to climate change and their potential exacerbation due to the project operation.

The ESDD indicated that, on the Lenders’ request, the client had provided information regarding this issue as part of the ‘Critical Path Gaps’ process. The client commissioned a study to assess the potential effect of climate change on water flow in the project area of influence. Preliminary conclusions were shared with ERM and reviewed as part of Critical Gap #1 (Identification of water uses and management/compensation plan). The final Climate

<sup>65</sup> IFC Environmental and Social Review Summary, Alto Maipo, Project #31632 - <https://bit.ly/2whHdKK>

<sup>66</sup> *Gestión de Cuencas y cambio Climático: El caso del Maipo*, Rodrigo Garcia Palmo, 16 April 2012

Change Report<sup>67</sup> was completed in May 2013 and provided revised projections on the potential impact of climate change on water flow in the Maipo watershed. Results from the report show a reduction of average annual streamflow at the seven gauge stations of 3.4% to 9% for the Maipo river system for the 2040-2070 timeframe. For the 2011-2040 timeframe, the report projects a decrease of 5.9% to 8.5% for the Maipo river system compared to the simulated observed streamflow calculated for the baseline. The report also states that the Colorado river system is more vulnerable to global warming than the Maipo river system. However, when shrinking glaciers (approximately 1% per year) are considered, these negative percentages of streamflow are lower than without shrinking glaciers because runoff will be increased, particularly during the winter months.<sup>68</sup>

Based on this assessment, the ESDD concluded that water flow was expected to be sufficient to maintain all existing water rights during the period of project operation and considering the potential effects of climate change, and indicated that the client would design and implement a plan that includes management, mitigation and/or compensation measures related to impacts of climate change in addition to those of the project. CAO further notes that the CIA evaluated the effects of climate change as a cross-cutting topic for all VECs, from two different perspectives: the cumulative effects of the project on climate change, and the cumulative effects of climate change on the VECs that are affected by the project.<sup>69</sup>

On the basis of the studies conducted and the ESDD, the following requirements were included in the ESAP regarding the client's approach to climate change impacts:

- Present summary tables comparing results from the three main studies prepared to evaluate climate change and project impacts.
- Actively participate in and sponsor vulnerability and adaptation climate change studies and groups like the “*Vulnerabilidad y Adaptación Cuenca del Río Maipo en Chile Central*”.
- Design and apply the ecosystem services management and compensation plan (further discussed in section 3.14 of this report).

**CAO notes that the ESDD identified climate change impacts as an important area of concern raised by stakeholders. Studies prepared and/or communicated by different stakeholder groups including the CAO complainants were considered as part of this process, and the Lenders subsequently requested that the client conduct a specific study on potential impacts of climate change on water flows in the Maipo river basin. Climate change was also taken into consideration in the CIA as a cross-cutting topic. On this basis, several actions were included in the ESAP in relation to climate change impacts. CAO thus finds that IFC's pre-investment review of the client's approach to climate change was consistent with the requirement to “identify those risks and potential impacts on priority ecosystem services that may be exacerbated by climate change” and to “implement mitigation measures” (PS4, para. 8).**

#### Supervision

The ESMC reported that in August 2015, the client participated in a working group organized by the *Pontificia Universidad Católica de Chile*, which was leading the study on climate change vulnerability and adaptations for the Maipo river watershed (MAPA), *Vulnerabilidad y adaptación a la variabilidad y al cambio climático en la Cuenca del río Maipo en Chile central*. The client reported that the MAPA working group research efforts were finalized in 2016. The final MAPA technical report was made public in August 2016, and made findings related to climate change impacts in the Maipo

<sup>67</sup> *Cambio climático y su impacto en la disponibilidad de recursos hídricos del proyecto Alto Maipo*. Informe Final. UNTEC, May 2013. – <https://bit.ly/34k8etE>

<sup>68</sup> *Ibid.*

<sup>69</sup> AES Gener, Proyecto Hidroeléctrico Alto Maipo, Evaluación de Efectos Acumulativos, June 2013 – Available at <https://bit.ly/2UJcC1Z>

river basin and the broader water system of the Metropolitan Region of Santiago.<sup>70</sup> Relevant to the project, the research findings indicated the following, as reported by the client to the ESMC:

- The addition of the Alto Maipo HPP will double the watershed's hydropower generation and reduce the percentage of summer weeks with a streamflow over a certain threshold (not specified in the documentation reviewed).
- The addition of the project will not affect water availability for cities or agriculture.
- In general (not directly related to the project), most climate scenarios (optimist, intermediary, and pessimist) show a decrease in streamflow from 2020 to 2050, which will negatively affect the operation of Santiago's water system.
- A case study of the *Buin Canalistas* (water users) showed that all climate scenarios result in an increase in water demands and a decrease in water supply in the Maipo watershed, independent of the Alto Maipo Project.

As of IFC's exit from the project in May 2018, the Lenders had requested that the client provide an update on the project's planned actions based on the MAPA workgroup recommendations and any future Maipo Watershed Adaptation Plan efforts.

***CAO notes that the client participated in the MAPA initiative working group as a "water user" of the Maipo watershed, as required by the ESAP. At the time of IFC's exit, the Lenders had requested that the client propose actions based on the outcomes of the research findings. CAO thus finds that IFC's supervision of the client's engagement with climate change issues as they relate to the project was consistent with the requirements of the Sustainability Policy (para. 11) and Performance Standards.***

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<sup>70</sup> Centro UC Cambio Global, Vulnerability and Adaptation to Climate Variability and Change in the Maipo Basin, Central Chile, Final Technical Report, August 2016 – <https://bit.ly/2JKqS4f>

### 3.5. Performance Standard 2: Harassment on the Workplace and Worker Grievance Mechanism

Issues Raised by the Complainants	IFC Requirements
<ul style="list-style-type: none"> <li>• Claim that the company’s response to sexual harassment allegations was not appropriate.</li> <li>• Claim that reprisals were taken against the complainant and her family because of her having brought a complaint</li> <li>• Claim that the company’s grievance mechanism for workers does not function in a fair and transparent manner.</li> </ul>	<ul style="list-style-type: none"> <li>• “The client will take measures to prevent and address harassment, intimidation, and/or exploitation, especially in regard to women.” (PS2, para. 15)</li> <li>• “The client will provide a grievance mechanism for workers ... to raise workplace concerns. ... The mechanism should involve an appropriate level of management and address concerns promptly, using an understandable and transparent process that provides timely feedback to those concerned, without any retribution.” (PS2, para. 20)</li> </ul>

#### CAO Analysis and Findings

##### Pre-Investment Review

As indicated in the ESRS, workers are protected by Chilean legislation through the Chilean Labor Code, and Chile has also ratified the main ILO Conventions. The ESRS also notes that AES Gener (the project sponsor) has a series of policies which govern company practices on labor relations of own employees and contractors, including a Policy on Selection, Hiring and Relocation of Personnel with a requirement of non-discrimination; a Business Ethics and Compliance Policy which includes an internal grievance mechanism specific to unethical business conduct; and a Code of Conduct for workers.<sup>71</sup>

As these policies and procedures were applicable to the project sponsor but not expressly to Alto Maipo SpA, the ESAP included a requirement for the project to develop and implement a stand-alone human resources (HR) policy and employee grievance mechanism (GM) consistent with IFC’s requirements and national labor laws. While a GM for communities and workers was developed in August 2012 on the basis of the Lenders’ preliminary ESDD, it was required that the client update it to align with Lenders standards. The HR policy was expected to make explicit reference to the company’s commitments to the tenants of IFC’s PS2, including non-discrimination, equal opportunity, working conditions and terms of employment. The GM was expected to be applicable and disseminated to both contractors and employees.<sup>72</sup> In addition to the project’s GM, each contractor involved in project construction would be required to implement a similar GM. Nevertheless, it was expected that the project holds final responsibility for the grievance redress process and plans to periodically audit contractors’ GMs to ensure complaints and grievances are adequately resolved.

<sup>71</sup> IFC Environmental and Social Review Summary, Alto Maipo, Project #31632 - <https://bit.ly/2whHdKK>

<sup>72</sup> *Ibid.*

**CAO notes that the ESDD reviewed the project sponsor's HR policies and GM, and the Lenders' subsequently required the project to develop a stand-alone HR Policy and employee GM in line with PS2 requirements. The HR Policy was expected to be disseminated to both contractors and employees. In addition, project contractors would be required to adopt the GM, though the project would ultimately be held responsible for the grievance redress process. These ESAP requirements were expected to be completed before IFC's first disbursement. CAO thus finds that IFC's pre-investment review of the project's approach to preventing harassment, intimidation, and/or exploitation, and employee GM, was consistent with the requirements of PS2, paras 15 and 20.**

### Supervision

Early supervision by the ESMC indicated that the client had updated the GM for communities and workers, and that the project-wide GM was functioning with the support and integration from both project contractors. The ESMC reported, however, that in practice there was limited information to confirm that employees, contractors or subcontractors were aware of the GM for labor-related grievance. It was further reported that all labor related complaints were sent to the legal department for verification. The ESMC noted that this limited the likelihood that employees would report incidents which involve their managers, and was therefore inadequate. Subsequently, the ESMC recommended that the client seek to communicate broadly the existence of the GM with all employees, contractors and subcontractors, and create a database to track all grievances and record pertinent information to identify and manage trends, reoccurring problem areas or unidentified risks and impacts.

In 2016, the ESMC reported cases of sexual harassment in the workplace. In the following supervision cycles the ESMC followed up with the client on this issue. The client had identified cases which were not reported through the GM, and the ESMC stated that the client committed to conduct proactive investigations of cases of sexual harassment on the workplace. In response, in May 2017, IFC noted future supervision activities would evaluate more closely some topics including workers grievances, with special attention to sexual harassment, and could potentially seek the assistance of a labor consultant to address these concerns in more details.

In 2017, the ESMC reiterated that it had not received evidence of a "proactive sexual harassment investigation process" as discussed during previous monitoring exercises. The ESMC and the Lenders urged the client to make specific efforts to identify cases of sexual harassment, intimidation and assault, and to develop a program by which to address the issue of sexual harassment in the workplace, including contractors, sub-contractors and direct employees. In early 2018, a Zero Tolerance Campaign which included the issue of sexual harassment in the workplace was launched by the project for dissemination to all project and contractor workers.

As of IFC's exit in May 2018, no evidence was made available to CAO that (i) recommendations by the ESMC had been fulfilled by the client to ensure that a "proactive sexual harassment investigation process" was in place, and (ii) IFC had provided the client with available guidance on addressing sexual harassment on the workplace or ensured that known cases of sexual harassment on the workplace had been investigated in accordance with PS2 requirements.

CAO further notes that the Alto Maipo-02 complainant submitted her first complaint to the AES Gener Helpline in Chile in December 2016. A response was received in January 2017 indicating that her case had been investigated and was closed without the alleged perpetrator having been dismissed. The complainant's second complaint, submitted to AES headquarters in the United States in March 2017, as well as her third complaint, submitted to the project office in San Jose de Maipo later in March 2017, were both dismissed on the basis that her complaint had already been addressed through the AES Gener Helpline.

CAO's Assessment Report in relation to the Alto Maipo-02 complaint noted the client's perspective that an internal investigation was completed in relation to this case, and relevant measures were adopted. During the course of the compliance process CAO requested that the client provide documentation of their internal investigation in relation to the complainant's sexual harassment allegations. The client declined to share this

information stating that it was confidential. Though the complainant's allegations are serious in nature, there is no indication in the documentation made available to CAO that the ESMC and/or IFC reviewed and assessed the adequacy of the grievance handling process of this specific case.

Additionally, the client emphasized that CAO should not have jurisdiction regarding this claim because the Alto Maipo-02 complainant was employed by a foundation affiliated with the client, AES Gener, and not the recipient of the IFC loan Alto Maipo SpA. The client further contended that it terminated the complainant's employment in March of 2017 due to the reorganization of the Foundation where she worked, and not because of her sexual harassment claims. CAO notes that the Alto Maipo-02 complaint was deemed eligible for consideration by CAO, on the basis that the complainant was working for an organization established by the project sponsor and directly involved in activities related to the Alto Maipo project. Regardless of the contractual relationships governing the complainant's employment, CAO considers that the allegations relate to the IFC project and thus fall within the scope of this compliance investigation.

***CAO found no evidence that the actions required by the ESMC and the Lenders in relation to addressing sexual harassment in the workplace had been satisfactorily completed as of IFC's exit in May 2018, in particular recommendations in relation to investigations of cases of sexual harassment on the workplace were not actioned. CAO found no evidence either that IFC shared with the client relevant guidance on addressing issues of sexual harassment on the workplace. Finally, there is no indication that IFC and/or the ESMC reviewed the client's investigation into the CAO complainant's case specifically. In this context, CAO finds that IFC's supervision did not ensure that the client took appropriate measures to prevent and address harassment, intimidation, and/or exploitation, especially in regard to women (PS2, para. 15). CAO further finds that IFC's supervision did not ensure that the client had in place a GM for workers of the company and its contractors that involved an appropriate level of management and address concerns promptly, using an understandable and transparent process, including in relation to the case of sexual harassment brought by the CAO complainant (PS2, para. 20). Given that CAO was not granted access to documentation of the client's investigation in response to the CAO complainant's allegations of sexual harassment, and there is no IFC supervision record in relation to this issue, CAO is not in a position to comment on the client's response to the specific issues raised.***

### 3.6. Performance Standard 3 (1/4): Impacts of Waste Rock Disposal on Soil and Water Pollution

Issues Raised by the Complainants	IFC Requirements
<ul style="list-style-type: none"> <li>• Claim that the project contaminates water (including irrigation water) with heavy metals found in rocks removed during tunnel construction, due to inadequate storage of waste rocks in disposal sites.</li> <li>• Claim that water samples collected in the Maipo basin present concentration of different heavy metals, which exceed Chilean law and the World Health Organization levels for both potable and irrigation water.</li> </ul>	<ul style="list-style-type: none"> <li>• “During the project life-cycle, the client will apply technically and financially feasible pollution prevention principles and techniques that are best suited to avoid, or where avoidance is not possible, minimize adverse impacts on the environment. The principles and techniques applied during the project life-cycle will be tailored to the hazards and risks associated with the nature of the project and consistent with good international industry practice (GIIP).” (PS3, para. 4)</li> <li>• “Where waste cannot be recovered or reused, the client will treat, destroy, or dispose of it in an environmentally sound manner that includes the appropriate control of emissions and residues resulting from the handling and processing of the waste material.” (PS3, para. 12)</li> </ul>

#### CAO Analysis and Findings

##### Pre-Investment Review

The ESRS indicates that the construction of tunnels was expected to generate approximately 1.7M m<sup>3</sup> of waste rock material. This volume was to be transferred to 14 waste rock disposal sites or excavation waste heaps located throughout the project area, in close proximity to the tunnel portals. Depending on the chemical make-up of this waste rock, the ESRS noted that it could have some potential to generate leachate impacting negatively the surrounding soils, groundwater and potentially surface water. However, it is also noted that based on geological assessments conducted during feasibility and design stages, the potential for acid rock drainage (ARD) was considered low.<sup>73</sup>

Nevertheless, the RCA requires the project to conduct geological sampling every 25-30 m in advance of tunnel excavation, to identify hydrogeological characteristics which could generate impacts to water quality. The ESRS further notes that in case of encountering levels of acidity or alkalinity over regulated limits, the company is required, per the RCA, to implement contingency measures such as installation of a soil impermeabilization system (i.e., liner), runoff and drainage management, and water treatment/neutralization prior to discharge of surface or subsurface runoff.<sup>74</sup>

The client has prepared an Environmental Management Plan (EMP) for Waste Rock Heaps which describes the site selection criteria for their location, and includes procedures to ensure slope stability as well as for site restoration following the completion of construction activities. An emergency

<sup>73</sup> IFC Environmental and Social Review Summary, Alto Maipo, Project #31632 - <https://bit.ly/2whHdKK>

<sup>74</sup> *Ibid.*

preparedness plan related to waste rock disposal sites or tunnels (during construction) and a Waste Management Plan which describes the procedures, actions and equipment to manage and dispose of waste during the construction and operation of the project, were also developed.<sup>75</sup>

The ESAP further required the client to complement the existing Contingency Plan for Acid Rocks with specific mitigation measures to be implemented in the event of encountering acid rock, including measures to prevent acid drainage from entering the water courses.<sup>76</sup>

***IFC's pre-investment review identified waste rock disposal as an important area of concern raised by stakeholders. Although there was found to be low probability of ARD in the waste rock, the client was required by the RCA to take preventive measures, and prepared management plans that were considered adequate by the ESDD consultant and the Lenders. The ESAP further included a requirement for the client to complement the existing plans to comply with Lenders requirements. Therefore, CAO finds that IFC's pre-investment review of potential impacts of waste rock disposal on water contamination was commensurate with the level of risks, and consistent with PS3 requirements.***

#### Supervision

Early supervision by the ESMC reported that, while progress had been made, there were delays in the client's management of waste rock disposal. In this context, the ESMS noted a need to ensure that measures described in the plans were fully implemented by the project and contractors. This was flagged as a high priority item for action. A risk assessment of waste rock deposits to identify high risk locations was pending at this time.

In 2015, the ESMC visited some waste rock disposal sites and reported that the procedure established by the client for identification, tracking and managing rocks with ARD was being implemented adequately. However, it was repeatedly required as a high priority action that the client provide details on the location and design of the contingency acid waste rock deposits, within the authorized waste deposits.

In 2016, the ESMC reported that the client needed to establish a clear and detailed disposal tracking mechanism for waste rock deposits. This was considered important given the time lags for testing waste rock and the need to identify of any batch with ARD potential.

