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Barrick Gold's Pascua Lama Drama

Costs and Bonds in Chile's Regulator-Driven Mining Monitoring System

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Transnational mining corporations often cut corners in their extractive processes and exploit the institutional systems of developing nations for the sake of profitability. An epitomic case is that of Barrick Gold's Pascua Lama mine in Chile. The Canadian mining company's efforts to extract gold from the Huasco Valley in the Andes Mountains led to environmental damage, such as glacial destruction and water pollution.ⁱ These damages have downstream human rights impacts, such as economically destabilizing agricultural-dependent Chileans. After two decades of environmental complaints, Chile's environmental regulator took action against Barrick Gold after it failed to address water management problems in early 2013. The Chilean Superintendency of the Environment sanctioned Barrick in April 2013 with a \$16 million fine and indefinitely suspended work at Pascua Lama, which led Barrick to halt the project on October 31, 2013. The Pascua Lama case is the first time in Chilean history in which the environmental regulator has significantly countered a multinational mining corporation, when over 20 percent of tax revenue and over 55 percent of exports come from the mining sector." This poses a focal question: what was unique about the Pascua Lama case that prompted the upholding of environmental regulations despite the economic benefits of the mine? Simply, what political pressures made environmental regulatory accountability a reality in Chile?

This research focuses on the political drivers that empowered the Chilean environmental regulator – and its environmental courts – to tame Barrick's ecological destruction at Pascua Lama. Largue that three political forces led to the enablement of Chile's environmental regulator *la Superintendencia del Medio Ambiente* (Superintendency of the Environment or SMA) to hold Barrick Gold accountable. First, Chile's accession process to the OECD in the mid-2000s required the revamping of its environmental regulator, upgrading the financial penalties at Chile's disposal against ecological ruin caused by mining companies. Next, increasing public

participation and NGO involvement over the Pascua Lama issues led to Chile's first major mining protests, prompting the SMA to sanction Barrick to avoid global shame for lacking democratic accountability. Lastly, Chile's signing of ILO Convention 169 created legal protection for indigenous residents, allowing the SMA to facilitate court action against Barrick.

Thus, political pressures enabled the SMA to curtail Barrick's environmental degradation and catalyze a major regulatory change in Chile's mining industry. The confluence of these factors in 2013 raised Barrick's costs of doing business in Chile, prompting it to voluntarily suspend its mining operation. These costs can be translated into a set of generalizable tools to promote a regulator-driven monitoring system. Argentina can leverage these factors to ensure Barrick's environmental compliance in its Veladero mining project. Responsible mining is possible, given the appropriate bonds backed up by a state regulator and the force of law.

The paper proceeds as follows. Part A summarizes Barrick's involvement at Pascua Lama and its inadequate self-regulation. Parts 2-4 explore the three political drivers – OECD accession, public protest, and indigenous rights – that motivated the environmental regulator to act against Barrick Gold at Pascua Lama. Part 5 concludes by summarizing the costs and bonds imposed by the SMA against Barrick and how they could be generally applied in other countries.

Part 1: Barrick Gold, Pascua Lama, and the Inadequacy of Self-Regulation

Toronto-based Barrick Gold is the world's largest gold producer, which operates dozens of multi-billion-dollar mining projects across 6 continents. Barrick became interested in the Pascua Lama site in 1991, as a mine there could produce 850,000 ounces of gold and 35 million ounces of silver in the first five years of a 25 year lifespan.^{iv} Barrick was approved to survey the mine by a COREMA office (a regional environmental regulator) in the Atacama Desert in 2001.^v

Despite the environmental impact assessments (EIAs) required for exploration, Barrick omitted data about glacial destruction as a result of lax, legacy Pinochet-era mining regulations.^{vi} After exploration concluded in 2004, Barrick submitted revisions to its EIAs in order to start building the mine in 2009, after the resolution of the mine's tax issues between Chile and Argentina.^{vii}

From 2009 until 2013, Barrick Gold performed seemingly rigorous actions to mitigate its ecological impact and build support among the locals. Barrick spent \$15 million and 200,000 hours creating 5,336 pages of environmental reports with the paid help of 10 ecological consultancies and Chilean and Canadian universities.^{viii} Barrick's report stated that there would be no impact on glaciers and it agreed to Chile's 400 environmental conditions. Barrick held 1000 meetings with community members and invested in education and health programs, as part of its culture of "trust, transparency and shared responsibility and accountability."^{ix} Despite Barrick's efforts, locals remained concerned about the project's environmental impacts.

