

# Going Against the Tide

## Towards Binding Environmental Regulation of Mining in Chile

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# GOING AGAINST THE TIDE: TOWARDS BINDING ENVIRONMENTAL REGULATION OF MINING IN CHILE

Johanna Järvelä and Lotta Aho  
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## Abstract

Mining industry is one of the only industries not subjected to any international environmental agreement. Thus, only national laws, Corporate Social Responsibility, industry standards, and other forms of self-regulation govern the mining industry. However, there are increasing concerns about the sustainability and social responsibility of this business. In Chile, neoliberal policies were implemented to a great extent during 1970's and 80's and the legacy of these policies was an almost absent environmental regulation until 2010. This makes Chile an interesting case to investigate the workings and consequences of voluntary environmental regulation based on neoliberal paradigm. Whereas multinational corporations largely influence the current development of environmental regulation, and hence it is increasingly based on voluntary measures and industry guidelines, the socio-environmental conflicts have forced Chile to go against the current and move from soft law towards binding regulation. A situation where a country needs to move from non-regulation or fully privatized regulation back towards hard law and command and control has been less investigated than deregulation and different forms of capitalist influence on governance. We wish to address this gap in literature with this study. Based on our findings, we argue that following neoliberal theory in environmental regulation leads to increasing socio-environmental conflicts.

**Key words:** Mining, environmental regulation, neoliberalism, Chile, CSR

## Introduction

One of the industries not subject to any international environmental agreements is mining industry, and therefore only national laws regulate it. In addition, various soft law instruments like Corporate Social Responsibility (CSR), industry standards, and other forms of self-regulation set guidelines for the industry without being legally binding. However, there are increasing concerns about the sustainability and social responsibility of businesses. In many, especially developing, countries the public has deemed national legislation inadequate, and been disappointed by the soft law measures. There is a growing disquiet about how big multinational companies are damaging the environment and livelihoods of local people. These concerns have become an increasingly high-profile issue in many countries and industries, and maybe none more so than in the mining industry where the public's acceptance of the industry is relatively low (Zhang et al., 2015). There has been an increasing need for mining companies to justify their actions and document their performance through social and environmental reporting throughout the last decades (Ranängen and Lindman, 2018; Sequeira et al., 2016). But when new scandals emerge, like the recent environmental disaster in Bento Rodrigues in Minas Gerais state of Brazil, just reporting on these issues is deemed very inadequate, and calls for regulation become stronger. Evidence from the literature suggests that binding regulation can be more important driver for environmental performance than industry self-regulation (Jones, 2010; Kagan et al., 2003; Testa et al., 2012) and stricter regulations are beneficial for the environment (Zhang et al., 2018) although this approach also has its limitations (Ribeiro and Kruglianskas, 2015). Notwithstanding, corporations tend to oppose all plans for stricter regulation at any level, and usually succeed because it is easier to argue for the immediately observable losses of economic opportunity than for the damage environmental degradation causes.

The lack of regulation is often explained with the fear of negative reactions from the firms, especially multinationals, who habitually use their economic power to influence law making (Clapp and Dauvergne, 2011; Newell, 2012). However, mining is a location bound industry that cannot easily relocate when facing regulatory changes, and therefore states hold stronger negotiation power vis-à-vis corporations (Bebbington and Bury, 2013). Notwithstanding, it is still very difficult to make binding environmental norms in this sector and therefore there must be other underlying reasons enabling the use of corporate political power to curb environmental regulation.

Mining has been, and continues to be, one of the key pillars of Chilean economy. Chile is the world's leading producer of copper, and copper concentrate is the main product (95%) of mining industry, making Chile largely a primary production economy. Although, reliance on primary production and mining is not an exceptional feature of the economy in the region, Chile has been a special case within mining sector in Latin America in many respects. Firstly, the scale of mining in Chile surpasses its neighbours. For example, between 1990 - 2001 Chile received 18 per cent of all global mining investments (Bridge, 2004). Secondly, Chile's economic dependency on mining gives the industry a special place within Chilean economy and politics guaranteed by legislation awarding mining an exceptional position vis-à-vis other land use (Chaparro, 2002). Although slightly decreased from the mining "heyday" in mid-2000's, in 2015 mining sector counted for 15 per cent of the GDP, one fifth of tax revenues and almost 60 per cent of Chilean exports (for largest operating mining companies in Chile, see appendix 1). Closest in comparison comes Peru where mining presents 10 per cent of GDP and mining has

become lately a significant contributor of exports, whereas in Argentina and Bolivia mining contributes only approximately 3 per cent to GDP (Deloitte, 2016). Thirdly, Pinochet's neoliberal policies preceded those of other countries in the region and set the example for private sector led mining around Latin America (Williams, 2012). Chile has also been one of the very few economies that has fully implemented neoliberal policies, which in Chile's case included leaving environmental affairs unregulated and up to markets (Nem Singh, 2010). Moreover, the neoliberal policies in Chile were nationally induced, whereas in rest of the Latin America the neoliberal reforms of the mining sector mostly responded to the prerequisites of World Bank (Cisneros and Christel, 2014). Compared to its neighbouring countries Chile shares some similarities in the neoliberalization of the mining sector and later development of environmental regulation to address the shortcomings of neoliberal reforms but is exceptional in the depth and timing of these developments.

Therefore, Chile makes an interesting case to study how the absence of environmental regulation and ensuing privatized regulation by transnational mining companies in form of self-regulation, has worked in Chile, and what have been the consequences of this to the environment and society? Previously, Jimenez (2007) has found that voluntary agreements in Chile resulted almost exclusively in incremental improvements and suffered from regulatory capture, which was clearly visible in their low ambition level, reflecting also the political constraints and institutionalized neoliberalism. In this paper, we explore the development of environmental regulation until 2015 and the implications of the current situation to businesses and broader society.