In 2017, it was reported that for the first time since construction started, ARD was found in waste rock. The ESMC reviewed the contingency measures taken and concluded they were adequate. It further recommended that the client finalize the design and construction of ARD contingency waste deposits to ensure adequate management of any future ARD deposits. In October 2017, it was reported that the client submitted a CdP to the environmental authority requesting an increase in capacity of the waste deposits.

***CAO notes that during early supervision, the ESMC considered that the procedures established to identify, track and manage waste rock disposal were adequate. The ESMC repeatedly flagged, however, a need for the client to enhance the implementation of waste rock disposal procedures, in particular by designating adequate tracking mechanisms for waste rock and identifying contingency waste rock deposits. In instances where ARD was found in waste rock, the ESMC indicated that adequate contingency measures were taken.***

***Therefore, CAO finds that IFC's supervision ensured that the client was given advice consistent with the requirements of PS3 in relation to the management of waste rock disposal during the period up to IFC's exit from the project in May 2018. With the support of the ESMC, IFC ensured that "technically and financially feasible pollution prevention techniques that were best suited to avoid contamination of water and soil were applied", as required by PS3, para. 4.***

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<sup>75</sup> *Ibid.*

<sup>76</sup> *Ibid.*

### 3.7. Performance Standard 3 (2/4): Impacts of Tunneling Activities on Groundwater

Issues Raised by the Complainants	IFC Requirements
<ul style="list-style-type: none"> <li>• Claim that tunnel construction will have negative impacts on groundwater, wells, and pumps on which most of the villages and towns in the Cajon del Maipo depend.</li> <li>• Claim that the company did not carry out a hydrogeological study to assess the impacts of tunnels on aquifers and groundwater, and that the company will assess impacts as they progress with constructions.</li> </ul>	<ul style="list-style-type: none"> <li>• “During the project life-cycle, the client will apply technically and financially feasible pollution prevention principles and techniques that are best suited to avoid, or where avoidance is not possible, minimize adverse impacts on the environment. The principles and techniques applied during the project life-cycle will be tailored to the hazards and risks associated with the nature of the project and consistent with good international industry practice (GIIP).” (PS3, para. 4)</li> </ul>

#### CAO Analysis and Findings

##### Pre-Investment Review

During the ESDD, ERM carried out an in-depth review of information provided by stakeholders and by the client regarding groundwater impacts associated with tunneling activities. ERM referred to a March 2008 study of nine aquifers located between the proposed intake structures and discharge points in the Maipo river which concluded that the aquifers were not expected to be affected by the project. However, ERM also noted that the potential impact to groundwater levels in the Volcán or Colorado rivers areas was excluded from the study. Subsequently, in response to the Lenders’ request, the client commissioned a review of the Potential for Contamination of Water from Tunneling Activities and Rock Disposal in Waste Heaps, which was completed in July 2012. This review concluded that the potential impacts to local hydrogeology had been adequately addressed through technical documentation, supporting evidence, and proposed management and mitigation measures. Although the possibilities of encountering an aquifer were assessed as low by hydrology studies, the tunneling procedure contains further measures to avoid negative impacts: (i) systematic exploratory drilling 20-25 m before each next blast round takes place; and (ii) tunnel excavation includes grouting (injection of cement, cement-bentonite slurry, polyurethane or others) to avoid hindrance to the tunneling activities and impacts to groundwater or aquifers. If any blasting results in fracturing and related infiltrations into the tunnel, the timely application of grouting was expected to re-establish the equilibrium rapidly and ensure that the natural water supply sources remain intact.<sup>77</sup>

As a result of the ESDD, two requirements were included in the ESAP regarding the management of groundwater impacts due to tunneling activities:

- Develop and implement a plan for managing tunnel production wastewater, including a complete list of chemical substances that will be used, handled and stored in tunnels; expected flow of production water in each tunnel section; capacity of wastewater treatment plants, the operating

<sup>77</sup> *Ibid.*

system and expected pollutants to be treated. The plan should account for potential excess water production from fractured rock (i.e., “*bolsones de agua*”) and include regular monitoring to ensure compliance with receiving water quality standards.<sup>78</sup>

- Ensure that pre-grouting and grouting requirements are explicitly specified in the contractor’s EHS Requirements and Management Plans and that supervision and monitoring of this measure is included in the program.

As acknowledged by ERM, however, the baseline on hydrogeology in the ESIA was weak, which prevented adequate estimation of groundwater flows, aquifer recharge and interactions with the river flows. CAO notes that, while the baseline presented in the ESIA was defined in compliance with national laws and norms, the description of hydrogeology in the project area was very general. CAO further notes that the Lenders requested that the client commission a review of potential contamination of groundwater, however, no additional technical studies were requested to ensure that the impact assessment was based on stronger baseline information. Rather it was considered that this would be addressed within a framework of monitoring based on adaptive management. This led to challenges in assessing changes in infiltration rates from water flowing through fractures potentially intercepted by the tunnels, and in developing an adequate plan for the control of groundwater interception and its pollution.

The ESRS further indicated that the Lenders recommended that potential impacts to groundwater or surface water bodies as a result of tunneling activities be one of the issues covered as part of the participatory monitoring program.<sup>79</sup>

***The Lenders identified the issue of impacts of tunneling activities on groundwater as a significant one for the project. Consequently, an in-depth ESDD was carried out in relation to groundwater impacts, additional assessments were conducted, and mitigation measures were included in the ESAP.***

***CAO notes, however, that while IFC took steps during appraisal to assess and prevent the risk of groundwater interception and pollution, certain elements were not raised in the ESDD, including the absence of a hydrogeological model to be carried out during tunneling activities. Considering that the ESIA had weak baseline information, conducting modelling during tunneling activities would represent GIIP in allowing for an accurate estimation of impacts on groundwater and aquifers and subsequent development of a monitoring plan for groundwater interception, pollution control and treatment. In this context, CAO finds that IFC did not require the client to use GIIP techniques, such as modeling during tunneling activities, which would provide data regarding potential impacts of tunneling activities on groundwater, thus IFC did not ensure project compliance with PS3 para. 4.***

#### Supervision

In 2015, the ESMC reported that a preliminary hydrogeological risk assessment was conducted, and five sites were selected for groundwater monitoring. The ESMC further flagged several high priority actions to be taken to comply with ESAP requirements, including the need for the client to provide evidence of implementation of groundwater monitoring wells, and results of groundwater baseline data.

On the basis of available monitoring information, CAO notes that throughout the construction phase, the construction of tunnels intercepted water flows that were percolating to the aquifers, and data showed that the groundwater discharge was higher than previously estimated in the ESIA and additional assessments. Specifically, potential impacts to percolating water levels above the tunnel construction area and the capacity of the treatment plants to handle the volumes of infiltration water were reported as areas of concern by the independent auditor in charge of conducting bi-monthly audits to verify compliance with the RCA. Recommendations were formally issued to reinforce control of infiltration water and investigate impacts to groundwater above these tunnels. In response, the client requested expert hydrogeologists in charge of routine tunnel inspections for the project to

<sup>78</sup> Environmental and Social Action Plan – *Ibid.*

<sup>79</sup> *Ibid.*

evaluate results from exploratory drilling on groundwater quality and water infiltration. The ESMC noted that pollution of groundwater that was intercepted by the tunnels was prevented in some cases through contingency plans (pumping and desiltation). However, despite provisions for adaptive management, the capacity to treat those waters to prevent pollution was less than required in many cases due to initial under-estimations.

Further, CAO notes that in early 2018 the ESMC reported that the contractor upgraded its water treatment capacity. However, the ESMC also noted that reports to confirm that treatment flows were within the capacity of the treatment plant were not provided. CAO notes that in this same month, a representative of the *Coordinadora Ciudadana No Alto Maipo* took legal action before the Chilean Environmental Court, requesting a revision of the RCA due to important changes of the project since its ESIA, including related to unexpected impacts of tunneling activities on groundwater.<sup>80</sup>

While at the time of IFC's exit from the project in May 2018 this issue was still pending, CAO notes that the company developed a more realistic hydrogeological model for estimation of groundwater interception by the tunnels during 2018. However, several events of pollution of groundwater had already been reported. Of relevance though outside of the timeline subject to this investigation, CAO notes that the environmental authority (SEA) ordered a revision of the RCA in January 2019, with special attention to several points including tunneling activities and groundwater impacts.<sup>81</sup> Subsequently, in February 2019 the company presented further background information to be considered in the revision process of the RCA, including a hydrogeological study of the project area.<sup>82</sup>

***CAO notes that, during construction, several events of groundwater interception by tunnels demonstrated that discharges were higher than expected in the ESIA, which as noted above, contained a weak baseline in hydrogeology. In several instances, adaptive management failed to adequately characterize the rock to identify whether acid rock drainage (ARD) was present, and therefore whether intercepted groundwater needed to be treated before it could be re-injected into the aquifer. This gave rise to risks of groundwater pollution. CAO notes that these project deficiencies later motivated Chilean authorities to order the revision of the project RCA.***

***The relationship between glaciers melting and infiltration, the effect of tunneling activities, and groundwater recharge were considered in the project's framework for adaptive management. The latter, however, was not sufficient to avoid significant issues regarding the management of important volumes of water infiltrations and the pollution of groundwater intercepted by the tunnels during construction. Therefore, CAO finds that IFC's supervision of the project's management of groundwater impacts of tunneling activities failed to ensure compliance with PS3 requirements.***

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<sup>80</sup> See <https://bit.ly/2VWCcAc>

<sup>81</sup> See <https://bit.ly/3bFNIXe>

<sup>82</sup> See <https://bit.ly/3eObrXm>

### 3.8. Performance Standard 3 (3/4): Air Quality

Issues Raised by the Complainants	IFC Requirements
<ul style="list-style-type: none"> <li>• Claim that the project is causing air pollution, particularly to the community of El Alfalfal through dust emissions, as well as emissions due to increased road traffic.</li> <li>• Claim that the ESIA is incomplete and fails to use adequate environmental and social baselines, including on air quality.</li> </ul>	<ul style="list-style-type: none"> <li>• “During the project life-cycle, the client will consider ambient conditions and apply technically and financially feasible resource efficiency and pollution prevention principles and techniques that are best suited to avoid, or where avoidance is not possible, minimize adverse impacts on human health and the environment. The principles and techniques applied during the project life-cycle will be tailored to the hazards and risks associated with the nature of the project and consistent with good international industry practice (GIIP), as reflected in various internationally recognized sources, including the World Bank Group ... EHS Guidelines.” (PS3, para. 4)</li> <li>• “When host country regulations differ from the levels and measures presented in the EHS Guidelines, clients will be required to achieve whichever is more stringent. If less stringent levels or measures than those provided in the EHS Guidelines are appropriate in view of specific project circumstances, the client will provide full and detailed justification for any proposed alternatives.” (PS3, para. 5)</li> <li>• “Projects with ... potential for significant impacts to ambient air quality, should prevent or minimize impacts by ensuring that ... emissions do not result in pollutant concentrations that reach or exceed relevant ambient quality guidelines and standards by applying national legislated standards, or in their absence, the current WHO Air Quality Guidelines ... or other internationally recognized sources.” (IFC General EHS Guidelines, 1.1, page 4)</li> <li>• “Techniques to consider for the reduction and control of air emissions from construction and decommissioning sites include:             <ul style="list-style-type: none"> <li>- Minimizing dust from material handling sources, such as conveyors and bins, by using covers and/or control equipment (water suppression, bag house, or cyclone)</li> <li>- Minimizing dust from open area sources, including storage piles, by using control measures such as installing enclosures and covers, and increasing the moisture content</li> <li>- Dust suppression techniques should be implemented, such as applying water or non-toxic chemicals to minimize dust from vehicle movements” (IFC General EHS Guidelines, 4.1, page 90)</li> </ul> </li> <li>• “Emissions and air quality monitoring programs provide information that can be used to assess the effectiveness of emissions management strategies” (IFC General EHS Guidelines, 1.1, page 10).</li> <li>• “Projects with potentially significant fugitive sources of emissions should establish the need for ambient quality assessment and monitoring practices.” (IFC EHS Guidelines on Air Emissions and Ambient Air Quality).</li> </ul>

## CAO Analysis and Findings

### Pre-Investment Review

According to the ESRS, the most significant impacts to air quality as identified in the ESIA consist of the generation of dust during construction due to the excavation and transportation of earth materials, as well as traffic of heavy equipment and vehicles through unpaved roads. The ESRS indicates that the project will implement preventive measures for the minimization of dust generation, which are detailed in an Air Quality Monitoring Plan, a requirement under the RCA. The Plan envisages weekly inspections of emissions control measures during construction. Key control measures include: transportation of waste rock via shuttle car wagons and conveyor belts; covering of trucks with canvas; reduce the length of service roads between the stockpile and work fronts; and humidification of dirt road surfaces.<sup>83</sup>

Moreover, because of its location the project is subject to the Metropolitan Region Air Pollution Prevention Plan (PPDA) which, per the RCA, requires a compensation of 150% of emissions of particulate matter (PM10). Compensation measures include road improvements in the project area, and were approved by environmental authorities. In addition, combustion gas emissions from engines and equipment were expected to increase emissions of CO, NOx and TPH.<sup>84</sup> CAO notes, however, that the Air Quality Monitoring Plan does not include parameters such as PM10, PM2.5, SOx, NOx, CO, among others, despite some work fronts being located in close proximity to sensitive receptors (e.g. community of El Alfalfal), and despite these human settlements being included in the project area of influence for air quality according to the ESIA. As indicated in the ESDD, a mitigation measure agreed between the client and the community of El Alfalfal to reduce dust emissions from project construction was the installation of an isolation wall to protect the community from noise and dust.

CAO notes that Chilean standards for PM10 set emissions reduction levels to be achieved by 2012. An additional standard for PM 2.5 was enacted in 2011, which was more stringent than the one required in the RCA. However, neither the ESIA nor the RCA refer to the need to reduce PM10 levels by 2012, or the need to comply with new regulations. Further, CAO notes that IFC did not discuss with the client changes in national requirements for PM emissions, nor the application of the WBG General EHS Guidelines on ambient air quality and dust emissions.

Besides, while the ESIA identifies potential project impacts on air quality during construction, no monitoring stations measuring PM, SO2, CO and NO2 levels were envisaged, considering that dust reduction measures would be sufficient to monitor construction impacts on air quality. CAO notes, however, that the requirement to compensate 150% of PM10 emissions does not mean that the project is not required to monitor its emission levels and meet other applicable requirements.

As previously noted in this report, the CIA conducted on the request of the Lenders does not analyze cumulative impacts on air quality. The CIA report provides a reasoned explanation as to why some VECs were not considered of importance from a cumulative effects perspective and therefore not assessed as part of the CIA. Regarding air quality, it was indicated that this issue represents an impact that is expected to occur only during construction stage, with a very localized effect directly related to project construction works.

**CAO notes that IFC did not enquire about the lack of characterization of the air quality baseline in the area of the project, despite the fact that it was acknowledged through the ESDD that alteration of air quality would likely occur during construction. The client put in place measures to compensate and mitigate the project's impact on air quality, however, only dust reduction measures were expected to be monitored, and no quantitative monitoring of other air quality indicators was required.**

<sup>83</sup> IFC Environmental and Social Review Summary, Alto Maipo, Project #31632 - <https://bit.ly/2whHdKK>

<sup>84</sup> *Ibid.*

**Good international industry practice would require impacts to be estimated through qualitative or quantitative assessments by the use of baseline air quality assessments and atmospheric dispersion models to assess potential ground level concentrations, and monitoring thereafter to ensure the effectiveness of emissions management measures (WBG General EHS Guidelines, 1.1). In the context of this project, this is particularly relevant in community areas located in close proximity with construction sites, such as El Alfalfal. CAO thus finds that IFC's advice was not consistent with the requirements of PS3, para 4. CAO further finds that IFC did not discuss the need for the project to comply with more stringent standards such as updated Chilean regulations or the WBG EHS Guidelines standards on ambient air quality and dust emissions, nor did IFC require the client to provide full and detailed justification for any proposed alternatives, as required by PS3, para. 5.**

#### Supervision

In 2014, the client reported that it was in conversations with the environmental authority regarding a modification on the plan for public roads enhancements to suppress dust. By September 2014, the client submitted a CdP in this regard, suspending the work being performed with the purpose to compensate emissions until the CdP was resolved. In March 2015, the CdP was approved and the project could resume compensation work in the proposed areas, including the pavement of roads.

In late 2015, the ESMC reported that the project began sharing quarterly air quality monitoring reports, which summarize the results of dust inspections, list abatement measures and provide pictures. It was noted that the reports submitted throughout 2015 constituted an improvement over past dust inspections. During the following supervision exercises, the ESMC reported that the client's monitoring of dust reduction measures was being satisfactorily implemented. CAO notes that air quality monitoring reports do not present results of quantified air quality data, but indicate the general schedule of activities being implemented, in particular related to the watering of working areas to reduce dust.

After a supervision visit in December 2016, the ESMC reported that the isolation wall which surrounds El Alfalfal was effective to mitigate dust impacts.

**As reported by the ESMC, the air quality monitoring reports submitted by the client throughout the construction phase – up to IFC's exit in May 2018 – were considered satisfactory to implement the agreed dust reduction measures. However, CAO finds it challenging to assess the effectiveness of mitigation measures without measuring air quality in the areas that may be considered sensitive due to their proximity to construction works and thus exposure to potential impacts. Quantitative air quality monitoring in important receptors in the area of influence of the project represents good international industry practice in this context.<sup>85</sup> Given the lack of quantitative air quality monitoring in relation to this project, CAO thus finds that IFC's supervision of the client's air quality monitoring did not ensure compliance with the requirements to meet GIIP in PS3 para. 4 and the WBG EHS Guidelines.**

<sup>85</sup> For sources indicating quantitative monitoring as good practice for large construction projects, see for e.g.:

IAQM, *Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction Sites*, 2012, p.8.