Despite Barrick's claims, the project was fraught with environmental violations. Exploratory work imperiled 3 glaciers in the Huasco Valley region due to effluent and dust production, threatening snowmelt-dependent agriculture by irrevocably melting some parts of the glaciers.^x While COREMA requested additional information about the mine's detrimental effects on the glaciers, it received minimal information from Barrick, yet it still approved the project upon receiving water management plans.^{xi} Barrick took advantage of Chile's environmental regulator via a piece-mealing strategy. The company divided its mining proposal into multiple parts to ensure lighter assessments by regional COREMA offices instead of the stricter regulations imposed by the national regulator CONAMA. These reviews were also biased towards Barrick, as COREMA granted the company unfair extensions to provide documentation,

prioritizing private investment over public well-being.^{xii} Also, the lack of independent reviewers of its ecological reports allowed Barrick to omit key information regarding glacial destruction.^{xiii}

The crisis came to a head in January 2013 when Barrick admitted that a water diversion channel had collapsed, leading to Barrick site managers deciding to let natural runoff water flow through the mining site, in direct abuse of Barrick's environmental permit.^{xiv} Barrick admitted to not building infrastructure to prevent the incident and admitted to 22 of 23 charges brought against it by the SMA in order to attempt to avoid court time and pay a lower fee than the SMA's \$16 million sanction.^{xv} However, appeals by the indigenous Diaguita people led to the SMA fining Barrick for \$16 million in May 2013, following the April 2013 appeals court ruling that halted construction work indefinitely.^{xvi} Barrick itself decided to fully halt the project in October 2013 due to costs escalating above \$8 billion from its initial \$1.5 billion projections, mainly due to its environmental mismanagement leading to several delays.^{xvii} Ramp-down activities needed for environmental protection purposes were completed during the second quarter of 2014.

The Pascua Lama mining case evinces the errors of self-regulation: one cannot be held accountable for environmental degradation unless these damages are properly verified by a state entity. The lack of independent reviews of corporate ecological reporting processes led to the failure of the state regulator to identify and close EIA loopholes. Barrick took advantage of the disjointed regulatory environment until its damages could be confronted by the newly created Superintendency, which went into operation in December 2012. While Barrick attempted to self-regulate, its voluntary regulations could only be effective when paired with governmental authoritative rule-making, as evinced by Richard Locke more broadly: "private voluntary regulation can best succeed when layered on and interacting with public (state) regulation."^{xviii} Before the SMA, Barrick was economically incentivized to misrepresent its ecological damages

as the threat of effective government regulation and the private costs to Barrick for polluting were low, as Locke generally notes: "without the support and legitimacy of government regulation, these private initiatives will produce only limited and often unsustainable improvements."^{xix} Private regulation did not quell bad behavior, leaving room for public regulation to fill the accountability gap. Plainly, the three political drivers – OECD accession, public protest, and indigenous rights – motivated the Chilean government to give its regulator more financial and political legitimacy in order to raise Barrick's costs of pollution.

Part 2: OECD Accession and Chilean Environmental Regulatory Reform

Among the drivers that led to the creation of an Environmental Superintendency that was able to suspend the Pascua Lama project was Chile's desire to become the first South American country to join the OECD. It aimed to reap the benefits of associating with the world's wealthiest nations and adopting economic standards to transform Chile into a developed nation. Chile's accession process to the Organization for Economic Cooperation and Development in the mid-2000s required the formation of an improved environmental regulator, which upgraded the tools at Chile's disposal against ecological destruction caused by mining corporations, such as raising fines against Barrick through the SMA. The benefits of developed nation status and environmental accountability outweighed the costs of conflict with the mining industry and being seen as unmodern if environmental standards were not improved. To understand the shift in politics that made both liberal and conservative presidents support the formation of the SMA and its strong efforts against Barrick, it is important to review the drivers of environmental politics in Chile. Also, I look at how leaders adopted a cost-benefit analysis that supported sustainable growth through fining companies for ecological damages.

2005: President Lagos and the OECD Environmental Performance Review

During the presidency of social democrat Ricardo Lagos (2000 to 2006), Chile courted the OECD to get considered for membership. As part of the consideration process, the OECD published an environmental performance report for Chile, highlighting areas of environmental institutional improvement.^{xx} The report recommended that Chile create an environmental inspectorate, make ecological information public, and strengthen its laws as to provide oversight over the commitments made by private mining companies, such as Barrick.^{xxi} While Chile was lauded for its economic performance, it was criticized for its environmental mismanagement. The OECD accused Chile of giving priority to private investment and neglecting sustainable development policies, according to researchers at the World Economic forum.^{xxii}

The report criticized the dispersion of regulatory activities across both the environmental and mining ministries' various regional offices, which spread inspection financing too thin to identify and redress environmental wrongdoing. The OECD advised that the supervisory role of the regulator be increased at the regional level, where the conflicts of interests and transaction costs are lower than at the local or national levels.^{xxiii} Such an "environmental superintendency" would act independent of political sway to address violations.^{xxiv} Yet, without a guarantee of accession, Lagos did not make environmental reforms. In the last days of his presidency in February 2006, CONAMA endorsed the Pascua Lama project, granting Barrick a permit despite public opposition of the project's glacial damages.^{xxv} While there were environmental debates in Chile in early 2006 that centered on motions presented in Congress by Senator Horvath and a coalition of political parties, the reforms ran into opposition by Barrick and Chile's state mining company Codelco that sought to profit from the Pascua Lama revenue. The EIA submission and the OECD report highlighted Barrick's lack of accountability for glacial damage during its

exploration phase, leading to mass protests and an opportunity for the government to confront Barrick without economic sacrifice by aligning with a global regime of democratic and economic standards. The OECD's critique of Chile's lack of oversight of the environmental commitments made by private companies provided political motivation to improve environmental standards.

