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# The authority of rules in Chile's contentious environmental politics

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## The authority of rules in Chile's contentious environmental politics

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#### **ABSTRACT**

In 2010 Chilean legislators replaced a small environmental coordinating agency with an Environment Ministry, an autonomous Environmental Impact Assessment Agency, an enforcement agency, and specialized tribunals. Though ambitious, the reform failed to meet the stated objective of depoliticizing environmental decision-making. Instead, the reforms strengthened the authority of the central state, justified on the premise that decisions would now be based on 'technical criteria', meaning rules rather than politics. Comparing the creation (1990–1994) and reform (2009–2010) of Chile's environmental institutions, it is demonstrated that a defining feature of Chilean political culture involves treating rules as if these were independent of the state. Chilean lawmakers use rules as science is used elsewhere: as an 'objective' voice separate from politics, that helps legitimate decisions. Appeals to the rules were used to increase the central state's authority and exclude local representatives, concerned communities, and scientists from environmental decision-making.

**KEYWORDS** Depoliticization; expertise; legitimacy; technocracy; neoliberalism; Chile

#### Introduction

On what foundations should a state decide to approve or reject infrastructure projects? Starting in the 1970s, many countries adopted reforms that put these decisions in the hands of profit-seeking corporations. In liberal democracies, however, a long tradition exists in which experts should make these decisions, or at least have a significant say in them. By contrast, advocates of participatory democracy would increase the voice of citizens in such decisions, given the impacts infrastructure projects have on neighboring communities. Whether to base the approval of industrial projects on market incentives, technical expertise, public participation, or some delicate combination thereof, is a central aspect of democratic decision-making; in the balance hang citizens' perceptions of the legitimacy of the state's decisions.

In 2010 legislators reformed Chile's environmental institutions. Congress replaced a coordinating agency, the National Commission for the Environment (Conama), with an Environment Ministry, an autonomous Environmental Impact Assessment (EIA) Agency, an enforcement agency, and specialized tribunals. Yet noted environmentalist-scholars have called the reforms 'a wasted opportunity' because public participation rights were insufficiently extended and decision-making, particularly in EIAs, remained 'politicized' (Sepulveda and Villarroel 2012). Chilean debates about how to depoliticize EIA decisions are an instance of the problem of legitimacy in a liberal democracy with strong neoliberal influences. Required in Chile since the 1990s, EIAs are a common regulatory tool used to assess the environmental impacts new industrial projects might have and propose measures to reduce, eliminate or compensate these impacts (Costa Cordella 2012). Critics complain that the environmental authorities – before and after the reforms - approved EIAs without regard to communities' concerns or scientific evidence of environmental harms. Instead, critics maintain that the authorities approved industrial projects for 'political' reasons, such as favoring a pro-growth development agenda. Activist-scholars claim that the stated goal of the 2010 reforms - to depoliticize environmental decisionmaking - was not achieved.

During the reforms, Chilean law-makers chose surprising ways to depoliticize EIA decisions. In Chile and elsewhere, depoliticization proceeds by displacing the state's authority from decision-making in favor of market incentives or the authority of experts (Pellizzoni 2011, Kinchy 2012). In these ways, depoliticizing an issue typically restricts the role the state plays in decision-making. By contrast, the Chilean reforms expanded the state's authority over EIA decisions. In many ways, this represents continuity with prior Chilean politics that are notoriously centralized. However, I argue that while the 2009–2010 reform reproduced familiar patterns of centralization and elitism, these effects did not result from the typical mechanisms scholars use to explain Chilean environmental politics, such as the dominance of neoliberal principles that privilege market incentives or the power of technocrats. Instead, these effects resulted from law-makers' appeals to 'rules and regulations', which they called 'technical' criteria, as a way to depoliticize environmental politics.

Here, I explore the changing meaning of 'technical' in Chilean environmental politics by comparing legislative debates during the transition to democracy (1990–1994), when Conama was created, and during its reform (2009–2010). During the transition, law-makers did not appeal to 'technical' criteria to depoliticize contentious issues but to values such as consensus. In 2009–2010, however, appeals to what reformers described as 'technical' criteria became law-makers' preferred mechanism for depoliticizing environmental issues. These continuities and changes have

implications for how we understand Chile's long-standing technocratic or 'anti-politics' tradition and for questions of legitimacy in liberal democracy (Hilbink 2007). I examine two such implications. First, focusing on how Chile's 'anti-politics' tradition informs contemporary environmental politics sheds light on the absent role that scientific knowledge plays in decision-making. Second, this absence begs the question of who speaks for the public and for nature in contested EIA decisions. In what follows, I summarize scholarship on depoliticization in general and in Chilean environmental politics in particular, followed by a methodological note. I then analyze the empirical material in two sections, the first focused on the transition and the second on the reforms, and finish with a discussion and conclusion that reflect on the politics of depoliticization in a neoliberal democracy.