Mayor of London, *Control of Dust and Emissions During Construction and Demolition*, 2013, p.51ff.

Government of Western Australia, *A guideline for managing impacts of dust and associated contaminants from land development sites, contaminated sites remediation and other related activities*, 2011, page 22.

IFC, *Good Practice note on EHS Approaches for Hydropower Projects*, 2018, p. 34. Available at: <https://bit.ly/3aBSnYJ>

### 3.9. Performance Standard 3 (4/4): Noise and Vibration

Issues Raised by the Complainants	IFC Requirements
<ul style="list-style-type: none"> <li>• Claim that the community of El Alfafal and Los Maitenes, located close to construction sites, are affected by noise and vibration due to circulation of trucks and movement of machines which use the only road in the area.</li> <li>• Claim that the ESIA is incomplete and fails to use adequate environmental and social baselines, including on noise and vibration</li> </ul>	<ul style="list-style-type: none"> <li>• “During the project life-cycle, the client will consider ambient conditions and apply technically and financially feasible resource efficiency and pollution prevention principles and techniques that are best suited to avoid, or where avoidance is not possible, minimize adverse impacts on human health and the environment. The principles and techniques applied during the project life-cycle will be tailored to the hazards and risks associated with the nature of the project and consistent with good international industry practice (GIIP), as reflected in various internationally recognized sources, including the World Bank Group ... EHS Guidelines.” (PS3, para. 4)</li> <li>• “If less stringent levels or measures than those provided in the EHS Guidelines are appropriate in view of specific project circumstances, the client will provide full and detailed justification for any proposed alternatives.” (PS3, para. 5)</li> <li>• “During construction and decommissioning activities, noise and vibration may be caused by the operation of pile drivers, earth moving and excavation equipment, concrete mixers, cranes and the transportation of equipment, materials and people. Some recommended noise reduction and control strategies to consider in areas close to community areas include:             <ul style="list-style-type: none"> <li>- Planning activities in consultation with local communities so that activities with the greatest potential to generate noise are planned during periods of the day that will result in least disturbance</li> <li>- Using noise control devices, such as temporary noise barriers and deflectors for impact and blasting activities, and exhaust muffling devices for combustion engines.</li> <li>- Avoiding or minimizing project transportation through community areas” (IFC General EHS Guidelines, 4.1, page 89)</li> </ul> </li> <li>• “Noise impacts should not exceed the levels presented in [the EHS Guidelines] or result in a maximum increase in background levels of 3 dBA at the nearest receptor location off-site” (IFC General EHS Guidelines, 1.7, page 52)</li> </ul>

#### CAO Analysis and Findings

##### Pre-Investment Review

The ESRS indicates that increased noise and vibrations would be generated during project construction. Based on noise modelling conducted as part of the ESIA, and as per RCA requirements, the client was expected to implement control measures to attenuate noise and vibrations impacts generated by the use of blasting, heavy construction machinery, and transit of trucks, among others.<sup>86,87</sup>

<sup>86</sup> IFC Environmental and Social Review Summary, Alto Maipo, Project #31632 - <https://bit.ly/2whHdKK>

<sup>87</sup> Note: The project’s assessment and management of vibrations impacts on glaciers is discussed in section 3.13 of this report.

The ESDD report notes that environmental noise measurements were made as part of the ESIA baseline data collection effort, with measurement points established in areas likely to experience the greatest impact: near the future worksites, disposal material sites, buried pipes, and the main roads proposed for vehicle traffic. It further indicates that when compared to the values provided in the WBG EHS Guidelines for residential areas,<sup>88</sup> existing baseline conditions already exceeded the standard. No evidence of discussions between the Lenders and the client regarding the project's approach to managing these exceedances was found.

In relation to noise emissions from fixed sources, the ESIA and the RCA considered Chilean regulation in force at the time. However, new regulations were enacted in 2011, to be applicable from 2014 onwards.<sup>89</sup> CAO found no indication that the client and the Lenders were aware of these changes. CAO further notes that the WBG EHS Guidelines in relation to noise are more stringent than either the old or revised Chilean regulations, though their application was not discussed with the client at the time of the ESDD.

The ESIA modelled noise levels for traffic (in those sites where increased traffic was expected), and compared the values obtained with limits indicated in the United States Highway Traffic Noise Analysis and Abatement Policy and Guidance of the FHWA (July 1982). The Chilean environmental authority accepted the noise level categorization proposed in the ESIA. IFC did not discuss this classification with the client, nor did it discuss the noise levels recommended in the WBG EHS Guidelines, which are more stringent than the FHWA limits.

Control measures anticipated in the ESIA to attenuate noise impacts on receptors close to the work fronts included the installation of acoustic screens and semi-enclosures for the noisiest equipment; limiting surface work and other noise generating activities, like traffic, during nighttime and weekends; equipment maintenance; notification of work activities and duration to communities, including blasting events; and monitor noise pressure levels at eight sensitive stationary points against national permitted limits and monitor vibrations and noise at blasting events.<sup>90</sup> Monitoring of noise and vibrations from heavy road traffic was not considered. CAO notes that in the community of El Alfalfal, the recommended mitigation measure for noise and dust was the construction of an isolation wall surrounding the village.

To strengthen noise and vibrations monitoring, the ESRS indicates the project was expected to complement the existing Noise and Vibration Monitoring Program to include a clear notification protocol to alert communities when blasting would occur. The monitoring of noise and vibrations was also expected to include households and sensitive receptors located in close proximity to roads where heavy traffic will occur due to the project. These requirements were included in the ESAP.<sup>91</sup>

***CAO notes that measures were included in the ESAP to strengthen the project's monitoring of noise impacts on receptors located close to construction sites and roads where heavy traffic was expected. These mitigation measures represent a first step towards compliance with the requirements of PS3, para. 4 to apply principles and techniques to avoid or minimize adverse project impacts. Relevant to the complainants concerns over noise impacts of construction on the community of El Alfalfal, the construction of an isolation wall as a noise control device is consistent with recommendations from the WBG EHS Guidelines.***

***However, CAO finds that IFC's pre-investment review over-relied on monitoring provisions that were approved by national authorities. IFC did not discuss with the client more stringent standards to be applied, particularly as some communities such as El Alfalfal were expected to be impacted due to their close proximity to construction sites. Consequently, IFC did not require the client to monitor noise impacts***

<sup>88</sup> WBG General EHS Guidelines, section 1.7, table 1.7.1, page 53 - <https://bit.ly/2XYZNTm>

<sup>89</sup> Decreto 38 Establece Norma de Emisión de Ruidos Generados por Fuentes que Indica, Elaborada a partir de La Revisión Del Decreto No. 146, de 1997, Del Ministerio Secretaría General de La Presidencia, November 2011 (Chile) - <https://bit.ly/3tj7UH7>

<sup>90</sup> IFC Environmental and Social Review Summary, Alto Maipo, Project #31632 - <https://bit.ly/2whHdKK>

<sup>91</sup> *Ibid.*

***against the WBG EHS Guidelines (section 1.7 on Noise) as required by PS3, para. 4, neither did IFC require the client to provide full and detailed justification for any proposed alternatives, as required by PS3, para. 5.***

#### Supervision

As reported in project construction reports, site preparation works for construction activities in the Las Lajas forebay (located nearby El Alfalfal) started in April 2014. Noise monitoring was initiated at the same time. However, the sound barrier was not in place yet. In July 2014, exploratory drilling started after the project reached an agreement with the El Alfalfal community, which allowed the construction work to start in the area. Installation of the wall isolating El Alfalfal from the construction site, as well as perimetral fencing, started in December 2014 and was completed in April 2015. At the end of 2016, the ESMC visited El Alfalfal and reported that the wall was not perceived by the community as mitigating noise impacts, though it did mitigate dust impacts.

Throughout supervision, from 2014 to 2017 the Lenders and the ESMC requested several times that the client demonstrate compliance in relation to monitoring results of noise with the WBG EHS Guidelines. During this period, the client reported several exceedances against national law requirements, but no comparison with the WBG EHS Guidelines was made, neither were changes to national regulation on noise discussed. In December 2017, the client started comparing noise monitoring results against the WBG EHS Guidelines. The results showed that there were several events of noise exceedances. The client reported that measures were applied to lower noise levels when exceedances were identified, but action taken to meet the WBG EHS Guidelines standard were not reported. CAO notes that the frequency of noise monitoring was sparse (approx. every two months) considering the proximity of some communities to construction sites. It is recognized, however, that during CAO's investigation visit, the community did not report major concerns in this regard, and indicated that they had direct communication with the project under the monitoring of the agreement between the community and the project.

***CAO notes that GIIP and adaptive management would have required the project to adopt the most recent national regulations or the WBG EHS guidelines from the start of construction regarding noise monitoring. The frequency of noise monitoring could have also been acted upon, including a more frequent monitoring schedule in sensitive receptors such as El Alfalfal, considering that exceedances in noise levels were repeatedly measured. CAO further notes that the construction phase has been extended, which may constitute an additional factor of increased impact than initially considered in the ESIA, as it has extended the period during which the community will be affected by the effects of construction.***

***The Lenders required the client several times to compare monitoring results with the WBG EHS Guidelines, which are more stringent than national law. However, it took three years for the client to meet this requirement. CAO further notes that the Lenders did not discuss additional measures to mitigate impacts on El Alfalfal, even though the existing mitigation measure (noise abatement wall) was considered ineffective. Therefore, CAO finds that IFC did not ensure that the project was taking adequate action to meet the requirements of PS3 para. 4 in relation to the mitigation and monitoring of noise impacts, particularly on the community of El Alfalfal.***

### 3.10. Performance Standard 4: Impacts of Labor Influx on Project-Affected Communities

Issues Raised by the Complainants	IFC Requirements
<ul style="list-style-type: none"> <li>Claim that, as the project construction phase will require 2,500 workers at its peak, this will increase risks for local communities, including related to crime, prostitution and drug trafficking.</li> </ul>	<ul style="list-style-type: none"> <li>“Adopt a mitigation hierarchy to anticipate and avoid, or where avoidance is not possible, minimize, and, where residual impacts remain, compensate/offset for risks and impacts to workers, Affected Communities, and the environment.” (PS1, Objectives)</li> <li>“Anticipate and avoid adverse impacts on the health and safety of the Affected Community during the project life from both routine and non-routine circumstances.” (PS4, Objectives)</li> <li>“Ensure that the safeguarding of personnel and property is carried out in accordance with relevant human rights principles and in a manner that avoids or minimizes risks to the Affected Communities.” (PS4, Objectives)</li> <li>“The client will avoid or minimize transmission of communicable diseases that may be associated with the influx of temporary or permanent project labor.” (PS4, para. 10)</li> </ul>

#### CAO Analysis and Findings

##### Pre-Investment Review

The Lenders’ preliminary ESDD identified a need to consider how the project area, with a population of only 13,400, would be affected by the high influx of construction workers, and how labor influx could be managed to avoid burdening local services and infrastructure. As indicated in the ESRS, an average of 2,000 workers was expected, with a peak of 2,500 workers midway through construction. As part of a Social Collaboration Agreement with the community of San Jose de Maipo, the client committed to hire a minimum of 15% of the workforce from the San Jose del Maipo, with an incremental bonus to contractors for increasing local labor up to 25%. Workers hired from local communities would not require housing, while the immigrant workers were expected to be housed in five camps with a capacity of approximately 200-400 workers each. Camp locations were selected considering logistics and engineering requirements, as well as environmental, social, and health and safety considerations. It is indicated that transportation services would be provided by the company between the camps and the work sites as well as between the camps and residential areas, in order to minimize traffic and influx to the area.<sup>92</sup>

The ESDD report noted that additional general standards of conduct had been developed during the ESDD phase to prevent and control any risks of disturbance for both the workers and the community. These included a Code of Conduct to promote respect for the local community, as well as ESHS training, access to workers’ camps and restricted transportation of workers to prevent influx of workers into local communities, policies on the prohibition of drugs, alcohol, weapons, and pets at all work sites and camps; health screening and education; and training on communicable diseases.

<sup>92</sup> IFC Environmental and Social Review Summary, Alto Maipo, Project #31632 - <https://bit.ly/2whHdKK>

Further, population changes and influx were expected to be monitored via the Social Indicators Monitoring Program to be implemented throughout the construction phase.

The June 2013 CIA further assesses potential impacts of labor influx in the project area of influence. As workers camps will provide basic social services, food, lodging and healthcare, the CIA concludes, in line with the ESIA, that project-induced influx was unlikely to affect the provision of basic services. In addition, the CIA notes two other construction projects which could potentially occur during the construction phase of the project, but concludes that these would not significantly increase the number of construction workers in the area and therefore not generate cumulative impacts. The execution of the Social Indicators Monitoring Program was also expected to serve as an adaptive management program in relation to these issues. In addition, the CIA assesses potential effects of worker influx on the local culture of San José de Maipo. However, considering that the town is located within the Santiago Metropolitan Region, and that the workers will come mainly from Santiago, their presence in the area was not expected to alter the local labor structure. It was also noted that the operation of existing hydroelectric plants and transmission lines, as well as other projects, have not generated cultural changes in the area of influence of the project.<sup>93</sup>

As a result of the ESDD, the Lenders required the client to develop a Project Induced In-Migration Plan (PIIM) to address the potential attraction the construction of the project may have to workers' families, outside job seekers, and the potential impacts of the interactions of the projected workforce on the existing communities in the area of influence. TOR for the PIIM were expected to be prepared prior to IFC's first disbursement.

***The Lenders ESDD identified the influx of workers as a risk to be managed by the project to avoid negative impacts on communities within the area of influence, particularly during the construction phase where a peak of 2,500 workers was expected. Worker camps were expected to provide accommodation for in-migrant workers, with management measures in place to control risks of disturbance to communities. The Social Indicators Monitoring Program was also expected to serve as an adaptive management program in relation to these issues. CAO further notes that the Lenders required the client to develop a PIIM to assess potential impacts of labor influx in the project area. CAO thus finds that IFC's pre-investment review was consistent with PS1 and PS4 requirements to adopt the mitigation hierarchy in defining measures to manage potential adverse impacts on the health and safety of affected communities.***

#### Supervision

The client submitted TOR for the PIIM, and these were reviewed by the ESMC on behalf of the Lenders in December 2013. They were considered to be in line with Lenders requirements. The client submitted a preliminary PIIM in January 2014, and the final plan was completed in March 2014 based on feedback from the ESMC. The ESMC noted that the PIIM describes in detail the staffing requirements of the project, as well as a detailed analysis of the socio-economic context of the project and the likely impacts the staffing requirements may have on this context. The plan also includes mitigation measures to be implemented to manage the impacts anticipated, in many cases, in coordination with local authorities. The PIIM indicates that 58% of the workforce would be housed in workers camps, while 29% would be lodged at community level in the project area. It is specified that workers from outside the area would be provided with transport between the camps and designated areas in the Metropolitan Region. The ESMC generally found the PIIM to fulfil the goals and tasks recommended by the Lenders. The ESMC further stressed the need to maintain open channels of communication with local authorities, community leaders, and key stakeholders in order to identify indicators of in-migration and take any necessary actions described in the PIIM.

As the contractors were opening the workers camps and transferring the workforce from in-community housing to the camps throughout 2015 and 2016, the ESMC and the Lenders urged the client to support contractors in managing this transition in the workforce. In particular, the client was

<sup>93</sup> AES Gener, Proyecto Hidroeléctrico Alto Maipo, Evaluación de Efectos Acumulativos, June 2013 – Available at <https://bit.ly/2UJcC1Z>

reminded to use the social indicators monitoring program as a tool for managing the impacts of workers in-migration in the area. The ESMC communicated to the client IFC's guidance on managing project induced in-migration as a reference document.<sup>94</sup>

CAO notes that, in early 2017, the project reported engaging over 4,300 workers, representing a significantly larger workforce than initially anticipated. Consequently, the number of workers lodged outside of workers camps increased substantially over time, with a large proportion of workers being housed within the communities surrounding the project construction sites. The Lenders did not, however, require the client to adapt its assessment of the potential impacts of labor influx in the project area and the PIIM.

Relevant to this issue, the social indicator monitoring results for the period 2014 – 2016 show that up to 23% of participants in the program considered that project workers were not respectful, or were very disrespectful, in public spaces. Following a suggestion by the Lenders, in 2018 the client engaged a specialized consultancy to conduct a study on the social and economic effects of project workforce lodged within the communities of the project area. In general, the study found that most interviewees consider that relationships between project workers lodged at community level and community members are good (71.4%), and that contact was limited given the workers' long working schedules.

As of IFC's exit in May 2018, the ESMC noted that the project was generally compliant with the requirements of the PIIM, and stressed the value of ongoing review and analysis of social indicators monitoring results to identify any potential risks to the communities associated with the migration of workers.