President Bachelet: The Turning Tide of Environmental Regulatory Reforms

Environmental regulation in Chile began to shift with the election of socialist Michelle Bachelet in 2005 and during her presidency (2006-2010). As her election coincided with the release of the OECD report, Bachelet made Chile's acceptance into the OECD a key goal.^{xxvi} She believed that membership would solidify Chile's commitment to democracy, sustainable development, and international integration since the restoration of democracy in 1990. It would accelerate Chile's transition to becoming a developed nation, believing that being part of "this community of democracies and best practices" was the optimal developmental path.xxvii Joining the OECD would help Chile set the trade standards of the global economy and raise national income, at the low cost of modernizing environmental enforcement. Bachelet noted the need to strengthen execution through a new environmental institutional framework, including a Ministry, a Superintendency, and an Evaluation Service.^{xxviii} To solidify her commitments during her 2005 campaign, Bachelet signed an agreement with leading environmentalists to create the OECDframework entities if elected.^{xxix} Thus, Bachelet leveraged the accession process as a catalyst for environmental institutional reform. In early 2007, Bachelet appointed Ana Uriarte as the Environment Minister to push the environmental reforms through the Chilean Congress. xxx

The modest attempts at environmental reform garnered the OECD Council's approval of Chile's roadmap to accession in November 2007, which required environmental reforms.^{xxxi} Thus, it took several years of piece-meal institutional reforms to garner the political will of

Chile's legislature to improve sustainable mining conditions. Amendments to the Environmental Framework law were introduced under Law 24,017 in January 2010, leading to Chile's accession to the OECD on May 7, 2010.^{xxxii} The OECD recognized that Law 24,017 would help ensure "Chile's convergence with OECD countries' environmental standards and practices."^{xxxiii} Law 24,017 addressed criticisms by transforming CONAMA into an empowered Ministry of the Environment, Environmental Assessment organization, and a Superintendency. The Superintendency, which was scheduled to replace CONAMA in December 2012, was given improved fining, inspection, and enforcement capabilities, raising the bar of ecological performance. It had increased accountability through economic penalizations and rigorous assessments of Barrick's ecological impacts, but not until it went into service in December 2012.

The Environmental Courts and President Piñera

Chilean citizens initially feared the reforms would be repealed at the March 2010 start of center-right President Sebastián Piñera's presidency. Despite his conservative tendencies, Piñera achieved political compromise by brokering a deal with center-right oppositionists to create "special environmental courts through which companies [would] be able to challenge sentences imposed by the regulator "***** The addition of the environmental courts allowed the SMA to use a fine-first strategy, where the regulator can easily sanction misbehaving mining companies, who then can appeal sanctions in the environmental courts. By having judges specialize in economics and science, it provides an accountability system in which mining companies can be fairly judged regarding the amount of damage they have caused.**** It also provides a "shadow of the state" mentality in which mining corporations would choose to obey environmental regulations, as it would be economically costlier to pay fines and legal fees during litigation than to obey the law.

The reforms – including inspection budget increases, higher fines, and independent environmental reviews – have been supported by a multi-party coalition of political and business leaders. Recent changes in the mining sector reforms have resulted from a "a cross-political effort between a highly respected private sector, civil society and political representatives."^{xxxvi} Also, the original bill for the SMA's rigorous Strategic Environmental Assessment system was drafted by President Sebastian Piñera's conservative administration. Thus, the conservative Piñera administration was able to uphold the liberal environmental regulations passed by the Bachelet administration, believing that respecting the rule of law would allow Chile to best reap the benefits of trade liberalization through OECD membership. Finera believed the future of the Chilean economy would be dependent on the services industry and not the foreign-driven mining industry, thus it made sense to support sustainable mining as to improve Chile's position in the global value chain by transitioning from extractive to creative production.