The changes in regulatory environment; impact of different kinds of environmental regulations (Li and Ramathan, 2018; Testa et al., 2012); multi-stakeholder involvement (Cisneros and Christel, 2014; Graafland and Smid, 2017; Newell, 2008; Paterson, 2000; Ranängen and Lindman, 2018); and the concepts of regulatory capture (Stigler, 1971) and regulatory capitalism (Levi-Faur, 2005) have been widely addressed in the literature. However, a situation where a country needs to move from non-regulation via fully privatized regulation back towards hard law, yet influenced by regulatory capture and capitalism, is a lot less investigated area. We wish to address this gap in literature with this study. We start by looking at the neoliberal regulatory framework in international context, and then continue with how it was implemented in Chile and what were the general outcomes of this political experiment. From there we move on to introduce the methodology used in this study and the results. We conclude by raising some points for discussion and further study.

## **Neoliberalism and development of environmental regulatory framework**

1980's and 1990's saw the worldwide shift of policies to reflect neoliberal economic thought. The spread of economic neoliberalism also strengthened the support for market-liberal environmental views, which see environment as static and infinitely available and hold a belief that economic growth improves the environment (Clapp & Dauvergne, 2011). This economic growth dogma increased the importance and political power of economic actors and therefore paved a way for the privatization of regulation. Like Paterson (2000, pp.46) argues, "because of the necessity of growth for capitalism to survive, those organizing such growth, defined generally as capital, gain a great deal of power with respect to state decision-making". In addition to emphasizing economic growth, neoliberal paradigm aims to keep regulation to minimum and leave it for market and/or voluntary mechanisms where possible. The only



environmental values recognized are the ones for which a markets and economic valuation exists, ignoring all values not reflected in market transactions, while profit maximization objective presumes the legitimacy of the existing system (Sagoff, 1988). As Bernstein (2001) explains, environmental policies towards deregulation and voluntary measures have actually been more ideologically oriented than based on policy effectiveness assessment. Ultimately laws and regulatory environment reflect the dominant worldview of the society in which they arise, and are thus used to institutionalize these values reflected in the governance (Pelletier, 2010). Regulatory environment based on neoliberal worldview therefore tends to emphasize property rights and corporate profit making instead of rights to live in an unpolluted environment or social justice.

Consequently, there is a clear discrepancy between the neoliberal policies and understanding of the regulation, and what contemporary legal scholars consider as an ideal case of environmental regulation. Parks and Morgera (2011) argue that a fair and equitable benefit-sharing is an ideal case of global environmental law. The elements of this kind of law are e.g. sustainable use and regulation of natural resources, as well as fair and equitable distribution of benefits arising out of the use of natural resources among State and non-State actors. This definition relates closely to the environmental justice literature where current situation of environmental injustice is seen as a form of social injustice or distributive inequality. Bickerstaff et al. (2009) define this distributive inequality as a disparate level of exposure to environmental harm, and access to environmental goods, experienced by different social groups. However, it is ideals and definitions that go beyond the distributive, like the one Parks and Morgera use, that can help the expanding environmental justice movement to develop and conceptualize global environmental justice (Schlosberg, 2004).

Regarding national level, in addition to regulatory requirements, corporate environmental outcomes also relate to institutional aspects in general, and to the respective national business systems (Kogut and Ragin, 2006, Matten and Moon, 2008, Ortas et al., 2015). Moreover, regulation coexists with private politics (Calveras et al., 2007) on company and/or industry level and regulation can be based on state's strategic calculations, e.g. promotion of a certain sector and their interests, which is a logic the regulators can then over time internalize (Checkel, 2005). Internalizing is likely to lead to a reproduction of similar norms rooted into this logic, and these norms and the logic behind them thus become institutionalized. However, other normative influences, like international agreements or pressures, can lead to an internalization of new understandings of appropriateness (ibid.). Institutionalized norms constitute social structure, enjoy political authority and define what political institutions and practices are viewed as legitimate. However, this is a subjective understanding of legitimacy and does not imply these norms necessarily constitute social or environmental justice (Bernstein, 2001).

Cato (2009) argues that globalized economy has allowed the owners of production facilities to dictate environmental standards. Furthermore, transnational corporations have structural power, meaning that they are able to influence the formation of governance and push ideology in state policy formation through their dominant position in global and national economies (Clapp & Dauvergne, 2011). Uneven distribution of power between states and firms at national level are reinforced by public inter-state legal protection of private property and power in forms of trade and investment agreements thereby increasing corporate political power. When actors that have not been democratically elected start interfering with the making of regulation and related governance, it leads to a fragmentation in both national and international legislation

(Khrebtukova, 2008). And the more ambiguous or conflicting the environment is, the greater opportunity it provides for strategic and agentic behaviour (Scott, 2005). Neoliberal environmental governance has meant a delegation of regulatory power to market actors and reconstitution of power where regulation is for business rather than of business (Newell, 2012). Thus, any environmental policy emerging from the business, the interests of corporations are likely to have played a big part in designing it, and therefore it only mildly constrains their activity no matter how environmentally harmful that activity may be (Cato, 2009). Even if laws or environmental institutions are not made to serve unrepresentative interests or undemocratic ends, they reflect the material conditions in which they are produced and seek to preserve, and the “legal culture” of transnational bloc advancing a globalizing neoliberal agenda with naturalised representations of property, market and capital (Newell, 2008). Seeking legitimation through voluntary measures, industry standards and other forms of privatized self-regulation is an integral part of this “legal culture”.