***CAO recognizes IFC's efforts to ensure that the client developed the PIIM prior to first disbursement, and prior to a large workforce migrating to the project area. CAO further notes that IFC's approach was consistent with the key principles of the World Bank's Guidance Note on Managing the Risks of Adverse Impacts on Communities from Temporary Project Induced Labor Influx: (i) Reduce labor influx by tapping into the local workforce; (ii) Assess and manage labor influx risk based on appropriate instruments, such as a site-specific Labor Influx Management Plan and a Workers' Camp Management Plan; and (iii) Incorporate E&S mitigation measures into contractors' obligations.***<sup>95</sup>

***As noted by the ESMC, the PIIM was considered satisfactory to manage the potential impacts of the projected workforce on the existing communities in the area of influence, on the basis of projections of 2,000 to 2,500 workers. However, as of early 2017, the number of workers was almost doubled compared to initial estimations, leading to a greater proportion of workers being housed within communities in the area of influence of the project. Despite these substantial changes in the size of the workforce and housing arrangements, the Lenders did not require the client to conduct further risk and impact analysis, and to update the PIIM accordingly. While social indicators monitoring results suggest that the increase in workers have not generated significant impacts on local services, absent further analysis, the extent of impacts of the increased workforce on communities in the project area is unclear.***

***Therefore, as of IFC's exit in May 2018, CAO finds that IFC did not assure itself that the client's adaptive management strategy addressed changes in the workforce in a manner that ensured compliance with the objective of PS4 to "avoid adverse impacts on the health and safety of the Affected Community during the project life from both routine and non-routine circumstances."***

<sup>94</sup> IFC, Projects and People: A Handbook for Addressing Project-Induced In-Migration, September 2009 – <https://bit.ly/2XoY6yu>

<sup>95</sup> World Bank, Managing the Risks of Adverse Impacts on Communities from Temporary Project Induced Labor Influx, December 2016 – <https://bit.ly/2yDKWTT>

### 3.11. Performance Standard 5: Resettlement, Economic Displacement, and Restrictions on Land Use

Issues Raised by the Complainants	IFC Requirements
<ul style="list-style-type: none"> <li>• Claim the isolation wall surrounding El Alfalfal restricts access to land and natural resources for the community.</li> <li>• Claim that the project agreed to resettle affected people from different areas, including some living in El Alfalfal, but that the commitment has not been fulfilled.</li> <li>• Claim that the project has caused restrictions on land use by <i>arrieros</i><sup>96</sup> and had negative impacts on their economic activities.</li> </ul>	<ul style="list-style-type: none"> <li>• “The client will consider feasible alternative project designs to avoid or minimize physical and/or economic displacement.” (PS5, para. 8)</li> <li>• “If land acquisition or restrictions on land use result in economic displacement defined as loss of assets and/or means of livelihood, regardless of whether or not the affected people are physically displaced, the client will meet the requirements in [PS5, paras 27-29].” (PS5, para. 26)</li> <li>• “In addition to compensation for lost assets, if any, as required under paragraph 27, economically displaced persons whose livelihoods or income levels are adversely affected will also be provided opportunities to improve, or at least restore, their means of income-earning capacity, production levels, and standards of living. ... For persons whose livelihoods are natural resource-based and where project-related restrictions on access ... apply, implementation of measures will be made to either allow continued access to affected resources or provide access to alternative resources with equivalent livelihood-earning potential and accessibility.” (PS5, para. 28)</li> </ul>

#### CAO Analysis and Findings

##### Pre-Investment Review

As indicated in the ESRS, the project design was developed to minimize land acquisition with about 90% of the project’s infrastructure being underground. Land acquisition and rights of way were mainly required for subsurface access for the tunnels, road expansions, transmission lines, spoil dumps and minor facilities. 70% of the land affected by the project was government owned, 28% was privately owned, and 2% was owned by the company. The 16 privately owned properties were not being used for agriculture or other activities sustaining livelihoods, and were thus not considered to involve economic displacement under PS5.<sup>97</sup>

The project was not expected to lead to physical displacement. Economic displacement was expected to be limited to the loss of land-based assets that were not used for primary production or means of livelihood, and were owned primarily by Government agencies. The construction of the Maitenes intake structure and tunnels required the acquisition of a community football field, and a Government-owned camping ground used by a private ecotourism company. In both cases, the client negotiated agreements to relocate the affected facilities to nearby areas with comparable characteristics which were considered acceptable to the affected property owners.<sup>98</sup>

<sup>96</sup> *Arrieros* are “muleteers”, i.e. people who traditionally transports goods using pack animals. *Arrieros* in the project area have also developed horseback riding tourism activities.

<sup>97</sup> IFC Environmental and Social Review Summary, Alto Maipo, Project #31632 - <https://bit.ly/2whHdKK>

<sup>98</sup> *Ibid.*

The preliminary ESDD, however, identified land acquisition as one of the ‘Critical Path Gaps’ that had to be addressed prior to financing. The Lenders required the client to establish a Land and Right of Way Acquisition Report. The report was completed in May 2013 and considered acceptable by the Lenders.<sup>99</sup> The ESRS notes that the client documented the land and right of way acquisition process in line with IFC requirements, identifying and characterizing all property owners and land use required for the project, providing an inventory of affected assets, describing the methods used for the land and right of way acquisition process, and describing a grievance mechanism for the property owners and affected people.<sup>100</sup> The ESDD consultant further reviewed a description of the methodologies used for consultation and negotiation with each affected land and right of way owner, details on the socio-economic status of each land owner, the process whereby compensation was determined, and other relevant paperwork, such as land titles and agreements, and considered that the process was in line with PS5 requirements.

Relevant to the issues raised in the complaint, CAO notes that according to the ethnographic study conducted as part of the ESIA, the construction of the project was not expected to significantly affect areas utilized by *arrieros*. To mitigate impacts during the construction phase, the ESIA proposed monitoring of impacts on *arrieros* through the social indicators monitoring program.

A requirement was included in the ESAP for the client to conduct ongoing monitoring and evaluation of those areas that have been acquired to ensure adequate compensation to affected landowners, and avoidance of damages to properties not acquired by the project.

***CAO notes that the Lenders identified land acquisition as a critical gap to be addressed in line with PS5 requirements. The client prepared a Land and Right of Way Acquisition Report, which was considered to meet the Lenders requirements. In relation to the issues raised in the complaint, CAO notes that while arrieros and herders were identified as stakeholders operating in the project area, no significant impacts were expected on their traditional activities. The social indicators monitoring program was expected to monitor potential impacts of project construction on these groups and provide a basis for adaptive management. CAO further notes that limited land acquisition and economic displacement were expected for the project, and no physical resettlement was envisaged, including in El Alfalfal, which is expected to be the most closely affected community due to its proximity with construction works for the Las Lajas forebay.***

***CAO finds that IFC’s pre-investment review of the client’s approach to land acquisition and economic displacement was consistent with the requirements of PS5 to “avoid or minimize physical and/or economic displacement” (para. 8).***

#### Supervision

Relevant to the issues raised by the complainants regarding PS5-related impacts on El Alfalfal, an agreement was reached between the project and representatives of the community of El Alfalfal (*Comité de Adelanto El Alfalfal*) in August 2014. As part of this agreement, the project committed to provide in-kind compensation to affected households in the community, as well as additional compensation for 12 families to relocate. These families, referred to as “*allegados*” (or “relatives”), do not have land titles and are relatives and/or friends of community members, who were sharing households in El Alfalfal at the time the project started. CAO notes that this agreement, while envisaging compensation for community members of El Alfalfal, does not indicate that the agreed compensation is related to land acquisition, economic displacement, or restrictions on land use for the affected households. The project was due to provide assistance to the *allegados* in establishing themselves on a new piece of land close to El Alfalfal once Government settlement permits were granted, but this was considered a benefit to affected communities rather than a response to involuntary resettlement. An October 2015 addendum to this agreement detailed the compensation to be provided by the project to regular households, as well as the *allegados*. In 2017, however, the ESMC indicated that the authorities did not approve the formalization and provision of legal rights to the land

<sup>99</sup> project, Gap No. 4: Acceso a Terrenos, Adquisiciones y Servidumbre, May 2013 – available at <https://bit.ly/3b3q0UD>

<sup>100</sup> IFC Environmental and Social Review Summary, Alto Maipo, Project #31632 - <https://bit.ly/2whHdKK>

that was requested for the 12 *allegados* families. Subsequently, the ESMC reported that the project had been in negotiation with the *allegados* to amend the community agreement, allowing the project to provide payment without it being tied to land ownership. As of IFC's exit in May 2018, the status of the agreement between the client and the *allegados* was unclear. Available evidence does not support a conclusion that the construction of the noise barrier around El Alfalal caused a restriction on access to land and natural resources that would trigger PS5 as there are openings in the barrier that allow community members to access surrounding areas.

In relation to project impacts on *arrieros*, as of 2015 documentation available indicates that the project engaged with the *arriero* community to ensure that their activities could continue during project construction. In 2016, the client reported to the Lenders that it had been engaging with the Corporation of Equestrian Tourism "*Los Arrieros Cajon del Maipo*", and representatives of national, regional and local authorities and agencies, to improve muleteers routes that intersect with the project's works in the area of El Volcan, to allow the *arriero* community to continue developing its equestrian tourism activities. This engagement was also supported by a country-wide initiative to safeguard the *arriero* community and integrate them in economic development strategies. Monitoring reports during the period of construction (up to IFC's exit) do not give indications of project activities having a negative effect *arriero* activities overall. While temporary interruptions of access to trails or grazing lands were reported in a few instances, they were not considered to have significantly affected *arrieros* and/or animal herding activities.

***CAO notes that the client engaged with the community of El Alfalal and reached an agreement regarding compensation, for both formal households and *allegados* with no official land titles. Though it envisaged compensation and relocation of some families, CAO notes that this agreement was reached in the context of the project providing benefits to communities and not in the context of land acquisition or land use restrictions due to the project. CAO further notes that the client reported engagement with the *arriero* community to ensure continuity of their activities during project construction, in order to avoid economic displacement. The social indicators monitoring program, while reporting some instances of temporary restrictions in land access, did not report significant impacts on *arrieros*.***

***CAO thus finds that IFC's supervision of the project's performance related to land acquisition, economic displacement, and restrictions on land use, was adequate to ensure compliance with PS5, paras 8 and 26 as relevant to the issues raised in the complaint.***

### 3.12. Performance Standard 6 (1/3): Habitat Classification, Endangered Species, and Ecological Flow

Issues Raised by the Complainants	IFC Requirements
<ul style="list-style-type: none"> <li>• Claim that the project will impact living Natural Resources, particularly endangered species.</li> <li>• Claim that the ESIA did not consider impacts on habitats of some species such as the Torrent Duck (<i>Merganetta Armata</i>) and Andean Condor (<i>Vultur Gryphus</i>).</li> <li>• Claim that the reduction of river flows will be much more important than anticipated in the ESIA, thus impacts river ecology, recreational and tourism activities. According to independent calculations the project would reduce the flow of the Maipo tributaries from 60 to 90 percent of its natural flow.</li> </ul>	<ul style="list-style-type: none"> <li>• “The risks and impacts identification process ... should consider direct and indirect project-related impacts on biodiversity and ecosystem services and identify any significant residual impacts. This process will consider relevant threats to biodiversity..., especially focusing on habitat loss...” (PS6, para. 6).</li> <li>• “Given the complexity in predicting project impacts on biodiversity and ecosystem services over the long term, the client should adopt a practice of adaptive management ... responsive to changing conditions and the results of monitoring throughout the project’s lifecycle.” (PS6, para. 7)</li> <li>• In areas of critical habitat,<sup>101</sup> the client will not implement any project activities unless all of the following are demonstrated: <ul style="list-style-type: none"> <li>– No other viable alternatives within the region exist for development of the project on modified or natural habitats that are not critical;</li> <li>– 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;</li> <li>– 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; and</li> <li>– A robust, appropriately designed, and long-term biodiversity monitoring and evaluation program is integrated into the client’s management program.” (PS6, para. 17)</li> </ul> </li> </ul>

#### CAO Analysis and Findings

##### Pre-Investment Review

##### **Habitat Classification and Endangered Species**

The ESIA does not explicitly reference Chilean conservation categories (CONAF Red Book), the IUCN<sup>102</sup> Red List, or IFC’s habitat classification (natural, modified, critical). However, the ESDD consultant performed a comparison of conservation status between flora and fauna species contained in the ESIA, the CONAF Red Book and in the IUCN Red List. IFC’s ESRS further describes project impacts on biodiversity following IFC’s habitat classification. It notes that expected biodiversity impacts relate to natural and modified habitat, and include (1) direct impacts to terrestrial flora due

<sup>101</sup> As defined in PS6, para. 16, “Critical habitats are areas with high biodiversity value, including (i) habitat of significant importance to Critically Endangered and/or Endangered species; (ii) habitat of significant importance to endemic and/or restricted-range species; (iii) habitat supporting globally significant concentrations of migratory species and/or congregatory species; (iv) highly threatened and/or unique ecosystems; and/or (v) areas associated with key evolutionary processes.”

<sup>102</sup> International Union for Conservation of Nature.

to the project's footprint, primarily during construction; and (2) direct impacts on the highly modified aquatic habitat due to reduction in water flow, potentially leading to residual impacts on the ecological integrity of the affected rivers.<sup>103</sup>

The project's footprint was also expected to impact natural forests along the Colorado and Volcan rivers, and shrubs and grasses including wetlands ("vegas" traditionally used for pasturing livestock along the water streams), considered "Vulnerable" under Chilean law. The project's EMP defines actions to prevent or minimize impacts on terrestrial flora, in particular regarding vegas wetlands, as well as clear cutting of trees and reforestation, as per Chilean regulations. The ESIA reported the presence of 16 species of terrestrial fauna in a Chilean conservation category, most of them classified as "Threatened" per Chilean law but also classified under lower conservation categories by the IUCN Red List.<sup>104</sup>

Three fish species were identified in baseline surveys conducted for the ESIA, including the small catfish (*Trichomycterus areolatus*), a native endemic species to Chile considered "Vulnerable" in the project area, and in the IUCN Red List category of "Data Deficient". Two species in conservation status are also present in the project area of influence: the Torrent Duck (*Merganatta armata*), categorized as "Endemic to Chile" in Chile's CONAF Red Book and as "Least Concern" by the IUCN Red List; and the frog "Sapo Arriero" (*Alsodes nodosus*), categorized as "Threatened" in Chile's CONAF Red Book and as "Near Threatened" by the IUCN Red List. The ESRS indicates that the client developed and was implementing an Integrated Management Plan for the small catfish, and was incorporating the Torrent duck and Sapo Arriero into the ongoing habitat surveys.<sup>105</sup> The Andean condor was listed as vulnerable in the ESIA, but is not listed under Chilean law and it is "Near threatened" under the IUCN Red List, therefore no specific action related to the Andean condor was proposed.

The ESAP included a requirement for the client to confirm that the "sensitive areas" noted in the EMP are inclusive of all areas that would require additional restrictions per international standards, due to sensitive habitat or its potential to be "critical", with management measures developed consistent with international standards when needed.

### **Ecological Flow**

The ESRS notes that an Ecological Flow Study for the project was developed in 2008, and its results were confirmed by the RCA. However, as a part of the ESDD, the Lenders considered the "Identification and Assessment of the Conversion or Degradation of Aquatic Habitats and Establishment of an Ecological Flow Management Strategy" as one of the 'Critical Path Gaps' to be addressed. As required by Lenders, the client conducted a revised Ecological Flow Study, considering comments made by IFC and an expert consultant on eco-hydraulics, and including new field data gathered in 2012-2013.<sup>106</sup>

The study recommended specific flows at each intake location determined to be sufficient to sustain the aquatic habitats directly impacted by the project. These ecological flows were approved in the RCA, nevertheless, through the application of Chilean regulations, higher ecological flow requirements were imposed on the project, thus setting more conservative measures for the protection of aquatic habitats. The RCA also includes specific requirements for adaptive management and revisions to the proposed ecological flows if deemed necessary.<sup>107</sup>

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<sup>103</sup> IFC Environmental and Social Review Summary, Alto Maipo, Project #31632 - <https://bit.ly/2whHdKK>

<sup>104</sup> *Ibid.*

<sup>105</sup> *Ibid.*

<sup>106</sup> *Ibid.*

<sup>107</sup> *Ibid.*

The ESAP included requirements for the project to continue to gather baseline information with monitoring campaigns which provide detailed information on the pattern of habitat use of the small catfish in the Maipo basin area. The project was also required to complement the Ecological Flow Management Plan with specific mitigation measures for habitat conservation, compensation, and adaptive management, if applicable.<sup>108</sup>

***PS6 requires that “in instances where nationally ... listed species’ categorizations do not correspond well to those of the IUCN, an assessment will be conducted to determine the rationale and purpose of the listing”, and “the critical habitat determination will be based on such an assessment” (PS6, para. 16, fn 11). In the absence of clarity as to whether the area of influence of the project contained critical habitat, CAO notes that the ESDD included a comparison with IUCN conservation standards, leading to an ESAP requirement for the client to assess the presence of critical habitat prior to initiating project activities, and to develop management measures as needed to ensure compliance with PS6. CAO finds that this approach was consistent with the requirements of PS6, para. 16.***

***CAO further notes that IFC considered the issue of ecological flow management and conservation or degradation of aquatic habitat as a critical gap for the project to meet PS6 requirements, and required the client to conduct additional studies to provide specific flow requirements in line with international standards. This study was completed prior to IFC’s investment approval, and deemed acceptable by IFC. Further requirements were included in the ESAP with a view to ensuring adequate monitoring and adaptive management measures would be put in place. CAO thus finds that IFC’s pre-investment review and advice in relation to the conservation of aquatic biodiversity was consistent with the requirements of PS6, paras 6 and 7.***

#### Supervision

The ESMC’s supervision from 2014 to 2016 reported that the project had not conducted construction activities in areas defined as sensitive in the ESIA. It was also noted that the client was implementing “Environmental Clearance Forms” prior to entering any work area, which were based on a rapid survey of forestry, vegetation, fauna and cultural heritage elements, but did not allow for the identification of critical habitats or endangered species as required by the ESAP. Therefore, the ESMC flagged the need to update these forms including IFC standards as a high priority action. In 2016, the ESMC reported again that the environmental clearance forms were not updated to include information allowing for the identification of critical habitats or endangered species. However, it was also reported that the recommendation had become irrelevant as there were very few areas pending clearance, and no critical habitat was known in the area. Consequently, the item was closed.