Environmental Regulation in Practice at Pascua Lama

To monitor and combat Barrick Gold's ecological damage, the SMA under Piñera engaged in a series of reforms. It implemented more rigorous and independent inspections and raised the levels of fines from tens of thousands to tens of millions of dollars to increase compliance. The SMA fined Barrick Gold for \$16 million in May 2013, following the April 2013 Chilean appeals court ruling that halted construction work. The SMA still continues inspections, both schedule- and complaint-driven, through today to ensure environmental compliance, under the threat of financial sanctions against Barrick. Increasing regulatory power has imposed financial costs on Barrick while proactively preventing more damage. The fines were designed to be discouraging instead of punitive. They were intended to make it preferable to comply with environmental regulations, such as using particle filters, instead of being fined,

sanctioned, or taken to court, following Piñera's economics-driven policies. ^{xxxvii} This new "bond", under the shadow of the state, created an agreement in which Barrick Gold was compelled to obey the SMA's environmental regulations on its own, or else pay fines and face work halts upon committing a violation. The bond proved to be strong, as Barrick chose to halt development of Pascua Lama in October 2013, for its wrongdoings had become too costly to overcome. Thus, the SMA was successful in making environmental compliance economically preferable, as continued action at Pascua Lama would have further inflated Barrick's costs.

Piñera's full support for the SMA came after a May 2013 meeting with Canadian Prime Minister Stephen Harper, who supported the SMA's call for the Toronto-based Barrick to improve its performance in 23 areas and that the mine be stopped until the water management issue was resolved.^{xxxviii} The Canadian prime minister encouraged Piñera to state that "Chile is a democratic country that follows the rule of law.^{xxxiii} As Chile's OECD benefits were threatened by the Pascua Lama disaster, the SMA and the Piñera administration were able to counter Barrick and set a precedent that only sustainable mining can exist in Chile and unaccountable companies will be punished. Piñera made sure that piece-mealing at the local level cannot occur, by requiring the SMA to investigate total ecological impact of a project and consult the public, who will be provided a study of how mining projects will impact a region, or else a company will face further fines. Thus, OECD accession increased the effectiveness of regulatory fines.

Part 3: Public Political Participation and NGO Involvement in Regulation

Another driver of regulatory reform in Chile's mining industry is the greater participation of civil society and non-governmental organizations in bringing the government's attention to address environmental offenses. The public shaming of Barrick, and of Chile's lax regulations,

prompted the SMA to employ a new tool – a court injunction to stop mining activities at Pascua Lama to resolve violations. The use of protests and international journalism escalated the Pascua Lama conflict to shame the Chilean government into taking action against Barrick, whereas NGOs provided scientific and legal support to civil society claims. Public shaming successfully drove the SMA to halt Barrick's project. The political motivation to respond in the Pascua Lama case is best represented by Keck and Sikkink's boomerang model of transnational advocacy networks: when the linkages of trust between the state and its people are broken – such as in cases of poor environmental enforcement – domestic civil society organizations and NGOs directly seek international allies to bring in international pressure to force a change in the state's behavior.^{xl} Below, I explore why the Pascua Lama case was the first instance in which the transnational advocacy boomerang strategy was effective in forcing state regulatory action .

Public Political Participation and Protests

Since the reclamation of democracy in Chile in 1990, the participation of average citizens in mining development has been low, as legacy regulations did not require public consultation for mining projects. Yet, the citizen protests against Barrick's Pascua Lama project demonstrated growing activism, prompting the Chilean state to incorporate public consultation in mining-environmental decision-making, which previously was limited to technocrats and business leaders.^{xli} Historically, the private mining sector has distorted politics, pitting profits against the ecological concerns of environmental agencies and citizens. While mining companies pay royalties of 5 percent of profits – over \$250 million in 2008 – there has been growing public pressure to increase investments in community and ecological protection and to halt harmful projects, as Chilean domestic affairs have become more frequently reported in the international sphere as part of the OECD integration process.^{xlii} The scarcity of water in the Atacama Desert

first galvanized the Barrick conflict, as the Pascua Lama site consumed a disproportionate amount of water while polluting glacial freshwater, leading to publicized conflicts.^{xliii}

The protests made international news during the June 4th, 2005 protests in the Chilean capital Santiago and in Vallenar, drawing 2,000 Huasco Valley residents to bring to light Barrick's plans to "relocate" the three glaciers at Pascua Lama through controlled blasting.^{xliv} Protests persisted through the 2005-2006 approval process, starting with a letter with 18,000 signatures delivered to President Lagos in November 2005 during a protest at the *Plaza de la Constituición* in Santiago, but the protesters were met with police opposition. This led to follow-up protests in Vallenar and Santiago and international uproar over the police trying to silence peaceful protesters.^{xlv} Civil society concerns coalesced into the Vallenar Defense Committee, which protested against Barrick's water contamination and asked the government to halt the project instead of solely forcing Barrick to compensate them for damages.^{xlvi}

The 2006 CONAMA approval of Pascua Lama led to a boom of highly-publicized protests against Barrick, posing a new set of problems for the flailing regulator: how to address public concerns over mining in a manner similar to OECD countries. The Pascua Lama mining protests that started after the 2006 approval inspired other protests over environmental degradation, including protests against thermoelectric plants in Punta de Choros, marking an increasing voice of civil society against the energy and mining industries.^{xlvii} After the Pinochet years, the Chilean public demanded a greater role in environmental decision- making, posing as a new actor in a relationship traditionally held between the State and mining companies. Pascua Lama marked a turning point as while Chilean leaders in the 1990s thought mining protests only existed outside of Chile, they could not ignore the current publicized protests.^{xlviii} With global eyes on Chile due to Bachelet's bid for Chile's OECD accession, there was political pressure to

respond democratically to protesters as to demonstrate government accountability. While Lagos failed to reform, Bachelet felt a need to respond to the protests or else lose Chile's OECD bid.