#### Depoliticizing environmental politics

Often in Chile 'one person's environmental "disaster" is another's economic "miracle" (Risley 2014, p. 432). As in other developing countries, Chilean state officials regularly have to choose between promoting economic growth through industries that create jobs, and protecting natural resources and a clean environment. The choice frequently pits industry against small-scale activities such as agriculture or tourism, whose viability depends on a healthy environment (Martinez-Alier 2002, Cárcamo et al. 2011, Cuadra Montoya 2012). Since the 1990s, Chilean authorities have made this choice through EIAs, a procedure by which the authorities evaluate one industrial project at a time to assess its environmental impacts and propose measures to reduce, eliminate, mitigate or compensate those impacts. Critics complain that EIAs have promoted conflict because they are prone to political intervention and have fragmented Chilean environmental politics (Carruthers and Rodriguez 2009, Sepulveda and Villarroel 2012).

Scholars have explained these characteristics of Chilean environmental politics as the result of the country's unique neoliberal and technocratic approaches to government (E. Silva 1994, 1996b). After the 1973 military coup, Chilean governing elites adopted neoliberal principles earlier and more deeply than elsewhere, turning Chile into a 'test case' of neoliberal environmental governance (Liverman and Vilas 2006, Tecklin et al. 2011). During the transition, political leaders adopted democratic reforms, but avoided those that might have eroded elites' power or threatened stability and economic growth. 'Democratic rule [in Chile] has opened political space, yet new environmental institutions and procedures exhibited inherited elitist and exclusionary features.' (Carruthers 2001, p. 343). In the environmental arena, democratic reforms promoted consensus among elites by excluding from decisionmaking actors who favored strong environmental protections (E. Silva 1996a,

1996b) and by employing 'market-enabling mechanisms' that privileged business interests over regulation (Tecklin et al. 2011). Power also remained concentrated in the central government. Although municipal governments came to be elected by direct suffrage, regional governments continued to be appointed by the President (Mardones 2007). Moreover, power became concentrated in the Treasury and its cadre of economists, who after 1970 became the technocrats of choice (Markoff and Montecinos 1994). Thus, Chilean government stands out for its commitments to strong central authority, market-enabling principles, and the authority of technocrats (E. Silva 1996c, Moulian 2002, Stein et al. 2005). While some scholars see in these commitments a harmful depoliticization of environmental issues (Carruthers 2001, Carruthers and Rodriguez 2009, Tecklin et al. 2011), others see the conditions that put activists and policy-makers on a highly politicized 'collision course' (Risley 2014).

Though some aspects of Chile's path to depoliticization are unique, debates about depoliticization are common in liberal democracies. In contrast to the Chilean case, where depoliticization co-occurs with a state and executive government that remain central actors in public life, scholarship on other countries defines depoliticization as the opposite - as a process of excluding the state from public life (Pellizzoni 2011). Scholars point to two common ways in which the state is excluded from environmental politics, and both processes have been observed in Chile. The first involves appeals to neoliberal principles that favor replacing state control with free markets buttressed by strong property rights (Kinchy 2012, Felli 2015). Across many countries and environmental issues, law-makers have turned to markets, privatization and deregulation for resource management, convinced that private management will out-perform state agencies or political bodies (Liverman and Vilas 2006). By contrast, critics argue that the turn to markets depoliticizes environmental issues by transforming water, forests or land into commodities that respond to price signals and investors' preferences. The displacement of the state through neoliberalism is borne out in studies of global drinking water policies (Goldman 2007), genetically modified seeds and plants (Kinchy 2012), carbon emissions trading (Felli 2015) and, in Chile, water sanitation regulation (Baer 2014), to name a few.

The second way states are removed from public life involves reliance on expert assessments of nature. Liberal democracy has a long tradition that links experts, also called technocrats, to less partisan and more stable decision-making (Brown 2009). Through claims of competence, technocrats can help depoliticize issues that would otherwise be mired in ideological or interest-based disputes (Majone 2002). Many scholars, however, argue instead that experts tend to sideline views that do not conform to scientific norms and practices (Backstrand 2003, Pellizzoni 2011, Kinchy 2012). In this view, 'government by experts' depoliticizes by shutting lay citizens out of decision-making (Fischer 2000, Pellizzoni 2011) and by reducing conflicts over power and alternative world-views to calculable terms like costs, benefits and risks (Farrell and Jager 2006, Wesselink et al. 2013). For example, while Canadian and US law-makers sought to regulate genetic modification technologies by calculating the risks and benefits, concerned farmers tried to broaden the debate to include equity and justice considerations (Kinchy 2012). In addition, as in the case of genetically modified foods Kinchy studied, neoliberalism and 'government by experts' sometimes reinforce each other. Emission trading schemes in the European Union combine markets with methods of calculation that depoliticize decisions over which polluters must change and which can continue to pollute (Felli 2015). Similarly, between the 1970s and 2000s, under neoliberal influences, Chilean law-makers switched first to cost-benefit analysis and later to EIAs to depoliticize decisions over energy (Tironi and Barandiaran 2014).