During the same period, the ESMC noted constant delays in providing ecological flow monitoring reports for the Lenders’ review, however, the client was considered to be in compliance with ESAP requirements regarding flow monitoring, as there had not been any permanent reduction of species in the study area according to observations of species made during the monitoring period. In 2016, the client reported a species was observed for the first time in the project area, the toad “sapo de rulo” (*Bufo chilensis*), considered “Threatened” under Chilean regulation, and “Nearly Threatened” by the IUCN Red List. The ESMC issued a high priority recommendation that the client seek the technical opinion of the consultant conducting this monitoring to determine whether it was necessary to monitor the species closely. Later in 2016, the client reported that there had not been significant changes on sensitive species populations due to project construction, however, it would continue monitoring the sapo de rulo.

***CAO notes that for several years during supervision, the client did not comply with the requirement included in the ESAP to provide documentation that assesses whether the “sensitive areas” included in the ESIA were considered critical habitats under IFC standards. Nevertheless, the ESMC and IFC indicated that the project had not carried out construction works in areas identified as critical habitat. It is unclear to CAO how this conclusion was reached without the client having implemented the required actions to conduct such***

<sup>108</sup> *Ibid.*

***assessment. CAO thus finds that IFC's supervision did not provide assurance of the project's compliance with the requirements of PS6 para. 17 to ensure that the client does not implement any project activities in areas of critical habitat.***

***CAO acknowledges IFC's supervision of the client's implementation of adaptive management measures during the construction phase as required in the ESAP. This consisted in collecting data regarding aquatic species and adapting the project's monitoring program as needed. CAO notes, however, that the client did not monitor water flow during construction and the Lenders did not require the client to monitor discharges from construction works in a way that would allow effective verification of construction impacts on the aquatic biota. In 2017 the ESMC reported that the client conducted monthly surface water monitoring. However, the ESMC also noted that several stations were not monitored during winter months due to unsafe sampling conditions for the laboratory technicians. CAO notes that monthly water monitoring is too infrequent to assess impacts on the biota. More frequent monitoring, including in relation to flow, could provide relevant data to inform the baseline flow necessary to protect aquatic species during the operational phase of the project, and a lack thereof could compromise future compliance with PS6 requirements for biodiversity conservation.***

### 3.13. Performance Standard 6 (2/3): Impacts on Protected Areas, including Glaciers

Issues Raised by the Complainants	IFC Requirements
<ul style="list-style-type: none"> <li>Claim of negative impacts on living natural resources, particularly in protected areas due to blasting and explosions under glaciers.</li> </ul>	<ul style="list-style-type: none"> <li>“In circumstances where a proposed project is located within a legally protected area or an internationally recognized area, ... the client will:               <ul style="list-style-type: none"> <li>– Demonstrate that the proposed development in such areas is legally permitted;</li> <li>– Act in a manner consistent with any government recognized management plans for such areas;</li> <li>– Consult protected area sponsors and managers, Affected Communities, Indigenous Peoples and other stakeholders on the proposed project, as appropriate; and</li> <li>– Implement additional programs, as appropriate, to promote and enhance the conservation aims and effective management of the area.” (PS 6. para. 20)</li> </ul> </li> </ul>

#### CAO Analysis and Findings

##### Pre-Investment Review

Three legally protected areas lie within the project area of influence, all of which are internationally recognized under an IUCN category. The ESIA identified the tunnels for the project would be built under two protected areas: *Monumento Natural El Morado* (a national monument – IUCN Category III) and the *Santuario de la Naturaleza San Francisco de Lagunillas y Quillayal* (a natural sanctuary – IUCN Category IV).<sup>109</sup> The ESDD indicated that the project design was modified to remove all surface infrastructure in protected areas on the basis of stakeholder feedback. It was also noted that specific vibration studies were conducted in the areas where the tunnels would traverse the protected areas, and results indicated that vibration would not be perceived at the ground surface. During the ESDD, a third protected area located within the area of influence of the project, the *Santuario de la Naturaleza Cascada de las Animas* (a natural sanctuary – IUCN Category IV), was identified although no physical project component was expected within the area. This protected area was not assessed in the ESIA, therefore the Lenders considered the issue of protected areas to be one of the project’s ‘Critical Path Gaps’, and requested a supplemental study to assess potential direct and indirect impacts to all three protected areas located in the area of influence of the project.

A supplemental study on the “Identification and Evaluation of Impacts on Legally Protected and Internationally Recognized Areas” was completed in January 2013.<sup>110</sup> This study concluded that the project was not expected to generate impacts to any of the three protected areas, as all construction works would take place underground. It notes, however, that the project would report information on construction works to relevant authorities and collaborate with them to ensure adequate monitoring of any unexpected impacts.<sup>111</sup> It is also indicated that in order to avoid and minimize impacts from vibration on the protected areas, the project would use Tunnel Boring Machines (TBM) in areas of high sensitivity – such as the *El Morado* glacier – to avoid the use of explosives, and implement a Blasting Vibration Monitoring Plan.

<sup>109</sup> IFC Environmental and Social Review Summary, Alto Maipo, Project #31632 - <https://bit.ly/2whHdKK>

<sup>110</sup> Available at <https://bit.ly/2xRIMRm>

<sup>111</sup> *Ibid.*

The ESDD noted that, as part of the ESIA process, the client carried out consultations with stakeholders directly related to the protected areas, including the owners of the *Santuario de la Naturaleza Cascada de las Animas*, and that no concerns were raised regarding project impacts. Further, the change in flow on the Maipo river where it abuts with the *Cascada de las Animas*, was not expected to be measurable or have any impacts on riparian vegetation within the natural sanctuary.<sup>112</sup>

The Lenders and the client agreed on an ESAP requirement to maintain timely and relevant information disclosure with the owners of the properties that constitute the protected areas regarding the most recent studies and impact assessment, as well as the construction activities and schedule that may be of relevance to them.

***The Lenders considered that the evaluation of project impacts on protected areas constituted a critical gap during the ESDD. Three protected areas were identified within the project area of influence, though no impacts were expected, as tunnel construction in these areas would only involve underground work. The Lenders requested the client to carry out additional studies to assess project impacts on all three protected areas. The study confirmed the ESIA findings that the project was not expected to impact these protected areas, though monitoring of construction activities was expected to be conducted in collaboration with relevant authorities. The ESAP further required timely disclosure of information and engagement with owners of properties in the protected areas.***

***CAO finds that IFC's review of issues related to the project's location in protected areas was consistent with the requirements of PS6, para. 20 to (1) ensure the project's activities in protected areas are legally permitted, (2) ensure collaboration with relevant authorities, and (3) consult protected area sponsors and managers, affected communities, and other stakeholders.***

#### Supervision

In early 2014, the client reported that in line with the ESAP, information on the project was provided to the administration and property owners of the three protected areas. The client distributed project flyers and invited them to visit the project website and the office in Sao Jose de Maipo. The ESMC noted, however, that relevant studies had not been disclosed to the owners, and recommended disclosure of detailed information about construction, local employment, traffic and other expected impacts, as well as results of technical studies. In a later monitoring exercise in 2014, the ESMC reported that the client disclosed information in a timely manner to owners of protected areas, thus complying with the ESAP.

At the same period, the client reported to the ESMC that, although the RCA requires the use of TBM to perforate the *El Volcán* tunnel section underneath the *Monumento Natural El Morado* to avoid blasting and minimize vibration impacts on the glaciers, the geology of the area would likely not allow TBM and the use of a different technology (drill and blast, D&B) was being considered. The ESMC further noted that the company was working with the University of Chile to install equipment and monitor vibrations at *El Morado* prior to initiating tunneling works.

A theoretical study was conducted to model the natural seismic effects and vibration levels induced by construction of the tunnel using traditional blasting in conjunction with TBM. The study recommended that vibration measurements are collected during construction of *El Volcán* tunnel – before reaching the *El Morado* section – to accurately determine variables to refine the model. As a result of this study, a Vibration Monitoring Program was prepared. The ESMC further requested that the client:

- Prepare an alternative assessment for various tunneling technologies for the *El Volcán* tunnel under *El Morado*. The assessment was expected to consider geological conditions, types of technologies, vibration modeling results, and potential impacts to glaciers. If an alternative other than TBM was selected, the client was expected to prepare a justification and confirm whether a CdP would be required.

<sup>112</sup> *Ibid.*

- Obtain approval from the Lenders prior to deciding on a specific technology for tunneling under *El Morado*, if different from TBM.
- Communicate any changes to relevant stakeholders and provide results of the vibration monitoring program.

The above points were reflected in the updated ESAP from Q3 2014 and Q 2 2015.

Throughout 2015 and 2016, several exchanges between the client and the ESMC indicated that (1) an alternative analysis of various technologies to tunnel under *El Morado* was conducted and revised based on ESMC comments, but potential impacts analysis and mitigation measures for each technology were missing, and (2) vibration monitoring was carried out but not disclosed to the relevant stakeholders in the protected area. Nevertheless, the ESMC considered that client's actions were generally compliant with the ESAP.

The ESMC's supervision activity throughout 2017 indicated that the company confirmed the method for tunneling under *El Morado* would be TBM as stipulated in the RCA, unless geology dictated otherwise. The ESMC reiterated that if TBM were not used, the client should provide to the Lenders a justification of geologic conditions requiring alternative technologies, and an analysis of comparative risks and impacts to the *El Morado* National Monument, if any.

***CAO notes that, through the ESMC, IFC monitored closely the choice of technologies to be used when tunneling under the El Morado glacier. The ESMC reviewed the client's additional studies and vibration monitoring results, and relevant conditions were included in the ESAP in case the client should diverge from initially planned technologies for construction. In this respect, CAO finds that IFC's supervision of the client's activities in protected areas was consistent with PS6 para. 20. However, as of IFC's exit in May 2018, CAO finds that IFC had not ensured that the client met the requirements of PS1 regarding disclosure of information to relevant stakeholders in particular the disclosure of the vibration monitoring results as required by the ESAP and ESMC. While the tunneling had not reached the El Morado National Monument by the time of IFC's exit, the objective of the vibration monitoring was to measure vibration prior to reaching the El Morado section. Therefore, it was not necessary to reach this point to disclose the information.***

### 3.14. Performance Standard 6 (3/3): Impacts on Ecosystem Services, including Recreational Water Users

Issues Raised by the Complainants	IFC Requirements
<ul style="list-style-type: none"> <li>• Claim that the project will cause negative impacts on ecosystem services, including on tourism and recreational activities.</li> <li>• Claim that 70 percent of jobs in the project area are related to tourism, and that impacts on jobs and tourism in general were not considered in the ESIA.</li> <li>• Claim that the project will cause erosion, significantly reducing sediment levels and affecting access to water for communities and riverbanks infrastructure.</li> </ul>	<ul style="list-style-type: none"> <li>• “Where a project is likely to adversely impact ecosystem services, ... the client will conduct a systematic review to identify priority ecosystem services. Priority ecosystem services are two-fold: (i) those services on which project operations are most likely to have an impact and, therefore, which result in adverse impacts to Affected Communities; and/or (ii) those services on which the project is directly dependent for its operations (e.g., water). When Affected Communities are likely to be impacted, they should participate in the determination of priority ecosystem services in accordance with the stakeholder engagement process as defined in [PS1].” (PS6, para. 24)</li> <li>• “With respect to impacts on priority ecosystem services of relevance to Affected Communities and where the client has direct management control or significant influence over such ecosystem services, adverse impacts should be avoided. If these impacts are unavoidable, the client will minimize them and implement mitigation measures that aim to maintain the value and functionality of priority services.” (PS6, para. 25)</li> </ul>

#### CAO Analysis and Findings

##### Pre-Investment Review

As noted in the ESRS, the ESIA identified key potential impacts on ecosystem services during project operation, including permanent changes in the water flow regime; potential impacts to water rights holders in the project area and immediately downstream of the project discharge; impacts to community water intake structures in the intervened reach; visual impacts; and recreational river use impacts. The ESRS indicated that mitigation measures corresponding to each impact were incorporated in the RCA and the client would include them into its management plans for project construction and operation.<sup>113</sup>

Further, during the ESDD, the “Identification and Assessment of Potential Impacts on Water Uses and Establishment of a Management/Compensation Plan” was identified by the Lenders as a ‘Critical Path Gap’ to be addressed by the client. This critical gap motivated the revision of the 2008 Ecological Flow Study, which was completed in 2013 and concluded that all recreational needs in the Maipo river would be covered by the ecological flow stated in the RCA. The study, however, did not analyze impacts on tributaries el Volcán, Yeso and Colorado, arguing that a minor number of professional kayakers were the only potential recreational users of those rivers. Based on this shortcoming, as well as limitations in the methodology used for the evaluation of recreational flow needs (which evaluated navigability rather than recreational experience needs), the Lenders required the client to conduct an in-depth assessment regarding recreational water uses in the project area. This was included in the ESAP, stating that in consultation

<sup>113</sup> IFC Environmental and Social Review Summary, Alto Maipo, Project #31632 - <https://bit.ly/2whHdKK>

with commercial and private recreational boaters and other stakeholders, the assessment would quantify the level of recreational use in affected rivers, the flow requirements for a quality recreational experience, and propose complementary mitigation and management measures, if required.<sup>114</sup>

The Lenders also found the “Identification and Assessment of Potential Impacts on Riverbed Sediments and Establishment of a Management/Compensation Plan” as a ‘Critical Path Gap’. Among the potential impacts identified in the ESIA is the structural undermining of irrigation intake structures located in the project area and up to 5 kilometers downstream of the project discharge. The ESRS notes that impacts were expected to only affect the El Manzano Community Irrigation Association intake, out of 17 intakes in the area. It further notes that the company reached an agreement with the *Comunidad de Aguas Canal el Manzano* regarding measures to ensure that their water intake structures in the Colorado River would be sufficient to provide water flow in accordance with the community’s water rights. The Lenders also required the client to conduct an Advanced Sediment Transport Study to better understand the potential impacts of changes in sediment transport dynamics and propose proper mitigation, management and compensation measures, if applicable. The requirement for these issues to be part of the project’s participatory monitoring program, as well as the development of an Ecosystem Services Management Program to ensure adequate implementation of management and compensation measures, were included in the ESAP.<sup>115</sup>

***Although the ESIA and the RCA identified potential impacts of the project on water uses and contained measures to be implemented by the project, including in relation to recreational streamflow requirements, the Lenders identified this issue as a critical gap which triggered (1) a revision of the Ecological Flow Study, and (2) a requirement for the client to conduct further assessment to ensure that project impacts on recreational water users were identified and addressed in line with PS6 requirements, including consultation with key affected stakeholders (e.g. commercial and private recreational boaters).***

***The Lenders further identified potential changes in sediment transport as another critical gap, and included an ESAP requirement for the client to develop an Ecosystem Services Management Program to address identified cumulative impacts on ecosystem services in the project area of influence, including stakeholder engagement provisions as part of the participatory monitoring program, compensation plans to address impacts on key stakeholders (incl. rafting operators, irrigation canal associations, etc.), and completion of the Advanced Sediment Transport Study.***

***Therefore, CAO finds that IFC’s pre-investment review of potential project impacts on ecosystem services was commensurate to the level of risks and impacts of the project, and the advice given to the client was consistent with the requirements of PS6 paras 24 and 25.***

#### Supervision

Throughout supervision, the ESMC repeatedly requested the client to complete the study on recreational water uses, flagging deficiencies in the client’s approach to this study. In 2014, TOR for the study were completed and considered acceptable by the Lenders, but it was reported that engagement with relevant stakeholders and sufficient data collection had not been conducted yet. While the study was initiated in 2014, a number of challenges were reported, including difficulties in correlating water flow information to user experience observations, and needs for further expertise to conduct the assessment. In 2015, the ESMC provided a detailed review and gap analysis to assist the client in improving the study and analysis necessary to determine flow requirements for recreational uses. In 2016, the Lenders recommended the hiring of a recreation expert to conduct a site visit and ensure that recommendations were understood and interpreted in a manner that would allow the study to get to completion. An independent expert conducted a site visit in December 2016 to observe the affected river segments and recreational use, meet with the consultant

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<sup>114</sup> *Ibid.*

<sup>115</sup> *Ibid.*

that had conducted the recreational use monitoring for the past four years, and to develop a Whitewater Boating Recreational Use Report with conclusions and recommendations. The report was discussed with the client, which generally accepted the recommendations but provided additional information. Consequently, in 2017, it was decided that the report would be updated with additional information, and delivered in early 2018. However, by the time of IFC's exit in May 2018, the study had not been completed and CAO only had access to a summary of the advances of the study, indicating that a number of methodological limitations had yet to be overcome to complete the study.

In relation to sediment transport, in 2015 the ESMC made a number of recommendations to the client to address gaps in the draft Advanced Sediment Transport Study against the Lenders requirements, though the draft study met national requirements. The ESMC reported that the company submitted the final Advanced Sediment Transport Study and summary presentation to the Hydraulic Works Department (*Dirección de Obras Hidráulicas – DOH*) in February 2016. Once approved by the DOH, the summary presentation was expected to be disclosed to other relevant stakeholders, including the public. In the interim, the ESMC noted that the summary presentation was delivered to the participatory water monitoring panel in March 2016. Recommendations by the Lenders for updates to the presentation to improve the communication of key information was incorporated into the draft document. In 2017, the ESMC reported that the client had not provided updates with regards to remaining gaps of the study, including: (1) a compensation mechanism in the event of impacts from sediment transport; (2) assigned resources and capacity for implementing the monitoring plan; and (3) providing a format for the monitoring report.