Political elites tend to have major interest in key economic sectors that are causing significant environmental damage. The deregulation and liberalization of mining sector in Chile aggravated the non-productive subsidies for state and private sector in form of rents (Haslam, 2016). And although Haslam (2016) argues that the ability of Chile to turn from rentier-state of Pinochet era to successful developmental state is due to strong business associations and cooperation of private mining firms with state-owned Codelco this ‘development’ has come with price of growing inequality and degradation of natural environment, and legitimacy crises of political system. These adverse impacts have certainly materialized in Chile, not only during Pinochet era, but also after that when the succeeding democratic governments chose to continue with the neoliberal economic model (Hojman, 1996). In turn, inequality may give cause to social conflicts, especially when the benefits resulting from use of resources are not shared in a fair and equitable way.

Environmental problems have a long-term and circular nature. This is in sharp contrast with the short-term thinking of neoliberal economics and also with the legislators elected term (Clapp & Dauvergne, 2011). As mentioned above, the ideals of neoliberal regulation and contemporary environmental regulation are in stark contrast. The neoliberal model has been tested in Chile, with all its side-effects. The minimum regulation, voluntary agreements, industry self-regulation, environmental concerns have been side-lined because of economic short-term benefits and letting the business decide the level regulation have not shown the ability of “markets” to solve environmental problems. Furthermore, there is no indication that Chile becoming wealthier would lessen the negative environmental impacts of its core mining industry. The path taken in Chile will be outlined in more detail in the following chapter, however it demonstrates quite clearly how the neoliberal policies do not provide environmental benefits, but rather vice versa.

We argue, against the claims that neoliberal policies would enhance corporate environmental performance (Warhurst, 1998), that following neoliberal theory in environmental regulation leads to increasing socio-environmental conflicts. Our case study of mining industry in Chile supports this argument. Furthermore, the absence of regulation has seriously undermined citizens’ confidence on state governance.

## Methodology

To understand the consequences of the changing environmental regulatory framework we interviewed mining industry representatives, public sector and civil society actors. The empirical data was collected in Chile during November and December 2015 and consists of semi-constructed in-depth interviews that were conducted in the towns of Santiago, Antofagasta, Coquimbo and Copiapó. The interviewees include managers and executives of large and medium size mining companies, mining technology companies and industry association representatives, state officials including Ministry of Mining, Ministry of Environment and Environmental Monitoring Office, and civil society members as well as representatives of public-private initiatives like Valor Minero and Programa Alta ley, which have been established to fulfill the need to develop sustainable mining future for Chile. The mining company representatives were selected amongst the largest mining MNCs operating in Chile. Additionally, Consejo Minero as representative of these companies and SONAMI (the national mining association) were interviewed. The officials and civil society members were selected with relevance aspect, as those mostly working with the topic of socio-environmental conflicts in mining. Lastly, also Codelco and few medium size mining companies were interviewed to amplify and compare the data from large mining multinationals. A total of 24 interviews with duration of 1 to 1,5 hours were conducted, the interviews were transcribed and analyzed. The details of the interviewees are in table 1.

**Table 1: List of interviews**

	<b>Interviews total</b>	24	100%
<b>Sector</b>	Private sector (incl. industry associations and state-owned companies)	12	50%
	Public sector	6	25%
	Public-private partnership associations	4	17%
	Civil society	2	8%
<b>Title</b>	Director	18	75%
	Manager and expert	6	25%
<b>Area</b>	General	7	29%
	Research	3	13%
	Sustainability and environment	9	38%
	Responsibility, local development, communities	3	13%
	other	2	8%
<b>Place</b>	Santiago	20	83%
	Regions	4	17%

The materials were analyzed and interpret in the light of the regulative and institutional changes since the time of dictatorship (1990-2015) and the results are presented in the light of theoretical framework of regulative path. Special emphasis was put in the latter part of the period, when first around the start of the millennium private regulation was introduced and later institutional changes started developing. The data was searched for explanations for these changes and also for conflicts that succeeded. Next, we first outline the institutional changes and thereafter discuss the consequences thereof in the light of the interview data.

## Findings

### *Formation of environmental regulation in Chile*

Chile is often considered as a poster country of neoliberal economics. The absence of environmental policy and governance during the military regime (1973-1989) was in fact considered to be an advantage in attracting foreign capital (Altieri and Rojas, 1999). This became especially topical in 1990's, when Chile became a country where nine out of 25 biggest investments in mining were made, largely because of mining restrictions in USA and Canada (Urkidi, 2010). Sectoral concentration often leads to concentration of ownership, wealth, and political power increasing the possibilities of political corruption, where wealth is traded in return for political support (Bebbington et al., 2008). Moreover, as the economic policies had been part of a long-term power strategy under Pinochet's regime (Huneus, 2000), the business elite had come to have strong political relevance and corporative identity; advantages that have been maintained during democratic times (Huneus, 2001). Most likely from a point of view of a transnational mining company Chile looked like the ideal environment for profit making, without having to think about the external effects of mining. We present the political development of the environmental regulation in the Table 1 below, and provide a more detailed description of the reforms in the text.

After the turndown of Pinochet's authoritative rule and global trade restrictions, the strategy of the new democratic government was to make Chile as attractive for foreign direct investment as possible, especially within mining industry. There was a considerable help from the fact that the Constitution from 1982 and Mining degree from 1983 gave mining an exceptional status in that mining interest overpowered any other industry interest, or use of land, and anyone fulfilling the lax requirements of the law had the right obtain mining permits. In early 90's Chile was definitely a "dream come true for mining companies" as one of the interviewees put it. There was no environmental or much other regulation in place, and the government provided a special status for the industry. From a purely industrial policy choice perspective, the Chilean strategy was very successful; it resulted in growth of mining production from 1,2 million tons in 1985 to 5,8 million tons of copper in 2015 (based on interviews with Consejo Minero and Sonami).