The protests began to gain traction in 2007 via civil society efforts to shed light on Barrick's environmental offenses through displaying documentaries and presentations, leading to annual protests in Vallenar (the capital city of the Huasco Valley). This built up to February 2007 and August 2008 protests that blocked roads to the mining site while thousands protested in Santiago.^{xlix} The protests' expansion to the state's capital demonstrated rising support against Barrick among powerful, well-connected activists and not just among a small regional community. This created "boomerang" connections to the Environmental Justice Network throughout Latin America and internationally to MiningWatch Canada and Greenpeace International.¹ Activists leveraged these transnational advocacy networks to spread information and shame Barrick and the Chilean government through mailings and presentations in other countries. This international shaming brought the glacial destruction and human rights violations to the global stage, making it an international responsibility to protect melting glaciers and vulnerable populations.¹⁶ Protesters also traveled to Canada to lobby against the Canadian government for not regulating the Toronto-based Barrick Gold, bringing further scrutiny.

Following the findings of the 2010 Halifax Initiative (a Canadian NGO focused on corporate reporting verification), it became apparent that Barrick Gold "deliberately undermined the Chilean environmental impact assessment system" through the piece-mealing strategy.^{III} This strategy allowed Barrick to misrepresent the environmental impact of the project by diminishing its inter-regional expanse, seeking the lower regulations held for smaller, separate projects instead of the regulations for mega-projects.^{IIII} It became verified that many of the consultations with environmental activists and with the Diaguita people were not considered in the 2006

permitting , leading to protests. This report highlighted Chile's regulatory facade: despite having many state regulators present; the disparate offices did not ethically or effectively garner a full picture of the environmental impact to hold Barrick accountable. Thus, the Piñera administration was tasked with consolidating all stakeholder opinions into the plans for the SMA, or else risk making Chile appear hypocritical after its accession to the OECD a few months earlier.

In response, the Piñera government passed legislation to ensure public participation in environmental studies and to require developers to explain how projects complied with land development regulations, pleasing environmental activist and investors who were concerned with the lack of clarity of mining corporation environmental performance.^{hv} Piñera also created the National System of Environmental Enforcement Information as a public database of mining ecological impact reports in order to provide average citizens with clear communication about mining projects.^{hv} Community participation and public information helped gained investor support and prevented investment flight, for the returns of a mining company's project are more predictable if there is improved compliance and a decreased frequency of fines and court cases.

The Santiago-based support changed the accountability language of the Chilean government under Bachelet and Piñera, a movement away from Pinochet's neoliberal policies and towards a balance between mining investments and the basic rights of citizens."^{Ivi} The national discussion over the Pascua Lama project catalyzed discussions to re-evaluate the mining-environment relationship once the concerns of the Huasco Valley residents were brought to all of Chile and the world, via "national and international media such as The Independent, The Economist, The New York Times [and] Al Jazeera TV."^{Ivii} While the Piñera government responded favorably to the protests, it had to wait until the end of 2012 to utilize the new Superintendency to take direct action against Barrick, as any executive action against Barrick

would seem unsubstantiated until the new regulator could verify existing damages. Yet, the presence of ecological NGO verification helped support the SMA's "boomerang" action when it came to power by providing political motivation to confirm the damages observed by NGOs.

NGOs as Ecological Verifiers and the SMA's and Environmental Court's Injunction Tool

Non-governmental organizations became part of the legal and regulatory process against Barrick Gold by influencing public opinion through environmental research to inspire the protests and government action against Barrick. NGOs provided scientific evidence and legal support to legitimate civil society claims about environmental degradation and government ineffectiveness, prompting the need for reform. Wanting to find the truth about Barrick's damages, NGOs such as OLCA (the Latin American Observatory of Environmental Conflicts) and OCEANA-Chile (the Ocean Protection & Restoration Environmental Advocacy group) found evidence the Chilean government had to address, completing the boomerang effect.

The OLCA provided hard scientific evidence during the April 2013 trial that contested Barrick Gold's environmental impact assessments, stressing the need for independent auditors in a mining project's ecological assessments. OLCA Director Lucio Cuenca confirmed that the OLCA's research agreed with Chile's own General Water Department's research that "Pascua Lama [was] destroying glaciers", proving that the Chilean government ignored its own research and instead relied on Barrick's biased reports, as Barrick paid the researchers, leading to a conflict of interests.^[viii] Correspondingly, Cuenca also noted that OLCA water tests confirmed that "illegal work on the mine has caused episodes of severe pollution in rivers in the area, and the environmental institutions have responded in a biased manner.^{wiix} The Piñera administration – through the courts – was forced to hold Barrick accountable for misleading the government.