***CAO notes that up to IFC's exit in May 2018, the client had not completed a satisfactory study regarding recreational water uses, as required in the ESAP. CAO further notes that, the adaptive management monitoring framework developed for the project required an increase of the minimum streamflow if monitoring results showed negative impacts on aquatic species. However, there was no similar requirement to ensure water flow to mitigate project impacts on recreational activities. Therefore, at the time of IFC's exit, CAO finds that IFC had not ensured that the client took adequate action to meet the requirements of PS6 para. 25 in relation to potential project impacts on recreational activities.***

***In relation to potential impacts of sediment transport, CAO notes that the client has completed the Advanced Sediment Transport Study, and shared a summary of results with the participatory monitoring panel. However, a number of gaps needed to be addressed to meet PS6 requirements and were still pending at the time of IFC's exit from the project. CAO further notes that the study's methodology did not meet GIIP, as required by PS6: because measurements of sediment transport were not performed in all the rivers and streams of the project area, and results on river morphodynamics were made based on assumptions that did not meet standard methods of analysis. GIIP is well documented in relation to sediment transport assessment and monitoring,<sup>116</sup> and was further documented in IFC's March 2018 IFC Good Practice Note on EHS Approaches to Hydropower Projects.<sup>117</sup>***

***CAO thus finds that IFC's supervision did not ensure that impacts of sediment transport on ecosystem services were assessed and monitored in accordance PS1 and PS6 requirements.***

<sup>116</sup> See for example: Chapter 6 in Calow, P. P., & Petts, G. E. (Eds.). (2009). The rivers handbook: hydrological and ecological principles. John Wiley & Sons – <https://bit.ly/3ldQM1u>; and Danube Sediment: Handbook on Good Practices in Sediment Monitoring – <https://bit.ly/2yGZJNi>

<sup>117</sup> IFC Good Practice note on EHS Approaches for Hydropower Projects, March 2018 – <https://bit.ly/3aBSnYJ>

### 3.15. IFC's Determination of Applicability of Performance Standard 8 on Cultural Heritage

Issues Raised by the Complainants	IFC Requirements
<ul style="list-style-type: none"> <li>Claim that impacts of the project were not evaluated in several areas of cultural heritage value. There are archeological and paleontological sites to be discovered in the area, which are threatened by project construction.</li> </ul>	<ul style="list-style-type: none"> <li>Where the risk and identification process determines that there is a chance of impacts to cultural heritage, the client will retain competent professionals to assist in the identification and protection of cultural heritage. (PS8, para. 7)</li> <li>“The client is responsible for siting and designing a project to avoid significant adverse impacts to cultural heritage. ... as part of the client’s ESMS, the client will develop provisions for managing chance finds through a chance find procedure which will be applied in the event that cultural heritage is subsequently discovered.” (PS8, para. 8)</li> </ul>

#### CAO Analysis and Findings

The ESDD report noted that the project was compliant with cultural and archaeological heritage authorizations, and that it was not expected to affect any known archeological, cultural heritage or paleontological sites.

The ESDD reported, however, that three sites with a high cultural heritage value were found in the area of indirect influence of the project as identified in the archaeological and paleontological baseline assessments conducted during the ESIA. None of the project facilities or installations, however, are located in the immediate vicinity of any of these sites, and no impacts to the sites were anticipated. Nevertheless, Mitigation measures were expected to be implemented during construction, including orientation and training to contractor managers by an archeologist, and implementation of a chance finds procedure compliant with national law and PS8 as new construction areas are entered, as part of the process for clearing the areas. The ESDD further noted that on the basis of stakeholder feedback during the ESIA process, the crossing of Yeso River was re-routed to avoid a cultural heritage finding associated with an Inca Trail (“*Camino del Inka*”).

Although the ESDD included PS8 as part of the Performance Standards triggered by the project, IFC’s ESRS noted that PS8 does not apply as the project will not affect any known archeological, cultural heritage or paleontological sites.<sup>118</sup>

Throughout supervision, the company has conducted archeological and paleontological monitoring prior to entering work areas, through the implementation of a chance finds procedure and “Environmental Clearance Forms”, which consider cultural heritage elements before construction works are initiated. As indicated in the ESMC’s monitoring reports, prior to initiating construction works, the company and contractors conducted training sessions to educate workers on chance finds, as well as training on the protection of paleontological resources. The ESMC reported that sites identified as having cultural heritage value are protected (e.g. through fencing), and the company’s specialized archeological consultant requests systematic prospections and selective rescue of material to the *Consejo de Monumentos Nacionales* (CNM – National Monuments Council). The client’s reporting to the ESMC has included copies of requests made to the CNM and corresponding approval letters. The ESMC further noted that the client was preparing a paleontological collection with rescued materials to be sent to the National Museum of Natural History of Chile. No damage

<sup>118</sup> IFC Environmental and Social Review Summary, Alto Maipo, Project #31632 - <https://bit.ly/2whHdKK>

to areas of cultural heritage value were reported to the Lenders during the time of IFC's involvement in the project, and the ESMC reported that the client's weekly archaeology and paleontology monitoring in the project's areas of intervention was adequate.

***While CAO acknowledges IFC's assessment that the project is not expected to affect any known archeological, cultural heritage or paleontological sites, CAO notes that the ESIA identified sites with cultural heritage value within the project's area of influence, and that the project design was modified on the basis of concerns regarding a cultural heritage finding. CAO further notes that the ESDD report indicated that PS8 should be triggered by the project, and that the company has implemented measures to manage potential impacts on cultural heritage. CAO thus finds that IFC's determination that PS8 does not apply to the project was not consistent with the evidence provided by the ESDD.***

***CAO notes, however, that throughout project supervision on behalf of the Lenders, the ESMC monitored the client's management of project impacts on cultural heritage and found the client's approach to be adequate. No damages to sites of cultural heritage value were reported in the documentation made available to CAO during the time of IFC's involvement in the project, and no non-compliances were found regarding the client's management of PS8-related issues.***

## 4. Conclusion and Observations

This compliance investigation report responds to two complaints submitted to CAO in 2017 regarding the environmental and social impacts of the Alto Maipo Hydropower Project in Chile, in which IFC had an active investment from 2013 to 2018.

The first complaint received by CAO raises a broad range of concerns regarding current and future impacts of the project on project-affected communities and the environment, while the second complaint makes allegations of sexual harassment on the workplace and inadequate response to these claims by the IFC client. The two complaints were merged for the purpose of the CAO compliance process.

IFC, together with other lenders, conducted an E&S due diligence process for the project in 2012-2013, with the support of a third-party consulting firm. IFC's approach to project supervision similarly consisted in a coordinated approach with other lenders, with the support of an Environmental and Social Monitoring Consultant (ESMC) responsible for conducting field visits to the project area, reviewing the client's E&S reporting, and assessing the client's performance against lenders requirements and the ESAP. In the context of large and complex projects like Alto Maipo, this approach to E&S due diligence and supervision was broadly consistent with IFC's Sustainability Policy and IFC's Environmental and Social Review Procedures (ESRP).

While the involvement of a specialized E&S consultancy firm in project review and supervision is consistent with IFC requirements, IFC is still required to review the external consultant's reports against the requirements of the Performance Standards, follow up with the client on matters of compliance with IFC requirements and the ESAP, and otherwise fulfil its supervision duties as required by the Sustainability Policy, including the requirement to exercise remedies as appropriate where non-compliance with its E&S requirements persists. As such, while CAO's analysis of IFC's pre-investment review and supervision of the project relies to a large extent on reporting from the external consultant to the lenders, conclusions and findings are reached as to IFC's performance against its own policies and procedures.

CAO finds that IFC's pre-investment review of the project was generally consistent with the requirements of the Sustainability Policy for IFC to conduct a review "appropriate to the nature and scale of the activity and commensurate with the level of E&S risks and/or impacts" (para. 6). IFC's review found a number of shortcomings in the project's preparation against international E&S standards. As a result, IFC together with the other lenders, identified eight 'Critical Path Gaps' and required these to be addressed prior to financing. The client commissioned a number of additional studies in relation to the critical gaps. The lenders and the external consultant reviewed these and agreed on management measures with the client. An E&S action plan (ESAP) was developed and included in the financing agreements between the client and the lenders. The ESAP contained a number of measures to be taken prior to project construction, while additional assessments and measures were expected to be completed before the operational phase of the project.

IFC's pre-investment review noted that the client would adopt an adaptive management framework in relation to certain E&S risks and impacts. This adaptive management approach was particularly designed to monitor – and reassess as needed – issues regarding the construction of tunnels and related uncertainties as to the geological aspects of such activities, as well as issues related to ecological flows, potential cumulative impacts of the project, and social issues through a social indicators monitoring program that was to serve as tool to identify areas requiring additional management measures. The objective of this approach was to leave the possibility for

the client to implement additional prevention and mitigation measures as project construction advanced, and later on during operation, should changing project conditions occur. Provisions for adaptive management were also included in the environmental license granted by Chilean authorities to the project.

While adaptive management may be appropriate in certain circumstances, CAO finds that IFC's reliance on adaptive management in relation to this project led to oversights in IFC's review of the project's assessment of a number of risks and impacts. In particular, in relation to impacts of tunneling activities on groundwater, CAO finds a weak baseline in hydrogeology made it challenging to assess potential water infiltration and potential groundwater contamination during construction of the tunnels. In relation to air quality, while the project proposed mitigation measures related to dust emissions, IFC did not ensure that the project established adequate air quality baselines. Consequently, there was no quantitative monitoring of air quality, particularly in areas such as El Alfalfal, which was expected to be impacted due to its close proximity to construction sites. Similarly, in relation to noise impacts, while monitoring provisions were approved by national authorities, during pre-investment, IFC did not discuss with the client more stringent standards to be applied such as the WBG EHS Guidelines, including in El Alfalfal.

Throughout supervision, the ESMC submitted quarterly reports to the lenders. These provided a key source of information for IFC supervision. The client's adaptive management approach during project construction phase allowed for a number of issues to be addressed in a manner consistent with good industry practice, for instance:

- Tracking mechanisms for waste rock were implemented as construction progressed, and in events where ARD was found in waste rock, adequate contingency measures were taken.
- The social indicators monitoring program identified potential impacts on the *arriero* community, which led to additional monitoring to ensure that their activities would not be negatively affected by the project.
- Data monitoring of aquatic species during construction led to the adaptation of the project's monitoring program.
- The client's additional studies and vibration monitoring results related to tunneling activities led to the addition of relevant conditions in the ESAP in case the client should diverge from initially planned technologies for construction, particularly under the El Morado glacier.
- The client's approach to management of project impacts on cultural heritage consisted in systematic assessment of risks prior to entering construction sites, and avoided damages to sites of cultural heritage value during the time of IFC's involvement in the project.

CAO finds, however, that IFC's supervision of the project was not sufficient to ensure compliance in relation to several issues of importance during project construction. In particular, CAO notes that the project's adaptive management framework failed to address a number of shortcomings identified as early as the ESDD and during supervision, including the following:

- Several events of groundwater interception by tunnels demonstrated that discharges were higher than expected in the ESIA. In several instances, adaptive management failed to adequately characterize the rock to identify whether acid rock drainage (ARD) was present, and therefore whether intercepted groundwater needed to be treated before it could be re-injected into the aquifer. This gave rise to risks of groundwater pollution. These deficiencies later motivated Chilean authorities to order the revision of the project's environmental license.

- The absence of quantitative air quality monitoring has made it challenging for the project to assess the effectiveness of mitigation measures in areas that may be considered sensitive due to their proximity to construction works, such as El Alfalfal.
- The Lenders required the client to compare noise monitoring results with the WBG EHS Guidelines on several occasions, however, it took three years for the client to meet this requirement. IFC did not discuss additional measures to mitigate impacts on El Alfalfal, even though the existing mitigation measure (a noise abatement wall) was determined to be ineffective.
- As of 2017, the number of workers on site almost doubled compared to initial estimations of 2,000-2,500 workers. Despite substantial changes in the size of the workforce and associated housing arrangements, the lenders did not require the client to conduct further risk and impact analysis and to update its Project Induced In-Migration Plan accordingly.
- As of IFC's exit in May 2018, the client had not completed a satisfactory study regarding recreational water uses, as required in the ESAP. CAO found that, while the adaptive management framework developed for the project was well-suited for increasing the minimum streamflow based on monitoring of aquatic species, such option was not anticipated for recreational activities. For this reason, completion of the study is essential for the project to satisfy the requirements of PS6 para. 25 in relation to potential project impacts on recreational activities.
- Although the client completed an Advanced Sediment Transport Study, IFC supervision did not ensure that the study's methodology met GIIP, as required by PS6. In particular, CAO notes that measurements of sediment transport were not performed across the various rivers and streams in the project area, and results on the river morphodynamics were made based on assumptions that did not meet standard methods of analysis. As a result, the study did not ensure that mitigation, management and compensation measures for adverse effects of changes in sediment transport dynamics on ecosystem services were developed in line with GIIP.

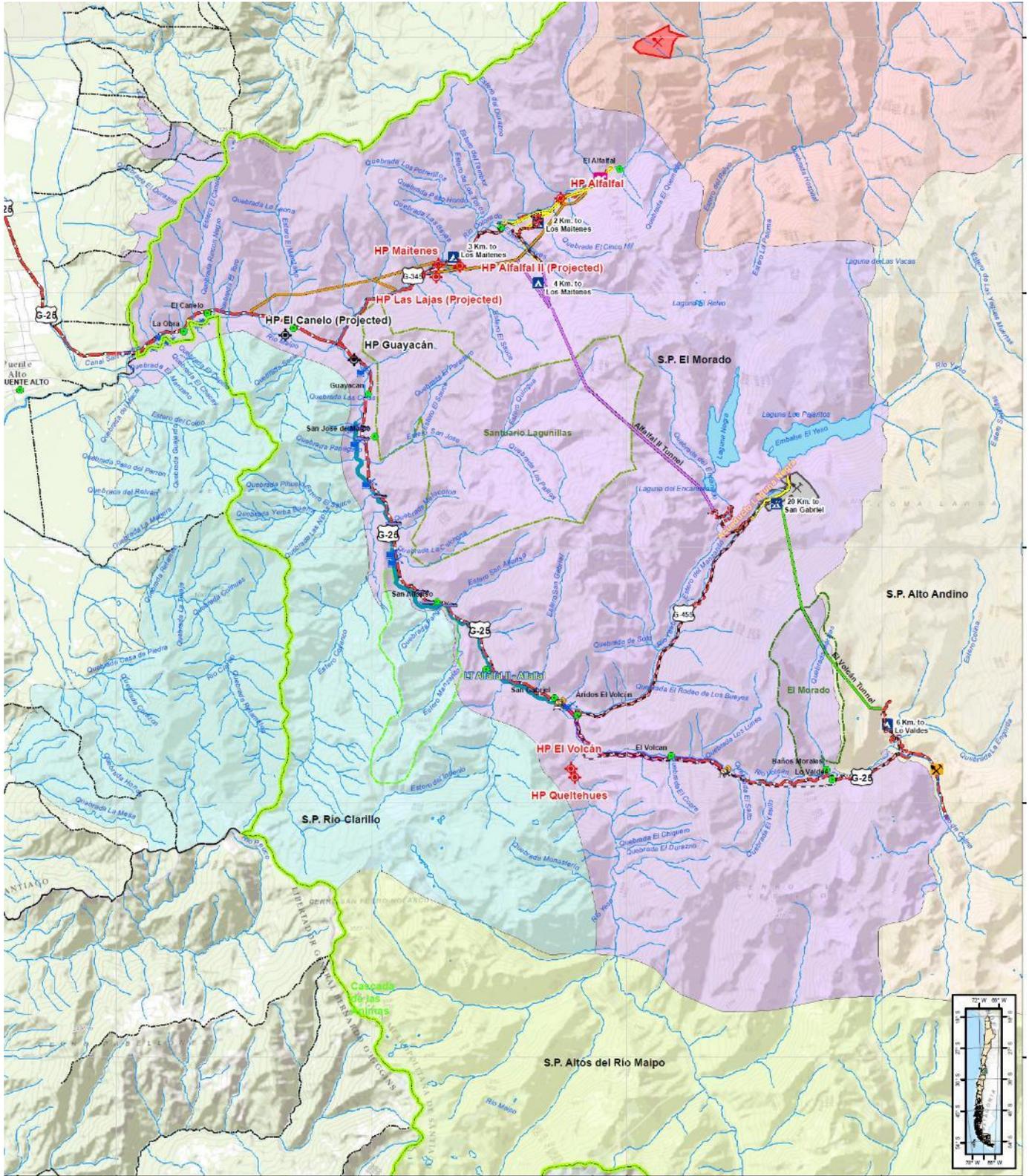
CAO further notes that the construction period was regularly extended compared to the five-year period initially planned. This is particularly important in relation to issues most affecting local communities, such as the potential impacts of a large workforce being present in the project area for a longer period of time, and potential air, noise and traffic impacts on communities located in close proximity to construction sites. A highly functional adaptive management approach was needed to ensure that client management plans were updated taking into account the longer than expected duration of these impacts, however there are no indications that a review of potential additional impacts and the adequacy of management measures, was conducted.

In relation to the second complaint submitted to CAO regarding allegations of sexual harassment, CAO notes that cases of sexual harassment in the workplace were reported from 2016 onwards, but were not registered as part of the project grievance mechanism. The ESMC and the lenders repeatedly required the client to provide evidence that a "proactive sexual harassment investigation process" was being carried out. However, CAO found no evidence that (a) actions required had been satisfactorily completed as of IFC's exit in May 2018; (b) IFC shared with the client relevant guidance on addressing issues of sexual harassment on the workplace; or that (c) IFC reviewed the client's investigation into the CAO complainant's case. Therefore, CAO finds that IFC's supervision did not ensure that the client took measures to prevent and address harassment, intimidation, and/or exploitation, especially in regards to women as required by PS2 (para. 15). Given that the client declined to provide CAO access to documentation of its response to the allegations from the CAO complainant, and there is no record of IFC supervision in relation to this issue, CAO is not in a position to comment on the client's response to the specific issues raised.