**Table 2: Political development of environmental regulation in Chile from 1980's**

1980's	1990's	Beginning of 2000's	Late 2000's until 2016
Institutionalization of the neoliberal politics	Weak regulation brought on by international requirements	Regulation in place, but implementation weak and enforcement fragmented	Creation of the first Ministry of Environment Coordination and enforcement of monitoring and application sanctions
Constitution reinforced the right to private property and freedom to	Main principle of regulation still market-enabling	Institutional instability in environmental sector very high	Focus still on organizational changes rather than policy approach

pursue economic activities	(designed by the World Bank)		
Free functioning of the markets became an axiom of the whole legal system	Focus on non-binding policies and guidelines	System highly politicized, high-level interventions in project approvals	Still no regulation of natural resource use, procedural compliance of projects emphasized
	Environmental authorities function to approve or improve, but never reject investment projects	Loss of public credibility, stronger demands for reforms	

Sources: Tecklin et al. (2011); Rutherford (2001)

However, the lack of regulation had adverse environmental impacts which neither markets, nor the voluntary standards introduced by transnational mining companies were correcting. Already in mid-1990's there was mounting evidence of negative environmental impacts (Quiroga, 1995) and the government needed to make changes to address these impacts. The institutionalization of environmental protection and regulation in Chile started quite early in the 90's as part of the requirements of Free Trade Agreements (FTAs) and the signing of Agenda 21 of Rio Earth Summit in 1992. Notwithstanding, Agenda 21 has been criticized of reflecting institutionalized neoliberalism in environmental governance (Bernstein, 2001; Clapp & Dauvergne, 2011), and FTA's for being made in terms of trade, where the rights of capital are given prevalence over the environment (Newell, 2008). Therefore, these changes were incremental at best without significant contribution to resolving the negative environmental impacts.

The aforementioned international agreements however started a process that created a framework for environmental governance in Chile in the form of environmental law and founding of National Commission of Environment (Comisión Nacional del Medio Ambiente, CONAMA), and system for Environmental Impact Assessment (EIA) (Roja and Rungruansakorn, 2011). The legislative environmental package started slowly moving through the Chilean Congress for some years, with private national and foreign industry lobby blocking it at every turn (Altieri and Rojas, 1999). Chile had started a regulatory journey away from extreme neoliberalism; from absence of regulation towards binding environmental norms. This advancement was still mostly designed to fill the needs of business interests and political elites (Sepúlveda and Villarroel 2012, p.184). As Nem Singh (2014) has showed, the neoliberal institutions and rules set by Pinochet regimen had such a strong power and led to path dependence that it was hard for the new democratic center-left governments to change this trajectory. Thus, the changes were more incremental than foundational.

If the first institutional changes in environmental regulation resulted mostly from outside pressures of FTA and Rio Summit (Silva 1996; Tecklin et al., 2011), the second wave of change was fuelled by increasing environmental conflicts and demands by civil society movements for better environmental regulation (Sepúlveda and Villarroel, 2012). The most significant of these was the movement of Valdivia that shed the light on the environmental disaster created by

Celco-Arauco pulp mill in Rio Cruces in 2004, where thousands of black-neck swans died or migrated after the contamination of the river. The case highlighted in a concrete and horrific way the consequences of non-functioning environmental regulation and the movement was able to mobilize the larger civil society to create pressure for change (Sepúlveda and Villarroel, 2012). There is some disagreement on how much of the institutional and regulatory change in 2009 was due to country internal pressures and loss of legitimacy of the institutions in place (ibid.) and how much of it was part of the foreign demands, namely the recommendations from OECD to which Chile was applying membership in (Tecklin et al., 2011). Notwithstanding, the internal pressure and public attention emanated by the environmental damages mining had caused, did have a clear impact on reinforcing the regulation. In 2009 a government bill was accepted that established new institutions and laws for environmental regulation and control. These were an independent Ministry for the Environment, an environmental oversight agency (Superintendencia del Medio Ambiente, SMA) and an Environmental Assessment Service institution.

This regulatory development was further strengthened with the ratification of ILO 169 agreement in 2010, which guarantees rights for indigenous peoples to be heard and taken into account when industrial projects are planned on their traditional lands. Further changes followed in the legal structure: in 2012 a norm was set to establish independent environmental tribunals, and in 2013 new environmental quality standards and emission norms were set (Eyzaguirre, 2015). Notwithstanding the significant changes in and strengthening of the environmental regulation during 2010-2015, there have been some great failings as well. As Sepúlveda and Villarroel (2012, p.194) note, the people whom these changes concerned were not heard, their ability to participate in the decision-making and thus the democratic accountability was not strengthened but omitted in these institutional changes. These shortcomings have eroded the legitimacy of environmental assessments, increased the distrust to political and economic elites, and multiplied the number of socio-economic conflicts.

In sum, Chile has moved from libertarian zero regulation towards binding environmental law, including requirements and monitoring system for businesses. However, the regulatory changes regarding social and environmental responsibility issues in Chile have been carried out largely with economic motives and to some extent only to comply with political and societal demands caused by environmental catastrophes. Environmental policymaking has been tightly constrained by neoliberal institutional and political legacy and arrangements in a way that legislation only advances when internal demands correlate with global forces (Tecklin et al, 2011). The first development of early 90s was due to external factors (FTAs and Rio Summit) but the second had domestic pressures (the Valdivia movement) along with the foreign one (the recommendations/requirements by OECD). The regulatory path of Chile supports Checkel's (2005) findings on how national economic interests internalized by environmental regulatory authorities lead to unsustainable (environmental) outcomes and how that internalized industry-centric view may change, but usually require the support of international agreements.