The April 2013 Copiapó Appeals Court verdict was unanimous: all mining activities at Pascua Lama besides those related to environmental protection were indefinitely suspended, upholding the SMA's injunction to stop work after the January 2013 water management issues. In response to the decision, Cuenca responded that the government had finally taken into account the severity of the complaints "made by the community with respect to the infractions committed by Barrick."^{Ix} Representing the conservative Piñera administration's support of the court ruling, Interior Minister Andrés Chadwick applauded that "it was possible to bring work on the mine to a halt, through a judicial organism", demonstrating the effectiveness of the boomerang effect.^{Ixi}

In short, the confluence of public protests and NGO verification empowered the SMA and environmental courts to hold Barrick Gold accountable, even under a more conservative administration. The public shaming of the Chilean government for not knowing of the damages claimed by protesters and shown by these NGOs prompted the SMA to conduct its own investigations regarding the damage and the downstream effects of Barrick's Pascua Lama efforts or else face international shame.^{1kir} Keck and Sikkink's boomerang effect functioned as a political tool that resulted in the SMA-backed court order to halt mining work at Pascua Lama.

Part 4: Indigenous Human Rights Accountability for Eco-Damage in Court

Another way in which the Chilean regulator and courts were empowered in the Pascua Lama case was through the state's obligation to defend indigenous peoples affected by environmental degradation or else face litigation and shame for not upholding the rule of law and human rights. Below, I explore how an international standard – ILO Convention 169 – gained domestic clout in the Pascua Lama case to support the SMA-backed court order to suspend

mining activities, following the Richard Locke model of the need for the state's authoritative power to make international standards domestically enforceable to protect citizens.

In 2006, the Bachelet administration recognized the Diaguita people as a protected indigenous group under Chilean legislation, as part of the OECD accession process to account for environmental damages against native peoples.^{kiii} In September 2008, the Bachelet administration ratified the International Labor Organization's Convention Number 169: "The ILO Convention on Indigenous and Tribal Peoples (1989) imposes on States the obligation to consult and afford wide participation to indigenous peoples."^{kiiv} This provided legal support for the rights of indigenous peoples to be protected in cases of environmental degradation. Under the Chilean constitution, the ratification of ILO 169 is considered to be a legally-binding instrument that demands that the State and mining companies must consult with indigenous peoplations in cases in which their resources are threatened, making consent a key part of accountability.^{kv} Despite historic tensions with its native population, the OECD accession process under Bachelet prompted Chile to ratify international treaties and uphold human and environmental rights.

While indigenous and environmental rights were paltry under Pinochet, the return to democracy revived focus on these rights. Before Barrick's 1994 arrival, Chile in 1993 codified basic indigenous rights, leading to piece-meal gains in indigenous-environmental rights through Chile's courts. These rights were greatly improved under Bachelet's first presidency, which had a wave of judicial activism unheard of during the Lagos administration. Progressive judges used their power to counteract the excessively lax mining regulations that persisted from the Pinochet era, leading to the new paralysis of "an estimated \$50-billion worth" of mining and industrial projects with egregious ecological damages.^{lxvi} Much of this focused around leveraging ILO 169 is a

legally-binding international convention, it only became domestically enforceable via its ratification by the Bachelet administration, which incorporated the law under protections granted in its constitution. The judicial activism of leftist judges supported the establishment of indigenous-environmental precedents to solidify a strong interpretation of the ILO Convention regardless of the political administrations. Also, these judge appointments lasted past Bachelet's first administration, leading to similar interpretations through Piñera's administration. The progressive precedents set by these judges have allowed ecological regulation to be effective in Chile by encouraging mining companies to adopt a proactive approach to environmental compliance, public consultation, and human rights protection. Else, companies will resort to litigation, where judicial precedents have decreased offenders' abilities to avoid harsh sentences.

Thus, the 2006 approval of the Pascua Lama mine violated the Diaguita indigenous community's rights to informed consent about natural resources near traditional lands. While domestic indigenous law lacked political force to support the Diaguita people, the ratification of ILO 169 provided international pressure to support the rights given to native peoples.^{hvii} Yet, ILO 169, like other international treaties, relied on domestic Chilean support to act properly. The Pascua Lama case provided a nice overlap of indigenous and environmental law to bridge the "implementation gap", as the Diaguita community highly depends on the Huasco River water for its survival, so any pollution would greatly threaten them.^{hviii} Given that Barrick's 2009 environmental impact assessment omitted that the gold ore was located underneath glaciers that were essential to the lives of the Diaguita people, the Diaguita community in the Huasco Valley submitted a petition to the Inter-American Commission on Human Rights on December 2009.^{bix}