IFC exited its direct investment in the project in May 2018 by selling its debt. However, IFC together with other lenders enabled the project through construction financing and IFC has an ongoing business relationship with the project's parent company, AES Corporation. IFC also has ongoing relationships with Itaú Corpbank, that have continued to provide finance to the project.

In light of the findings of 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.

# 5. Annex 1: Project Map (Source: project ESIA, 2008)



<p><b>ALTO MAIPO HYDROELECTRIC PROJECT</b> Cumulative Effects Assessment</p> <p><b>AMHP Works: General Map</b></p> <p><b>AES Gener</b></p>	<p><b>Legend</b></p> <p><b>Conservation Priority Sites</b></p> <ul style="list-style-type: none"> <li>Alto del Rio Maipo</li> <li>El Morado</li> <li>Rio Clarillo</li> <li>Rio Colorado, Tupungato</li> <li>Sector Rio Andino</li> </ul> <p><b>Towns and Villages</b></p> <ul style="list-style-type: none"> <li>2017 San José de Maipo</li> <li>Las Anexas Falls</li> <li>Rio Clarillo</li> <li>M.N. El Morado</li> <li>Santuario Lagunillas</li> <li>Campes de Agua</li> </ul> <p><b>Hydrological network</b></p> <ul style="list-style-type: none"> <li>Municipality Borders</li> <li>Road network</li> <li>Route G-25</li> <li>G-245</li> <li>G-455</li> <li>Other Roads</li> </ul> <p><b>Other Symbols:</b></p> <ul style="list-style-type: none"> <li>Cardinal Complex AES</li> <li>Hydroelectric Plant</li> <li>Quempe Tourist</li> <li>Tourist Selling</li> <li>Setting Area</li> <li>Laguna Negro Acapulco</li> <li>Route G25 Improvement</li> <li>Working Lines</li> <li>AMHP Roads</li> <li>Los Pichos Exploration</li> <li>Mina Carbon Exploration</li> <li>Nonmetallic Mining Extraction</li> <li>Gravel Extension</li> <li>Start - End works</li> </ul>	<p><b>Source:</b></p> <ul style="list-style-type: none"> <li>Topographic layer: Vector topographic map (IGN)</li> <li>Information source: <ul style="list-style-type: none"> <li>State network MIDEPLAN-MOP</li> <li>Hydrological network MIDEPLAN</li> <li>Towns &amp; Villages MIDEPLAN</li> </ul> </li> </ul> <p><b>Design and edition:</b></p> <p><b>AES Gener</b></p>	<p><b>Scale:</b> 1:150,000</p> <p><b>Geographic coordinate systems:</b></p> <p>Projections: Universal Transverse of Mercator (UTM, UTMZ)</p> <p><b>Coordinate Data:</b></p> <p>Datum: WGS-84 (SIRGAS)</p> <p>Spheroid: WGS84</p> <p>Geographic (datum) transformations: ISM (SIRGAS)</p> <p>November 2012</p>
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## 6. Annex 2: Summary of CAO Findings

Issue	Findings	Project-Level Response
<p><b><i>IFC’s Review of the Environmental and Social Impact Assessment (ESIA) Process: Area of Influence, Alternatives Analysis and Cumulative Impact Assessment</i></b></p>	<p><u>Area of Influence</u></p> <p>While the definition of the project’s area of influence under Chilean standards identified a direct and an indirect area of influence, this distinction is not a requirement from the Lenders standards perspective, which require the project to consider the total area of influence when identifying potential project risks and impacts and proposing mitigation measures. After an initial review of the ESIA, the Lenders requested that the client expand the project area of influence to meet the definition of IFC PS1 para. 8, including the area downstream of the restitution point, in order to include downstream impacts in the project’s cumulative impacts assessment. A rationale was provided in the ESDD as to why extending the area of influence to 5 km downstream of the project discharge was considered adequate. CAO thus finds that IFC’s review and advice to the client in relation to the definition of the project’s area of influence was consistent with PS1, para. 8 requirements.</p> <p><u>Cumulative Impact Assessment</u></p> <p>Noting shortcomings in the identification and assessment of potential project risks and impacts, the Lenders required the client to conduct a CIA to meet international standards. The Lenders participated in the selection of a competent external expert to carry out the CIA, as required by PS1 para. 19. However, CAO notes that no additional consultation with relevant stakeholders was done in the context of the CIA study to identify any recent or recurring issues of concern. PS1 Guidance Notes indicate that “a CIA enlarges the scale and timeframe of the assessment”, and that “because a CIA transcends a single project development, the resulting potential management or mitigation measures typically require participation from a larger and more diverse number of stakeholders ... Furthermore, the active participation of government authorities is typically required to assess the incremental contribution of each project to the cumulative impacts” (PS1, GN40). IFC did not require the client to carry out further consultation in the context of the preparation of the CIA, therefore in relation to the CIA, CAO finds that IFC did not ensure compliance with PS1 requirements for the client to “undertake a process of consultation in a manner that provides the Affected Communities with opportunities to express their views on project risks, impacts and mitigation measures, and allows the client to consider and respond to them.” (PS1, para. 30)</p> <p><u>Alternatives Analysis</u></p> <p>For projects including “specifically identified physical elements, aspects, and facilities that are likely to generate potential significant E&amp;S impacts”, PS1 requires that the ESIA process includes an examination of alternatives where appropriate (PS1, para. 7, fn11). The analysis of alternatives is essential to the application of the mitigation hierarchy which requires “the avoidance of impacts over minimization, and, where residual impacts remain, compensation/offset, wherever technically and financially feasible” (para. 14). As required by PS1, the Lenders required an alternatives analysis as none was included in the project ESIA. The study was completed in June 2013 and its content was considered by the Lenders to meet international standards. This conclusion was reached on the basis of</p>	<p>NOT MONITORED</p>

Issue	Findings	Project-Level Response
	<p>the ESDD report, which provides details regarding changes in project design that were made based on stakeholder feedback, economic analysis of project alternatives, technology options, and alternative transmission line routes. CAO notes that marginal modifications were made to the design of the Las Lajas forebay in order to reduce impacts on the community of El Alfalfal. However, the Alternatives Analysis Report does not consider alternative locations for the Las Lajas forebay which may have further reduced or avoided the otherwise significant impact that the project was expected to have on the community during the construction phase. CAO notes IFC's view that this design change was based on a comprehensive review of alternatives, however, no documentation of this analysis was provided. In not ensuring a comprehensive alternatives analysis for this specific and potentially high impact element of the project, CAO finds that IFC's review of the client's ESIA process fell short of good international industry practice and thus did not meet the requirements of PS1 para. 7.</p>	
<p><b>IFC's Review and Supervision of the Project's Compliance with National Law</b></p>	<p><u>Pre-Investment Review</u>  At pre-investment stage, IFC was aware that the client carried out some activities prior to obtaining the necessary permits. As a consequence, the Lenders included an ESAP requirement for the client to put in place a permit registry to monitor the project's compliance with national law. This registry was implemented by the agreed deadline, i.e. financial closing. CAO thus finds that IFC's review of the project's approach to compliance with national law, and measures taken to monitor it, were consistent with PS1, para. 5 requirements.</p> <p><u>Supervision</u>  CAO recognizes the Lenders' efforts to ensure that the client put in place a permit registry and a compliance tracking system for monitoring the compliance with RCA and permitting requirements. From pre-investment stage and throughout supervision, however, the Lenders were made aware of repeated instances of project activities being carried out prior to obtaining necessary permits. These issues were flagged by the ESMC to be addressed as high priority items, and several non-compliances were confirmed by national authorities. Though actions were taken to strengthen the client's permit tracking systems in 2015, these were not sufficient to prevent further construction permitting breaches in 2016. As a result CAO finds that during the period 2014 to 2016, IFC did not have assurance that the client was full compliant with national legal requirements in relation to permitting as required under PS1, paras 5 and 24. CAO notes that no further permitting noncompliance was reported in 2017 through to IFC's exit from the project in May 2018.</p>	<p>NOT MONITORED</p>
<p><b>IFC's Determination of Broad Community Support (BCS), Review and Supervision of the Project's Consultation and Information Disclosure Activities, and</b></p>	<p><u>Pre-Investment Review</u>  CAO notes that IFC's pre-investment review of the project's stakeholder engagement and information disclosure process identified substantial gaps with PS1 requirements in the client's approach to stakeholder engagement up to 2013, considering stakeholder engagement as an overarching 'Critical Path Gap' for the project. The ESDD provided recommendations for the client to put in place procedures and systems in line with Lenders standards, prior to financing approval. CAO finds that the Lenders' recommendations for the client to strengthen the project's community relations capacity, to formalize an approach to stakeholder engagement through a SEP and a social management system, and to develop and</p>	<p>MONITORING (IFC disclosure of information)</p>

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<p><b>Grievance Mechanism</b></p>	<p>implement a GM for the project and its contractors, were consistent with the requirements of PS1.</p> <p><u>IFC's Determination of Broad Community Support</u></p> <p>CAO finds that IFC provided a reasoned decision leading to a conclusion that the client conducted a process of ICP, leading to BCS for the project, in line with the requirements of PS1 para. 30. While IFC's conclusions in relation to ICP (BCS stream 1) were supported by evidence in line with IFC guidance to staff, less detail was provided under the heading of "key evidence of support and/or objection to the project" (BCS stream 2). CAO further notes that IFC disclosed a summary of its determination of BCS as part of the ESRS, as required, albeit in a form that is so limited as to provide little useful information to the reader (ESRP 4 para. 2.12, Version 7, April 2013).</p> <p><u>Supervision</u></p> <p>CAO notes that throughout supervision, with an important level of engagement by the Lenders and the ESMC to support the client, improvements to stakeholder engagement processes were documented, including the improvement of the social indicators monitoring program, implementation of a participatory monitoring program and the dissemination of information regarding the GM. It was also reported, however, that the project needed to adopt a more open approach in relation to information sharing and to better utilize monitoring data from the social indicator monitoring system and GM to inform the project's management of E&amp;S risks and impacts.</p> <p>CAO notes that, as of IFC's exit from the project in May 2018, a number of recommendations were pending implementation by the client. Nevertheless, CAO finds that the advice provided by IFC up to May 2018 was consistent with the requirements of PS1 for a continued ICP process, and implementation of a PS-compliant GM.</p> <p>Finally, CAO notes that IFC did not consistently apply its own disclosure requirements to this project. In particular, IFC's Access to Information Policy requires that IFC updates the ESRS with E&amp;S information as it becomes available, including any additional E&amp;S assessments conducted for the project, and "third-party monitoring reports where required by IFC, in accordance with the Performance Standards." (AIP 2012, para. 41). For instance, disclosure of the final versions of the CIA, the 'Critical Path Gaps' reports, the Advance Sediment Transport Study, the PIIM, the study on Potential for Contamination of Water from Tunneling Activities and Rock Disposal in Waste Heaps, and E&amp;S management plans, were required under these provisions and would have provided up to date information on the project to interested stakeholders, including the complainants and other project-affected communities. CAO notes IFC's assertion that the ESMC reports are confidential in nature and were not disclosed on this bases. However, the ESMC were also disclosable under the AIP as third party monitoring reports.</p>	
<p><b>IFC's Review and Supervision of the Project's Approach to Climate Change Impacts</b></p>	<p><u>Pre-Investment Review</u></p> <p>CAO notes that the ESDD identified climate change impacts as an important area of concern raised by stakeholders. Studies prepared and/or communicated by different stakeholder groups including the CAO complainants were considered as part of this process, and the Lenders subsequently requested that the client conduct a specific study on potential impacts of climate change on water flows in the Maipo river basin. Climate</p>	<p>NOT MONITORED</p>

Issue	Findings	Project-Level Response
	<p>change was also taken into consideration in the CIA as a cross-cutting topic. On this basis, several actions were included in the ESAP in relation to climate change impacts. CAO thus finds that IFC’s pre-investment review of the client’s approach to climate change was consistent with the requirement to “identify those risks and potential impacts on priority ecosystem services that may be exacerbated by climate change” and to “implement mitigation measures” (PS4, para. 8).</p> <p><u>Supervision</u></p> <p>CAO notes that the client participated in the MAPA initiative working group as a “water user” of the Maipo watershed, as required by the ESAP. At the time of IFC’s exit, the Lenders had requested that the client propose actions based on the outcomes of the research findings. CAO thus finds that IFC’s supervision of the client’s engagement with climate change issues as they relate to the project was consistent with the requirements of the Sustainability Policy (para. 11) and Performance Standards.</p>	
<p><b>Performance Standard 2: Harassment on the Workplace and Worker Grievance Mechanism</b></p>	<p><u>Pre-Investment Review</u></p> <p>CAO notes that the ESDD reviewed the project sponsor’s HR policies and GM, and the Lenders’ subsequently required the project to develop a stand-alone HR Policy and employee GM in line with PS2 requirements. The HR Policy was expected to be disseminated to both contractors and employees. In addition, project contractors would be required to adopt the GM, though the project would ultimately be held responsible for the grievance redress process. These ESAP requirements were expected to be completed before IFC’s first disbursement. CAO thus finds that IFC’s pre-investment review of the project’s approach to preventing harassment, intimidation, and/or exploitation, and employee GM, was consistent with the requirements of PS2, paras 15 and 20.</p> <p><u>Supervision</u></p> <p>CAO found no evidence that the actions required by the ESMC and the Lenders in relation to addressing sexual harassment in the workplace had been satisfactorily completed as of IFC’s exit in May 2018, in particular recommendations in relation to investigations of cases of sexual harassment on the workplace were not actioned. CAO found no evidence either that IFC shared with the client relevant guidance on addressing issues of sexual harassment on the workplace. Finally, there is no indication that IFC and/or the ESMC reviewed the client’s investigation into the CAO complainant’s case specifically. In this context, CAO finds that IFC’s supervision did not ensure that the client took appropriate measures to prevent and address harassment, intimidation, and/or exploitation, especially in regard to women (PS2, para. 15). CAO further finds that IFC’s supervision did not ensure that the client had in place a GM for workers of the company and its contractors that involved an appropriate level of management and address concerns promptly, using an understandable and transparent process, including in relation to the case of sexual harassment brought by the CAO complainant (PS2, para. 20). Given that CAO was not granted access to documentation of the client’s investigation in response to the CAO complainant’s allegations of sexual harassment, and there is no IFC supervision record in relation to this issue, CAO is not in a position to comment on the client’s response to the specific issues raised.</p>	<p>MONITORING</p>

Issue	Findings	Project-Level Response
<p><b>Performance Standard 3 (1/4): Impacts of Waste Rock Disposal on Soil and Water Pollution</b></p>	<p><u>Pre-Investment Review</u></p> <p>IFC's pre-investment review identified waste rock disposal as an important area of concern raised by stakeholders. Although there was found to be low probability of ARD in the waste rock, the client was required by the RCA to take preventive measures, and prepared management plans that were considered adequate by the ESDD consultant and the Lenders. The ESAP further included a requirement for the client to complement the existing plans to comply with Lenders requirements. Therefore, CAO finds that IFC's pre-investment review of potential impacts of waste rock disposal on water contamination was commensurate with the level of risks, and consistent with PS3 requirements.</p> <p><u>Supervision</u></p> <p>CAO notes that during early supervision, the ESMC considered that the procedures established to identify, track and manage waste rock disposal were adequate. The ESMC repeatedly flagged, however, a need for the client to enhance the implementation of waste rock disposal procedures, in particular by designating adequate tracking mechanisms for waste rock and identifying contingency waste rock deposits. In instances where ARD was found in waste rock, the ESMC indicated that adequate contingency measures were taken.</p> <p>Therefore, CAO finds that IFC's supervision ensured that the client was given advice consistent with the requirements of PS3 in relation to the management of waste rock disposal during the period up to IFC's exit from the project in May 2018. With the support of the ESMC, IFC ensured that "technically and financially feasible pollution prevention techniques that were best suited to avoid contamination of water and soil were applied", as required by PS3, para. 4.</p>	<p>NOT MONITORED</p>
<p><b>Performance Standard 3 (2/4): Impacts of Tunneling Activities on Groundwater</b></p>	<p><u>Pre-Investment Review</u></p> <p>The Lenders identified the issue of impacts of tunneling activities on groundwater as a significant one for the project. Consequently, an in-depth ESDD was carried out in relation to groundwater impacts, additional assessments were conducted, and mitigation measures were included in the ESAP.</p> <p>CAO notes, however, that while IFC took steps during appraisal to assess and prevent the risk of groundwater interception and pollution, certain elements were not raised in the ESDD, including the absence of a hydrogeological model to be carried out during tunneling activities. Considering that the ESIA had weak baseline information, conducting modelling during tunneling activities would represent GIIP in allowing for an accurate estimation of impacts on groundwater and aquifers and subsequent development of a monitoring plan for groundwater interception, pollution control and treatment. In this context, CAO finds that IFC did not require the client to use GIIP techniques, such as monitoring tunneling activities, which would provide data regarding potential impacts on groundwater, thus IFC did not ensure project compliance with PS3 para. 4.</p> <p><u>Supervision</u></p> <p>CAO notes that, during construction, several events of groundwater interception by tunnels demonstrated that discharges were higher than expected in the ESIA, which as noted above, contained a weak baseline in hydrogeology. In several instances, adaptive management failed to adequately characterize the rock to identify whether acid rock drainage</p>	<p>NOT MONITORED</p>