### ***Development of self-regulation***

As the mining companies were operating in Chile for about 20 years without a proper environmental regulation, it makes the country an interesting example to see how well the voluntary regulation regime has functioned. With pressure from civil society movements, but



dealing with fragmented and weak environmental governance, especially the industry associations took a strong role in making the voluntary agreements (Jimenez, 2007). From 2000 onwards, the agenda and principles for sustainable and responsible business were set in more international, although mostly business-oriented, level for example in the form of requirements of Dow Jones Sustainability Index (2001) or those set by The UN Global Compact (2000) and the Sustainable Development Framework by International Council of Mining and Metals (ICMM) created in 2003. These guidelines became the backbone for sustainability and responsibility work and reporting for most global MNCs, including those mining companies operating in Chile, and thus voluntary self-regulation guidelines to a large extent presented the model for environmental governance in Chile until 2010. As many of the interviewees of large mining companies and industry associations confirmed, in the absence of environmental regulations it was the MNCs that in face of external pressure, and as part of global best practices, introduced voluntary standards to the mining sector in Chile, and that these practices have been slowly adapted by the medium size companies as well.

The reason for signing on to voluntary standards was that the lack of proper environmental regulation and the rapidly increasing amount of mining operations had started to create socio-environmental conflicts from mid- 90's onwards undermining the legitimacy of the industry. However, these voluntary standards, although better than nothing, were clearly not enough. One of the state officials estimated that since the government of Lagos entered into power in 2000, the number of conflicts that have become significant trials in the courts of law has multiplied from three in 2000 to 25 in 2015. Also, the statistics from environmental conflict monitoring NGO Ocmal state that in 2016 there were 37 ongoing mining conflicts in Chile. The local environmental catastrophes in the form of pollution, drought and mass dying and migration of species provided a visible evidence of non-functioning system for environmental regulation. Although, the Valdivia case was the most visible one with the dead swans, and in a certain respect a culmination point that triggered long-time concerns into action, it was not the only environmental disaster happening. The drying rivers of north, excessive logging of the forests in south and contaminated grounds in industrial areas amongst others provided a lot of reason for concern for people. Thus, as explained by Sepúlveda and Villarroel (2012) the Valdivia movement brought all these concerns over the socio-environmental impacts of industrial development together and was therefore able to raise pressure against the destructive practices of corporations and the lax policies and monitoring by officials. Furthermore, number of interviewees noted that the catastrophe in Valdivia and the movement fighting for better environmental regulation was able to raise the citizen awareness in Chile about the consequences of the lax regulation. Paradoxically, the mining industry views the heightened awareness of the need to protect the environment with environmental activism as one of the main causes of conflicts today instead of the absence of functioning regulation. This notion indicates that a defensive strategy regarding regulation, where companies target regulatory bodies to resist or delay environmental regulation (Aragon-Correa & Sharma, 2003) may in fact result in a situation where the companies would be better off with well-defined and enforced regulation (Dashwood, 2014, Bebbington et al., 2008).

The national and international disquiet and campaigns against mining companies, sparked a need for the industry to show action to maintain their legitimacy. These came in the form of different corporate self-regulative modes through variety of CSR principles and practices. The starting point was when ICMM introduced global standards for sustainable mining in 2003, which the largest multinational mining companies operating in Chile quickly adopted. Many

interviewees mentioned especially the Canadian companies as the leaders in bringing these new international standards to Chile, as they were in the forefront in adapting the new ICMM standards and represented the biggest mining multinationals operating in Chile. However, these standards did not translate to socio-environmental solutions, although virtually all the mining MNCs in Chile started to adopt new environmental and community policies. These policies and programs were, and still are, mostly philanthropic or in the form of monetary transactions as explained by one interviewee:

“We need to learn how to build a different way of relationship with those communities which has been quite transactional because of the money thing. Like I need your permit so here you have a check.” (original quote)

The companies are investing in the local schools and infrastructure and also supporting community recreational clubs and endeavours, for which the government grants the companies tax benefits. As the following excerpt explains:

“Many of our projects are funded by the state. Because of the laws for donations they have. So normally the educational projects we develop with municipalities – normally we get 50% refund through taxes. In the first place we put 100 so that the project can start but they will refund us with 50.”

Although it is difficult to distinguish between the pure social and environmental aspects of these conflicts, these voluntary programmes were social in that they tried to incorporate the environmental concerns of local people through different hearings mechanism but were unable to change the root-causes. Furthermore, during the high price cycle, which simultaneously increased the amount of extraction, revenues and conflicts, the quick solution for the conflicts was money. People were paid off in one way or another, as the volatility of the market prices of metals increased the sense of urgency to get the projects through and extraction on the way. As expressed in the interviews with afterthought:

"There is a level of awareness that we need to change [institutions and practices]. But we got that awareness a little bit late. And we are quite behind. So that it is not just that it is improving these things a little bit, it is sort of a radical change. And we are a bit behind in that. Basically, I think that it is because we went through a quite important period of very high prices of mining products, basically copper and when you have high prices you can fix everything with money [laughter]". (original quote)

This transactionality of the corporate-community relations is the most common characteristic of self-regulation and voluntary governance mode of mining industry in Chile. Together with expanding industry, environmental breeches and low-price cycle, all contribute to the growth of conflicts in their own ways. Thus, this need for a radical change as expressed in the interview above, is recognised by all the actors.