The Diaguita claim against the Chilean State (and thus against Barrick) by the Inter-American Commission of Human Rights (IACHR) legitimated human rights claims, by linking

health and indigenous rights abuses to ecological damage.^{bx} They citied violations of ILO 169's guarantees of prior consultation and natural resource protection by Chile's maintenance of Barrick's environmental permit, as to sue the Chilean government for violating its promises guaranteed not only under international law, but under national law via the ILO 169 ratification. They cited that "the size of the Toro I, Toro II, and Esperanza glaciers had experienced fifty to seventy percent reduction in size" since Barrick's work commenced at Pascua Lama, threatening water access to the agricultural-dependent indigenous population.^{bxi} This use of international law led to the Commission granting the Diaguita case admissibility, providing them with a legal avenue to sue Barrick in Chile's domestic courts in 2013 after the water management fiasco became public. Supporting the Diaguita's right to water, in April 2013, the Court of Appeals of Copiapó supported the indigenous residents claims under ILO 169 by ordering the indefinite halt of Pascua Lama, except for environmental protection work, for SMA inspections found "heavy concentrations of arsenic, aluminum, copper, and sulfate" in the community's water source.^{bxai}

The Diaguita community was able to hold Barrick accountable for its environmental degradation by holding the Chilean government accountable for its past lax environmental permitting processes. Through ratification and progressive judge appointments, a strong interpretation of ILO Convention 169 created linkages between human and environmental rights that allowed for court action to be taken against Barrick to halt the mining project. More broadly, the SMA has reported that \$10 billion in mining investments remain blocked following queries of indigenous communities appealing to ILO 169 due to lack of consultation and corresponding ecological damage.^{lxxiii} Chile's ratification of ILO 169 has shown that agreeing to international standards is not solely symbolic; judicial precedents have allowed the SMA to sanction offending mining companies while ensuring the courts follow a similar legal interpretation for

ecological violations. The cohesion of environmental regulation and indigenous rights law show how the SMA's regulatory efforts enforce existing law to reduce ecological destruction.^{bxiv} President Piñera highly supported the court ruling, stating "How could they [Barrick] not anticipate all these problems? ... Pascua-Lama must comply with the requirements we've set forth and cannot resume work until it does."^{bxv} The court's April 2013 decision suspended all mining operations at Pascua Lama. The court also facilitated conversations between Barrick and the Diaguita people, who reached an agreement in April 2014 that provided the Diaguitas with project details, allowing them to consult with environmental experts regarding the quality of Barrick's cleanup efforts, thus promoting accountability to the local people moving forward.^{bxvi}

Thus, the ratification of ILO Convention 169 functioned as political driver to improve the enforcement capability of the SMA and environmental courts This follows the Richard Locke model of the state being needed to ensure final compliance: government regulation – including supportive courts – is required because only the state has the authority and legitimacy to enforce international legislation like ILO 169 in order to protect rights and confront Barrick.^{lxxvii}

Part 5: Costs and Bonds: Making Mining Regulation Widespread

What lessons can be taken from Pascua Lama that can be translated into "bonds" between mining companies and state regulators to promote responsible mining and monitoring? These insights could specifically aid Argentina's regulator to ensure Barrick's environmental compliance in its Veladero gold mining project, located just south of the Pascua Lama site.

The regulator-driven monitoring system's success in getting Barrick to comply with environmental standards was due to political factors that raised three costs of doing business. First, the Bachelet and Piñera administrations conducted a cost-benefit analysis of the OECD

accession. The benefits of international integration and trade outweighed the costs of modernizing environmental infrastructure, leading them to adopt the OECD recommendations to increase financial sanctions for environmental violations from tens of thousands to tens of millions of dollars. While the \$16 million sanction against Barrick was relatively small compared to the multi-billion-dollar value of the project, it was large enough to garner Barrick's attention. which led to them admitting to 22 of 23 environmental charges. The piece-meal reforms and support of OECD standards allowed the SMA to hold Barrick accountable with a common tool used in other countries. Secondly, transnational advocacy through protests and NGO support helped bring international attention to Chile's struggle against Barrick's glacial damage at Pascua Lama. Through the boomerang effect, activists were able to leverage international journalism and NGOs to shame the Chilean government for failing to address Barrick's ecological damages, leading to state action against Barrick once NGOs independently verified the damages and accused the government of impropriety. Lastly, Chile's ratification of ILO 169 under Bachelet led to legislation and judicial precedents that intertwined human rights and environmental damages. The Diaguita claim through the IACHR allowed indigenous people to sue the Chilean government for not stopping Barrick's damage of their water sources, prompting the Chilean government to redress the issue through indefinitely suspending work at the Pascua Lama site. These financial sanctions and work halts proved to be too costly for Barrick, as after years of rising costs due to environmental mismanagement, Barrick shelved the entire project on October 30, 2013. The SMA effectively made Barrick choose between pursuing a responsible project or shelving the mine, and Barrick selected the latter.