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	<p>(ARD) was present, and therefore whether intercepted groundwater needed to be treated before it could be re-injected into the aquifer. This gave rise to risks of groundwater pollution. CAO notes that these project deficiencies later motivated Chilean authorities to order the revision of the project RCA.</p> <p>The relationship between glaciers melting and infiltration, the effect of tunneling activities, and groundwater recharge were considered in the project’s framework for adaptive management. The latter, however, was not sufficient to avoid significant issues regarding the management of important volumes of water infiltrations and the pollution of groundwater intercepted by the tunnels during construction. Therefore, CAO finds that IFC’s supervision of the project’s management of groundwater impacts of tunneling activities failed to ensure compliance with PS3 requirements.</p>	
<p><b>Performance Standard 3 (3/4): Air Quality</b></p>	<p><u>Pre-Investment Review</u></p> <p>CAO notes that IFC did not enquire about the lack of characterization of the air quality baseline in the area of the project, despite the fact that it was acknowledged through the ESDD that alteration of air quality would likely occur during construction. The client put in place measures to compensate and mitigate the project’s impact on air quality, however, only dust reduction measures were expected to be monitored, and no quantitative monitoring of other air quality indicators was required.</p> <p>Good international industry practice would require impacts to be estimated through qualitative or quantitative assessments by the use of baseline air quality assessments and atmospheric dispersion models to assess potential ground level concentrations, and monitoring thereafter to ensure the effectiveness of emissions management measures (WBG General EHS Guidelines, 1.1). In the context of this project, this is particularly relevant in community areas located in close proximity with construction sites, such as El Alfalfal. CAO thus finds that IFC’s advice was not consistent with the requirements of PS3, para 4. CAO further finds that IFC did not discuss the need for the project to comply with more stringent standards such as updated Chilean regulations or the WBG EHS Guidelines standards on ambient air quality and dust emissions, nor did IFC require the client to provide full and detailed justification for any proposed alternatives, as required by PS3, para. 5.</p> <p><u>Supervision</u></p> <p>As reported by the ESMC, the air quality monitoring reports submitted by the client throughout the construction phase – up to IFC’s exit in May 2018 – were considered satisfactory to implement the agreed dust reduction measures. However, CAO finds it challenging to assess the effectiveness of mitigation measures without measuring air quality in the areas that may be considered sensitive due to their proximity to construction works and thus exposure to potential impacts. Quantitative air quality monitoring in important receptors in the area of influence of the project represents good international industry practice in this context. Given the lack of quantitative air quality monitoring in relation to this project, CAO thus finds that IFC’s supervision of the client’s air quality monitoring did not ensure compliance with the requirements to meet GIIP in PS3 para. 4 and the WBG EHS Guidelines.</p>	<p>NOT MONITORED</p>

Issue	Findings	Project-Level Response
<p><b>Performance Standard 3 (4/4): Noise and Vibrations</b></p>	<p><u>Pre-Investment Review</u></p> <p>CAO notes that measures were included in the ESAP to strengthen the project’s monitoring of noise impacts on receptors located close to construction sites and roads where heavy traffic was expected. These mitigation measures represent a first step towards compliance with the requirements of PS3, para. 4 to apply principles and techniques to avoid or minimize adverse project impacts. Relevant to the complainants concerns over noise impacts of construction on the community of El Alfalfal, the construction of an isolation wall as a noise control device is consistent with recommendations from the WBG EHS Guidelines.</p> <p>However, CAO finds that IFC’s pre-investment review over-relied on monitoring provisions that were approved by national authorities. IFC did not discuss with the client more stringent standards to be applied, particularly as some communities such as El Alfalfal were expected to be impacted due to their close proximity to construction sites. Consequently, IFC did not require the client to monitor noise impacts against the WBG EHS Guidelines (section 1.7 on Noise) as required by PS3, para. 4, neither did IFC require the client to provide full and detailed justification for any proposed alternatives, as required by PS3, para. 5.</p> <p><u>Supervision</u></p> <p>CAO notes that GIIP and adaptive management would have required the project to adopt the most recent national regulations or the WBG EHS guidelines from the start of construction regarding noise monitoring. The frequency of noise monitoring could have also been acted upon, including a more frequent monitoring schedule in sensitive receptors such as El Alfalfal, considering that exceedances in noise levels were repeatedly measured. CAO further notes that the construction phase has been extended, which may constitute an additional factor of increased impact than initially considered in the ESIA, as it has extended the period during which the community will be affected by the effects of construction.</p> <p>The Lenders required the client several times to compare monitoring results with the WBG EHS Guidelines, which are more stringent than national law. However, it took three years for the client to meet this requirement. CAO further notes that the Lenders did not discuss additional measures to mitigate impacts on El Alfalfal, even though the existing mitigation measure (noise abatement wall) was considered ineffective. Therefore, CAO finds that IFC did not ensure that the project was taking adequate action to meet the requirements of PS3 para. 4 in relation to the mitigation and monitoring of noise impacts, particularly on the community of El Alfalfal.</p>	<p>NOT MONITORED</p>
<p><b>Performance Standard 4: Impacts of Labor Influx on Project-Affected Communities</b></p>	<p><u>Pre-Investment Review</u></p> <p>The Lenders ESDD identified the influx of workers as a risk to be managed by the project to avoid negative impacts on communities within the area of influence, particularly during the construction phase where a peak of 2,500 workers was expected. Worker camps were expected to provide accommodation for in-migrant workers, with management measures in place to control risks of disturbance to communities. The Social Indicators Monitoring Program was also expected to serve as an adaptive management program in relation to these issues. CAO further notes that the Lenders required the client to develop a PIIM to assess potential impacts of labor influx in the project area. CAO thus finds that IFC’s pre-investment review was consistent with PS1 and PS4 requirements to adopt</p>	<p>MONITORING</p>

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	<p>the mitigation hierarchy in defining measures to manage potential adverse impacts on the health and safety of affected communities.</p> <p><u>Supervision</u></p> <p>CAO recognizes IFC's efforts to ensure that the client developed the PIIM prior to first disbursement, and prior to a large workforce migrating to the project area. CAO further notes that IFC's approach was consistent with the key principles of the World Bank's Guidance Note on Managing the Risks of Adverse Impacts on Communities from Temporary Project Induced Labor Influx: (i) Reduce labor influx by tapping into the local workforce; (ii) Assess and manage labor influx risk based on appropriate instruments, such as a site-specific Labor Influx Management Plan and a Workers' Camp Management Plan; and (iii) Incorporate E&amp;S mitigation measures into contractors' obligations.</p> <p>As noted by the ESMC, the PIIM was considered satisfactory to manage the potential impacts of the projected workforce on the existing communities in the area of influence, on the basis of projections of 2,000 to 2,500 workers. However, as of early 2017, the number of workers was almost doubled compared to initial estimations, leading to a greater proportion of workers being housed within communities in the area of influence of the project. Despite these substantial changes in the size of the workforce and housing arrangements, the Lenders did not require the client to conduct further risk and impact analysis, and to update the PIIM accordingly. While social indicators monitoring results suggest that the increase in workers have not generated significant impacts on local services, absent further analysis, the extent of impacts of the increased workforce on communities in the project area is unclear.</p> <p>Therefore, as of IFC's exit in May 2018, CAO finds that IFC did not assure itself that the client's adaptive management strategy addressed changes in the workforce in a manner that ensured compliance with the objective of PS4 to "avoid adverse impacts on the health and safety of the Affected Community during the project life from both routine and non-routine circumstances."</p>	
<p><b>Performance Standard 5: Resettlement, Economic Displacement, and Restrictions on Land Use</b></p>	<p><u>Pre-Investment Review</u></p> <p>CAO notes that the Lenders identified land acquisition as a critical gap to be addressed in line with PS5 requirements. The client prepared a Land and Right of Way Acquisition Report, which was considered to meet the Lenders requirements. In relation to the issues raised in the complaint, CAO notes that while arrieros and herders were identified as stakeholders operating in the project area, no significant impacts were expected on their traditional activities. The social indicators monitoring program was expected to monitor potential impacts of project construction on these groups and provide a basis for adaptive management. CAO further notes that limited land acquisition and economic displacement were expected for the project, and no physical resettlement was envisaged, including in El Alfalfal, which is expected to be the most closely affected community due to its proximity with construction works for the Las Lajas forebay.</p> <p>CAO finds that IFC's pre-investment review of the client's approach to land acquisition and economic displacement was consistent with the requirements of PS5 to "avoid or minimize physical and/or economic displacement" (para. 8).</p> <p><u>Supervision</u></p>	<p>NOT MONITORED</p>

Issue	Findings	Project-Level Response
	<p>CAO notes that the client engaged with the community of El Alfalfal and reached an agreement regarding compensation, for both formal households and allegados with no official land titles. Though it envisaged compensation and relocation of some families, CAO notes that this agreement was reached in the context of the project providing benefits to communities and not in the context of land acquisition or land use restrictions due to the project. CAO further notes that the client reported engagement with the arriero community to ensure continuity of their activities during project construction, in order to avoid economic displacement. The social indicators monitoring program, while reporting some instances of temporary restrictions in land access, did not report significant impacts on arrieros.</p> <p>CAO thus finds that IFC's supervision of the project's performance related to land acquisition, economic displacement, and restrictions on land use, was adequate to ensure compliance with PS5, paras 8 and 26 as relevant to the issues raised in the complaint.</p>	
<p><b>Performance Standard 6 (1/3): Habitat Classification, Endangered Species, and Ecological Flow</b></p>	<p><u>Pre-Investment Review</u></p> <p>PS6 requires that “in instances where nationally ... listed species’ categorizations do not correspond well to those of the IUCN, an assessment will be conducted to determine the rationale and purpose of the listing”, and “the critical habitat determination will be based on such an assessment” (PS6, para. 16, fn 11). In the absence of clarity as to whether the area of influence of the project contained critical habitat, CAO notes that the ESDD conducted a comparison with IUCN conservation standards, leading to an ESAP requirement for the client to assess the presence of critical habitat prior to initiating project activities, and to develop management measures as needed to ensure compliance with PS6. CAO finds that this approach was consistent with the requirements of PS6, para. 16.</p> <p>CAO further notes that IFC considered the issue of ecological flow management and conservation or degradation of aquatic habitat as a critical gap for the project to meet PS6 requirements, and required the client to conduct additional studies to provide specific flow requirements in line with international standards. This study was completed prior to IFC’s investment approval, and deemed acceptable by IFC. Further requirements were included in the ESAP with a view to ensure adequate monitoring and adaptive management measures would be put in place. CAO thus finds that IFC’s pre-investment review and advice in relation to the conservation of aquatic biodiversity was consistent with the requirements of PS6, paras 6 and 7.</p> <p><u>Supervision</u></p> <p>CAO notes that for several years during supervision, the client did not comply with the requirement included in the ESAP to provide documentation that assesses whether the “sensitive areas” included in the ESIA were considered critical habitats under IFC standards. Nevertheless, the ESMC and IFC indicated that the project had not carried out construction works in areas identified as critical habitat. It is unclear to CAO how this conclusion was reached without the client having implemented the required actions to conduct such assessment. CAO thus finds that IFC’s supervision did not provide assurance of the project’s compliance with the requirements of PS6 para. 17 to ensure that the client does not implement any project activities in areas of critical habitat.</p>	<p>MONITORING</p>

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	<p>CAO acknowledges IFC's supervision of the client's implementation of adaptive management measures during the construction phase as required in the ESAP. This consisted in collecting data regarding aquatic species and adapting the project's monitoring program as needed. CAO notes, however, that the client did not monitor water flow during construction and the Lenders did not require the client to monitor discharges from construction works in a way that would allow effective verification of construction impacts on the aquatic biota. In 2017 the ESMC reported that the client conducted monthly surface water monitoring. However, the ESMC also noted that several stations were not monitored during winter months due to unsafe sampling conditions for the laboratory technicians. CAO notes that the monthly water monitoring is too infrequent to assess impact on the biota. More frequent monitoring, including in relation to flow, could provide relevant data to inform a baseline flow necessary to protect aquatic species during the operational phase of the project, and a lack thereof could compromise future compliance with PS6 requirements for biodiversity conservation.</p>	
<p><b>Performance Standard 6 (2/3): Impacts on Protected Areas, including Glaciers</b></p>	<p><u>Pre-Investment Review</u></p> <p>The Lenders considered that the evaluation of project impacts on protected areas constituted a critical gap during the ESDD. Three protected areas were identified within the project area of influence, though no impacts were expected, as tunnel construction in these areas would only involve underground work. The Lenders requested the client to carry out additional studies to assess project impacts on all three protected areas. The study confirmed the ESIA findings that the project was not expected to impact these protected areas, though monitoring of construction activities was expected to be conducted in collaboration with relevant authorities. The ESAP further requires timely disclosure of information and engagement with owners of properties in the protected areas.</p> <p>CAO finds that IFC's review of issues related to the project's location in protected areas was consistent with the requirements of PS6, para. 20 to (1) ensure the project's activities in protected areas are legally permitted, (2) ensure collaboration with relevant authorities, and (3) consult protected area sponsors and managers, affected communities, and other stakeholders.</p> <p><u>Supervision</u></p> <p>CAO notes that, through the ESMC, IFC monitored closely the choice of technologies to be used when tunneling under the El Morado glacier. The ESMC reviewed the client's additional studies and vibration monitoring results, and relevant conditions were included in the ESAP in case the client should diverge from initially planned technologies for construction. In this respect, CAO finds that IFC's supervision of the client's activities in protected areas was consistent with PS6 para. 20. However, as of IFC's exit in May 2018, CAO finds that IFC had not ensured that the client met the requirements of PS1 regarding disclosure of information to relevant stakeholders in particular the disclosure of the vibration monitoring results as required by the ESAP and ESMC. While the tunneling had not reached the El Morado National Monument by the time of IFC's exit, the objective of the vibration monitoring was to measure vibration prior to reaching the El Morado section. Therefore, it was not necessary to reach this point to disclose the information.</p>	<p>MONITORING (Disclosure of information)</p>

Issue	Findings	Project-Level Response
<p><b>Performance Standard 6 (3/3): Impacts on Ecosystem Services, including Recreational Water Users</b></p>	<p><u>Pre-Investment Review</u></p> <p>Although the ESIA and the RCA identified potential impacts of the project on water uses and contained measures to be implemented by the project, including in relation to recreational streamflow requirements, the Lenders identified this issue as a critical gap which triggered (1) a revision of the Ecological Flow Study, and (2) a requirement for the client to conduct further assessment to ensure that project impacts on recreational water users were identified and addressed in line with PS6 requirements, including consultation with key affected stakeholders (e.g. commercial and private recreational boaters).</p> <p>The Lenders further identified potential changes in sediment transport as another critical gap, and included an ESAP requirement for the client to develop an Ecosystem Services Management Program to address identified cumulative impacts on ecosystem services in the project area of influence, including stakeholder engagement provisions as part of the participatory monitoring program, compensation plans to address impacts on key stakeholders (incl. rafting operators, irrigation canal associations, etc.), and completion of the Advanced Sediment Transport Study.</p> <p>Therefore, CAO finds that IFC's pre-investment review of potential project impacts on ecosystem services was commensurate to the level of risks and impacts of the project, and the advice given to the client was consistent with the requirements of PS6 paras 24 and 25.</p> <p><u>Supervision</u></p> <p>CAO notes that up to IFC's exit in May 2018, the client had not completed a satisfactory study regarding recreational water uses, as required in the ESAP. CAO further notes that, the adaptive management monitoring framework developed for the project required an increase of the minimum streamflow if monitoring results show negative impacts on aquatic species. However, there was no similar requirement to ensure water flow to mitigate project impacts on recreational activities. Therefore, at the time of IFC's exit, CAO finds that IFC had not ensured that the client took adequate action to meet the requirements of PS6 para. 25 in relation to potential project impacts on recreational activities.</p> <p>In relation to potential impacts of sediment transport, CAO notes that the client has completed the Advanced Sediment Transport Study, and shared a summary of results with the participatory monitoring panel. However, a number of gaps to be addressed to meet PS6 requirements and were still pending at the time of IFC's exit from the project. CAO further notes that the study's methodology did not meet GIIP, as required by PS6: because measurements of sediment transport were not performed in all the rivers and streams of the project area, and results on the river morphodynamics were made based on assumptions that did not meet standard methods of analysis. GIIP is well documented in relation to sediment transport assessment and monitoring, and was further documented in IFC's March 2018 IFC Good Practice Note on EHS Approaches to Hydropower Projects. CAO thus finds that IFC's supervision did not ensure that impacts of sediment transport on ecosystem services were assessed and monitored in accordance PS1 and PS6 requirements.</p>	<p>MONITORING</p>
<p><b>IFC's Determination of</b></p>	<p>While CAO acknowledges IFC's assessment that the project is not expected to affect any known archeological, cultural heritage or</p>	<p>NOT MONITORED</p>

Issue	Findings	Project-Level Response
<p><b><i>Applicability of Performance Standard 8 on Cultural Heritage</i></b></p>	<p>paleontological sites, CAO notes that the ESIA identified sites with cultural heritage value within the project’s area of influence, and that the project design was modified on the basis of concerns regarding a cultural heritage finding. CAO further notes that the ESDD report indicated that PS8 should be triggered by the project, and that the company has implemented measures to manage potential impacts on cultural heritage. CAO thus finds that IFC’s determination that PS8 does not apply to the project was not consistent with the evidence provided by the ESDD.</p> <p>CAO notes, however, that throughout project supervision on behalf of the Lenders, the ESMC monitored the client’s management of project impacts on cultural heritage and found the client’s approach to be adequate. No damages to sites of cultural heritage value were reported in the documentation made available to CAO during the time of IFC’s involvement in the project, and no non-compliances were found regarding the client’s management of PS8-related issues.</p>	