Information obtained from the new environmental monitoring official states that only one third of mining companies in Chile fulfill the requirements of environmental legislation. Moreover, for example the halt of Pascua Lama was due to breeches in the environmental impact assessment process, suggesting the reason for conflicts is also the failure of companies to meet rules of environmental regulation. The interviewed ministry representatives also expressed

their concern that before something becomes a law, it is only hopes and intentions for some, because only law is binding for everyone. This is clearly seen in the work of SMA who started their work in 2011 in Chile. They have been inspecting and sanctioning corporations on violations of environmental law exponentially - the growth correlating with their resources to monitor. As a representative of SMA explained, they expect the rate of fines to grow for couple of years more until they have installed their offices in every region of the country and the fine/breach level finds its saturation point. From thereon it might even drop, as the corporations start to change their ways in the face of sanctions.

“This [the increase of resources at the agency] means that state is growing and is prepared to control more and better. Logically, the fines at least the amount if not the size will increase. In 2013 the amount of the fines was about 8M\$, in 2014 it was 18-19M\$, and this year we are going to 40 M\$. I think it is going to increase in 2016, 2017 and 2018. And then we will reach a point when it going to stabilize. The point in the curve when companies start to change their ways and the governing systems change, where they understand that it is more expensive not to fulfil the requirement of the law than not to fulfil it.”

There is a clear evidence that the consequences of lack of environmental regulation and industry self-regulation in Chile led to serious environmental hazards such as contamination, pollution and drought that had a negative impact to people's lives. Furthermore, the neoliberal minimal regulation system was unable to meet and deal with the concerns raised by citizens leading to legitimacy crises for both government institutions and for corporations as a result of these socio-environmental conflicts. The institutional change that the 2010 new environmental law brought can be seen as an attempt by the government to regain its legitimacy and ease the polarized situation, and on the other hand to comply with the recommendations by OECD. It remains to be seen how efficiently the new legislation will work as the monitoring and sanctioning office has functioned only couple of years and is still growing in reach. But as an official of SMA described, their workload is growing as these companies fail to address the citizens claims themselves and only change their behavior through fines and sanctions. Notwithstanding, there is definitely a “learning curve” happening in the corporations in that they are starting to note in the form of high fines and closures of operations that the lax regulation and monitoring belongs to the past.

### ***Neoliberal heritage and institutionalism***

The neoliberal political heritage of Chile and the institutional setting created a situation where most of the laws and regulations were, and still are, designed to promote mining industry. Consequently, there is an emergent legitimacy crisis in Chile that the neoliberal non-regulation model has invoked, further fuelled by the failure to protect people and environment in the face of corporate interest. In a three-country study (Zhang et al., 2015) the participants in Chile reported the lowest levels of trust in mining industry, its distributional and procedural fairness and confidence in governance. One of the major concerns for Chileans was exactly the lack of willingness and capacity of the government to regulate the mining industry. There is a deep distrust towards the political leaders and officials, and common belief that they are there to serve only their own interests and those of big corporations that have “bought” them, as expressed in many interviews.

This legitimacy crisis is not only involving the government but also the mining companies as their environmental breaches have become exposed. The interviewees indicated that in many cases the root causes of the conflicts were in the past irresponsible behaviour of corporations made possible by lack of regulation. The destruction of nature and the scarcity of water have created wider public consciousness and led to widespread demands for better regulation and monitoring. The corporations are now balancing between keeping their public and local legitimacy by complying with new norms and their own CSR standards and trying to make best profits in a low point of the price cycle. Therefore, the corporations are typical examples of instrumental CSR – a type of CSR that is practiced solely on economic grounds and its function is reduced to profit maximization (Gond et al, 2009).

Recently, the mining corporations have made efforts to regain their legitimacy and social license to operate through various measures. According to our data there are efforts to create dialogue processes between the corporations and communities, but to great extent these have been more of an information spreading devices of one-way communication, especially in the early project phases. Some companies have systems in place for hearing the concerns of people and also acting upon them, and these have been able to consolidate some smaller conflicts about traffic for example. The main issue is that most of the time the grievances from the civil society or communities come too late in the process, when everything has been decided already, or that these concerns are dismissed by the experts and information produced by companies. Furthermore, as most of companies were trying to tackle the local conflicts during the high-price cycle (around 2005-2012), mainly by offering money it created a situation where root causes of conflicts were not addressed - only suppressed. Consequently, the mining companies have not been able to prevent conflicts, vice versa, some very questionable practices of 'putting money to the problem' i.e. buying silence of the local people that are against the projects have also been creating more conflicts within the communities, where half of the people accept the compensation and half do not (Maher 2014, Prno and Slocombe 2012).

Even though there was a common understanding between most of the interviewees that the main causes for today's mining conflicts were due to the bad corporate practices from before, the mining industry associations have been trying to lobby against any stricter environmental regulation they see harmful for business. The lobbying comprises almost two thirds of their work as expressed one of the interviewees. Also, the regulatory capture is visible not only through the close ties between economic and political elites and corruption cases but also in statements such as this one from industry association representative:

".. with all those legal changes that have to do with mining directly we will give our opinion on it to the respective commission of parliament. They invite us. – If there is some concern amongst our members we will give a notice for the corresponding office, and to this we get a response from sub-secretary, minister or in some cases the president. Of course, you have to know them and the other thing is that they consider our opinion 100%. Historically looking the mining legislation until today. The organization has had an important role in it."