External Validity: Contextualization and Generalizability

While these costs seem to be generalizable to other nations confronting the abuses of transnational mining companies, there are some important features about the Pascua Lama case that make the regulator's response contextually-specific. For example, the relatively high social stability and centralization of the Chilean political system upon democracy's return in 1990 provided an atmosphere in which environmental regulation was respected and credible NGO relationships could be established.^{lxxviii} Secondly, the OECD process was a major driver of the SMA's reform, yet only 34 countries are current members of the OECD. While Chile benefited from the accession process, the promise of OECD membership is only a motivator for middleincome countries that already have good institutions that support the rule of law. Third, timing played a crucial role. The confluence of the 2006 EIA of Pascua Lama, the start of Bachelet's first term, and the OECD bid made the ecological destruction of mining company paramount in Chilean politics, where Bachelet could easily win over a liberal majority Congress to sacrifice some mining tax revenue to address ecological damage. Also, it was opportune timing for the SMA, which started operating in December 2012, to take a first mover advantage in the January 2013 water management issue at Pascua Lama in order to demonstrate its new powers. Lastly, the large size of Barrick's \$8 billion Pascua Lama site, Barrick's size as the world's largest gold miner, and Barrick's reputation as one of the world's most unethical and polluting companies made it an easy target for the SMA, while a lesser known company may fly under the radar.^{lxxix}

Regardless of these specific conditions, the costs exhibited in the Pascua Lama case can be translated into general "bonds" a state regulator can make with mining companies to hold them accountable for environmental damages.

From Costs to Bonds: How Argentina can confront Barrick Gold

There are three sets of bonds that a regulator-driven monitoring system can provide to ensure future environmental responsibility. First, the state regulator can ensure that future permits specifically outline financial sanctions appropriate to project scale and the potential ecological impacts. Even without the OECD motivation, the shadow of the state mentality provided by higher fines ensures that companies are aware they will be charged for non-compliance, and thus can save money and avoid project stalls by complying with environmental standards. An escalating cost structure for repeat offenders can also help build accountability. Thus, revisions to permitting and new fines and sanctions act as an Akerlof "guarantee", where ecological uncertainty is corrected for, as it assures the government of a certain level of environmental performance, or else violations of an environmental permit will result in escalating payments.^{bxxx}

Next, the regulator should actively seek out public concerns during new mining projects in order to identify and redress ecological problems before they lead to irrevocable destruction and international shame. Like Chile, new environmental permitting should require public consensus and concessions to balance the rights of the local populace and the desires of mining companies. This would limit public protests and trials that would be too costly for both a nation's courts and a mining company's bottom line. The state can also provide clear processes for NGOs to act as independent verifiers of environmental impact assessments. While it is hard to ensure NGOs remain vigilant, it is important for the state regulator to provide a space for them to contribute information. It is up to the regulator to require stricter independence of auditors for assessments to prevent the frequent lying of the Pascua Lama self-reports. Following the Akerlof cost models, requirements for independence will improve accountability, for self-regulation

creates incentives for dishonesty, such that "dishonest dealings tend to drive honest dealings out of the market"^{lxxxi} The punitive fines and work halts function as a bond to ensure independence.

Lastly, a state environmental regulator can leverage linkages between ecological and human rights issues to ensure that court rulings concur with the meaning of existing regulations. The incorporation of international law into domestic enforcement builds the credibility of indigenous claims against mining companies. While the creation of human rights legislation is dependent on the rise of a liberal regime, strong environmental-human rights linkages can be secured for future administrations through judicial activism to reflect the true intentions of the law.

The conditions for the Argentinian government to confront Barrick Gold and hold it accountable at Veladero, which has suffered recent water pollution issues, seems promising. First, the new center-right President Mauricio Macri has garnered enough support to formally launch its OECD accession process in February 2016, which will likely lead to OECD-driven environmental reforms such as higher financial sanctions.^{lxxxii} Additionally, Macri is supporting improvements in environmental inspections of mines, in order to generate trust at home among his citizens as well as provide investors with stability by assuring them the state will work cooperatively with mining corporations to ensure sustainable mining.^{lxxxiii} Argentina can adopt some of the aforementioned bonds to make environmentally accountable mining a reality.

Conclusion

Evidently, the state – through its environmental regulator and courts – is essential in upholding the environmental demands of the populace. Barrick's self-regulation was not enough, as private initiatives need to be embedded "within a system of authoritative rule making" if we hope to encourage sustainable mining practices with the threat of financial and legal

sanctions.^{lxxxiv} The aforementioned political motivations can raise a mining company's costs of committing ecological damage. Thus, a government can promote sustainable mining through the efforts of a strong state environmental regulator like the SMA holding mining companies accountable through a system of costs and bonds.

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