The case of Chilean environmental politics, which combines a powerful central state with neoliberal policies and a seemingly technocratic style, disrupts some ideas about depoliticization in neoliberal democracies. The analysis that follows shows that: depoliticization can, surprisingly, be pursued through a strong, centralized executive government authority; demands to depoliticize politics can come from broad quarters of society including, in this case, environmental NGOs and activists; and even in a country like Chile, well-known as a 'depoliticized' society (Carruthers 2001, Moulian 2002), depoliticization is a contested and dynamic process, where sectors of society hold different and changing ideas about who should participate in decision-making and how decisions become legitimate in a democracy. These contests can be observed in EIAs, a policy tool used in Chile and dozens of countries worldwide to bring legitimacy to environmental decision-making (Owens et al. 2004, Tecklin et al. 2011). The next section puts EIAs in historical context in Chile.

#### Chilean liberalism and rules

Before neoliberalism became influential in the 1970s, Chile's liberal tradition valued a form of depoliticization achieved by combining the power of laws with that of experts (Moulian 2002). Patricio Silva (2009) argues that technocrats have for a long time been a linchpin in Chilean politics, mediating between political parties and Chile's powerful presidents, providing continuity as governments changed, and representing ideals of efficiency and progress. Silva traces this vision of technocracy to nineteenth century liberalism, in which a 'scientific government' would produce efficient bureaucracies at the service of the masses, though not necessarily representative of them. For decades after 1870, positivists like V. Letelier and J.V. Lastarria promoted technocrats to counter political parties and

preferred an administrative to a democratic state. Likewise, in a study of nearly a century of judicial practices, Lisa Hilbink (2007) finds that Chilean judges' decisions were frequently illiberal due to their commitment to what she calls 'apolitical institutionalism.' Rooted also in nineteenth century positivism, apolitical institutionalism became anti-politics over time; judges saw themselves as 'slaves of the law', which they interpreted to mean 'less politics means more law' (Hilbink 2007, p. 6). Guided by these values, judges came to resent liberal democratic ideals, and organized their profession to reproduce this illiberal, anti-politics thinking. One of the remarkable aspects Hilbink reflects on is the resilience of these values through dictatorship and democracy. Following from P. Silva and Hilbink, Chile's 'antipolitics' or technocratic tradition is grounded in positivist ideals common to liberal democracy, albeit with a twist: in Chile, depoliticization was pursued through administrative tools like laws, rules and regulations and less through science.

Two years before protestors paralyzed Chile and challenged the image of a 'depoliticized society' (Mayol and Azócar 2011), Patricio Silva (2009) ventured that these anti-politics ideals were in crisis. He argued that Michelle Bachelet's first presidency (2006-2010) was marked by a twin crisis of participation and expertise. President Bachelet attempted to expand participation after winning the election with the slogan 'No to technocrats, yes to the people', but retreated after student protests escaped the government's control. Concurrently, Bachelet faced a crisis of expertise after a carefully planned urban transport system rolled out to disastrous results. P. Silva concludes that the Chilean government faced a crisis of legitimacy because it could govern neither through experts, who were losing credibility due to fiascos like the failed transport system and to complaints that they were not democratically accountable, nor through greater citizen participation, which had led to disruptive protests and proposals the government was not willing to support.

Political theorist Mark Brown (2009) attributes this impasse between 'government by the people' and 'government by experts' to deeply held liberal democratic assumptions about representation. Brown argues that 18th-century European liberals like Rousseau held science as an idealized model for politics; in their view, just as science represented nature, so an elite body of elected officials could best represent 'the people'. On this basis, European liberals developed a theory of representation that assumes a one-to-one correspondence between nature and science and between 'the people' and elected officials. However, Brown argues, in believing in a one-to-one correspondence between 'the people' and the legislative assembly, liberal democrats have fallen into a trap: both advocates of participatory and of representative democracy assume that representation requires correspondence to a popular will, but they disagree on how to

achieve it. Whereas the former wish to expand citizen participation in public affairs because 'the people' speak best for themselves rather than through representatives, advocates of representative democracy see direct democracy as infeasible. Better, they say, to have elected representatives speak for 'the people'. The result is an unproductive debate about legitimacy in decision-making that pits 'government by the people' against 'government by experts', and that is taking place in many liberal democracies (including Chile, P. Silva 2009, Italy, Pellizzoni 2011, the UK, Owens et al. 2004, and the US, Brown 2009).