The inability or unwillingness of government to establish proper regulation to protect people and nature, and the inadequacy of voluntary corporate action created the situation where people turned to courts of law to protect their rights. Lack of trust towards the state and the

corporations directed the socio-economic conflicts to judicial system. These findings support the views of Newell (2008) on the national political elites that have a significant interest in certain economic sectors to reproduce neoliberal environmental governance that supports the business interest and tries to find legitimation through voluntary regulation measures. However, given that self-regulation results mainly from external pressures, it is not surprising that this kind of compliance-based environment can lead to minimal or even shrinking compliance (Dashwood, 2014). In the context of Latin American natural resource conflicts, Chile represents a speciality in the sense that most of these conflicts are directed to courts, even-though sometimes simultaneously fought in public spaces. The judicial system still represents a non-corrupt and just holder of power in the eyes of civil society, as a high government official posited in an interview. This trust in the courts has strengthened further as the communities and civil society movements have won some of the cases against companies in these courts. For example, in the mining conflict with highest profile, Pascua Lama by Barrick Gold, the company was sued by the local groups due to environmental breaches and finally in the beginning of 2018 the environmental enforcement office ordered a permanent closure of the open pit mine.

These socio-environmental conflicts can also be seen as a part of the wider struggle against the hegemony of neoliberal policies in Chile, and elsewhere in Latin America, where civil society is demanding for wider perspective on policy-making than just that of economy. On the other hand, the industry associations are lobbying hard against any regulative restrictions and trying to find legitimation for their activities through dialogue processes with civil society and public-private initiatives. Interestingly, it seems that in Chile there is a stronger need for state and hard-law based regulation to mediate the conflicts and gain the public trust after decades of neoliberal policies and voluntary regulation.

In most of the interviews a theme of institutionalism ('institucionalidad') came up in some form or other, referring to the economic and political setting of the country that has deep roots in the authoritarian neoliberal era. A setting that remained persistently stable even after the return of democracy. As noted by Nem Singh (2010), this historical institutionalism made it difficult for new governments to change the production model and policies of the country. A change that has proved very difficult also to the progressive leftist governments of the continent. The constitution and mining decree from the Pinochet era are still in force and give exceptional advantage to mining industry with regards to other laws and rights. The fact that mining is such an elemental part of whole Chilean economy and the historically close ties of political and economic elites has not made progressive environmental reforms any easier. Given the context, the changes introduced in 2010 in the form of environmental law and ratification of ILO169 in 2010 can be considered remarkable. Partly, they can be seen as a victory for civil society activism and pressure, enabling people to voice their concerns about the negative consequences of self-regulation i.e. environmental disasters and heavy pollution, and partly as a loss of legitimacy for the old "institucionalidad" and corporate power. In general this modest, yet significant defeat from the old institutionalism in Chile in environmental and social issues is described in this paper as going from neoliberal policies of absent regulation via self-regulation towards stricter regulative demands and their monitoring and external pressures leading to better environmental governance.

**Table 3: Development of state and voluntary regulation**

	<b>90's</b>	<b>2000 – 2009</b>	<b>2010 -</b>
<b>State regulation</b>	Very weak	Weak (with regulatory capture)	Weak (but improving)
<b>Voluntary regulation</b>	None	Some (developing)	Widely accepted by large and medium sized corporations
	“wild west”	“mining boom”	“reality check”

Notwithstanding, as noted by Nem Singh (2010, 2014), Tecklin et al. (2011), and Sepúlveda and Villaroel (2012) the private sector and mining industry in particular still hold a significant power in Chilean policy making and renewing, and therefore the change has been gradual and somewhat disappointing in magnitude in the eyes of civil society. However, after a long time of authoritarian oppressive rule and the structural dominance of economic views and actors, the change in Chile has been brought on by the growth and empowerment of civil society that have contributed to the change in the regulative sphere.

## **Conclusion**

Chile can be defined as a special case or forerunner within Latin American mining. The neoliberal policies were implemented 10 years ahead before neighbouring countries and the scale of mining in has been exceptional. As result of the strong path dependence of the neoliberal past and the inability to new democratic governments to devise proper environmental laws and enforcement, mining MNCs in Chile functioned 20 years without almost any environmental regulation. In 2016, when the new environmental institutions were finally starting to work in full effect and new reforms discussed in the parliament, some of the industry representatives expressed concerns about this “institutional instability”. The industry associations openly admitted lobbying full-time to reject any stricter environmental or social regulation they perceived would harm their industry. This reflects how environmental protection has faced, and still continues facing, ideological and institutional barriers in terms of a closed policymaking that was designed to limit regulatory action, and moreover, opposition from the powerful and cohesive business sector (Tecklin et al, 2011; Fazio, 1997). There is a deeply held belief in industry that environmental regulation will slow and distort natural resource markets. Although global mining companies prefer global standards and stricter steward policies to regulatory uncertainty, partly because the former can enhance external stakeholder legitimacy (Dashwood, 2014; Bebbington et al 2008), it is almost as if the industry has a natural aversion to any government intervention. Therefore, this deeply rooted resentment towards binding regulation can lead to irrational resistance of environmental regulation (Sinclair, 1997). Franks et al (2014) concluded that if mining companies would better understand the magnitude of potential cost of conflict caused by irresponsible or unsustainable policies, it would improve their responsibility instantly. However, the companies continue to reinforce the idea that the only way to operationalize any sustainability or responsibility issues in a market setting is to put a price on it. In Chilean context this “price” is not only the direct costs from fines and sanctions imposed by the environmental monitoring agency, but furthermore the indirect and long-enduring costs from the socio-ecological conflicts and related lawsuits.



When discussing the limits of voluntary regulation vis-à-vis hard law regulation, it seems that the former works when the sustainability or responsibility objectives support the win-win ideology. Whereas, when the objectives do not have a direct link to profit margin, or if the possible improvement of the company overall performance looms far in the future, the incentives of companies to operate in a sustainable manner diminish (the limitations of the so called Porter hypothesis). Moreover, CSR might work best as a value adding tool between the companies and its stakeholders in strong western states with strong institutions, solid protection of people and environmental laws. Paradoxically, in those states of weak law and governance where CSR is mostly “needed” according to the proponents, it is not nearly enough (Cashore et al. 2007, Aguayo & Barriga 2016). Specifically in the context of mining industry in Latin America, Cisneros and Christel (2014) see CSR merely as a corporate strategy vis-à-vis government and civil society to influence the regulation and governance. The inability of the weak state to govern, the lack of knowledge, professionalism etc., which is many times used as legitimization for voluntary regulation regimes is actually a process of mutual enforcement. Voluntary regulation slows the development of laws and regulations by offering something instead, and with industry heavily lobbying for voluntarism and against the hard law it at the same time erodes the democratic legitimacy of states and/or its institutions.

Therefore, we argue that hard law, mandatory policies, and their adequate enforcement are required to regulate those aspects of sustainability and responsibility that do not comply with win-win ideology. This is the case in most environmental protection issues and many socio-ecological issues like indigenous and land rights. Furthermore, counting on private and undemocratic actors as regulators or providers of public and socio-ecological goods presents serious legitimacy and accountability issues (Banerjee 2017). As a high environmental monitoring official said, he does not see the sense in talking about corporate responsibility and sustainability as something extra on top of the law, when 2/3 of the companies fail to meet even the legal requirements set in the 2010. He would be happy if the companies would just meet the standards set in law, and nothing more would be needed.

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## Appendix

### Appendix 1: Largest operating mining companies in Chile, 2017

Mine	Started Operat-ing	Ore type	Company	Ownership	Production in 2017 (million tons)
Cerro Colorado	1994	Cu	BHP Billiton Pampa Norte	BHP Billiton	66
Spence	2006	Cu	BHP Billiton Pampa Norte	BHP Billiton	199
Escondida	1990	Cu	Minera Escondida Ltda	BHP Billiton(57,5%), Río Tinto (30%) y otros inversionistas (12,5%)	925
El Soldado	1980	Cu	Anglo American Sur	Anglo American plc(50,1%), JV Codelco-Mitsui(29,5%) y Mitsubishi Corp. (20,4%).	40
Los Bronces	1980	Cu, Mo	Anglo American Sur	Anglo American plc (50,1%), JV Codelco-Mitsui (29,5%) y Mitsubishi Corp. (20,4%).	308
Doña Inés de Collahuasi	1999	Cu, Mb	Cía. Minera Doña Inés de Collahuasi	Anglo American plc (44%), Glencore (44%) y JCR (12%)	524
Los Pelambres	2000	Cu, Mb, Au	Minera Los Pelambres	Antofagasta plc(60%), Nippon LP ResourcesBV (25%) y MM LP Holding (15%)	343
Centinela	2014	Cu	Minera El Tesoro	Antofagasta plc(70%) y MarubeniCorp. (30%)	228
Antucoya	2015	Cu	Minera Antucoya	AntofagastaMinerals(70%), Marubeni(30%)	80
Zaldívar	2015	Cu	Cía. Minera Zaldívar	Barrick(50%)y AntofagastaPlc. (50%)	154
Franke	2009	Cu	SCM Franke	KGHM International	19



Sierra Gorda	2014	Cu, Mb, Au	Sierra Gorda SCM	KGHM International (55%), Sumitomo Metal Mining y Sumitomo Metal Corporation (45%)	224	
Quebrada Blanca	1994	Cu	Cía. Minera Quebrada Blanca	Teck(90%) y Enami(10%)	23	
Carmen de Andacollo	1996	Cu	Cía. Minera Teck Carmen de Andacollo	Teck (90%) y Enami (10%)	72	
Altonorte	1993	F	Complejo Metalúrgico Altonorte	Glencore	n.a.	
Lomas Bayas	1998	Cu	Cía. Minera Xstrata Lomas Bayas	Glencore	78	
Altos de Punitaqui	2010	Cu	Minera Altos de Punitaqui	Glencore	5	
Candelaria / Ojos del Salado	1993	Cu,Au	Cía. Contractual Minera Candelaria / Cía. Contractual Minera Ojos del Salado	LundinMining(80%) y Sumitomo(20%)	177	
Caserones	2014	Cu, Mb, F, R	SCM MineraLumina Copper Chile	Pan Pacific Copper (77,37%)y Mitsui & Co. (22,63%)	122	
El Abra	1996	Cu	Sociedad Contractual Minera El Abra	Freeport-McMoRan (51%) y Codelco (49%)	78	
El Teniente	1905	Cu, Mo, F	Codelco	Chilean state	464	
Chuquicamata	1915	Cu, Mb, R	Codelco	Chilean state	330	
Salvador	1959	Cu, Mb, F, R	Codelco	Chilean state	62	
Andina	1970	Cu, Mo	Codelco	Chilean state	220	
RadomiroTomic	1997	Cu	Codelco	Chilean state	318	
Gabriela Mistral	2008	Cu	Codelco	Chilean state	122	
Ministro Hales	2010	Cu, Ag	Codelco	Chilean state	215	
La Coipa	1993	Au, Ag	Cía. Minera Mantos de Oro	Kinross	-	
Maricunga	1996	Au	Cía. Minera Maricunga	Kinross	91.127	oz Au
PlantaMagnetita, Mina Cerro Negro Norte, Mina Los Colorados,		Fe	CAP	CAP	14,510	(201 8)

Planta de Pellets, Minas El Algarrobo									
Minas el Romeral	1955	Fe	CAP		CAP			1,579	(2016)

Source: Consejo minero