During the 2000s, Chilean environmental governance became locked into such a debate between citizen participation versus 'technical criteria' in EIA decisions (Costa Cordella 2012). Globally ubiquitous, EIAs are premised on liberal democratic ideals that combine expert rationality (experts study a project's ecological impacts and make recommendations) with deliberation (with required public participation processes) (Owens et al. 2004). In Chile and worldwide, communities are contesting EIAs and demanding greater rights to participate directly in EIAs (Glasson and Neves Salvador 2000, Doberstein 2004, Mascarenhas and Scarce 2004, Goldman 2005, Li 2009, Hochstetler 2011, Kolhoff et al. 2013). In Chile critics decry environmental decisions based on 'economic and technical criteria' instead of communities' input (Camus and Hajek 1998, Larrain 1999), but also decisions made for 'political' reasons, such as supporting business, that have no foundation in scientific and technical criteria (Carruthers and Rodriguez 2009, Costa Cordella 2012, Cuadra Montoya 2012, Sepulveda and Villarroel 2012, Risley 2014). Whether the problem is too much or too little reliance on 'technical criteria', these activists and scholars advocate for increased citizen control of EIA decisions, exemplified by demands for mandatory or legally binding participation (Cuadra Montoya 2012, Sepulveda and Villarroel 2012, p. 193).

However, as the 2009-2010 reform debates illustrate, the meaning of 'technical criteria' is ambiguous in Chile. Sometimes it refers to criteria based on expertise or professional experience. When used like this, Chilean debates echo global ones about how to democratize 'government by experts'. Yet at other times, as in the 2009-2010 reform, 'technical criteria' refers to rules and regulations enacted by state bureaucracies, in ways that evoke Hilbink's notion of judges (here, state officials) as 'the slaves of the law'. In this usage, 'technical' criteria refer to rules and regulations that direct state officials' decision-making. Adherence to such 'legal-technical' criteria is thought to eliminate subjectivity or discretion and the potential for political interference from decisions over infrastructure projects. Where state officials see themselves as 'slaves of the law', the legitimacy of EIA decisions is only a matter of applying the rules. However, this produces a crisis of representation like that described above by P. Silva and Brown:



who speaks for the public or for nature in EIA decisions in a democracy where state officials are 'slaves of the law'? The 2009-2010 reform was an attempt to address such questions of legitimacy in EIAs and, in hindsight, appears as a potentially pivotal moment in this broader crisis of representation.

#### Methodological note

The following analysis is based on material from fifteen semi-structured interviews I conducted in 2010-11 with activists, scientists, professionals and law-makers involved in making and reforming environmental institutions. I relied on expert sampling supplemented by snowball sampling, and selected participants because of their participation in the events analyzed here. Respondents include current and former directors of Conama and the EIA Agency, CIPMA technocrats, and legislative advisors. I asked respondents about the goals of institutional design choices, why they thought environmental decisions were seen as 'political', and what they thought should be done to bring stability to environmental decision-making. I draw also from transcripts of debates in Congress and the Senate about the environmental framework law and its reform. These transcripts, called legislative histories (LH), are available through Chile's Congressional Library (www.bcn.cl). I used two legislative histories: the general environmental framework law (LH19.300) and its reform (LH20.417). I use individuals' proper names when using information contained in the public record, but keep interviewees' names anonymous. I coded the transcripts and interview material with Atlas.ti. This research is part of a project on the politics of scientific expertise in four environmental conflicts in Chile (NSF grant #0965524).

#### Transition: a transversal agency that seeks consensus

In 1986, during Augusto Pinochet's dictatorship, environmentalists began discussing environmental policies for a democratic Chile under the protective umbrella of CIPMA, an environmental NGO. Soon after President Patricio Aylwin took office in March 1990, he created Chile's first National Commission for the Environment (Conama) by decree. Several CIPMA members set to work on an environmental framework law. The legal proposal reflected the beliefs of CIPMA technocrats, such as lawyer Rafael Asenjo, Chile's first Environment Secretary, and engineer Ricardo Katz. Asenjo and Katz have moved fluidly between the private and public sector, and typify the post-Pinochet Chilean technocrat (Joignant 2011). For example, Katz worked in Pinochet's government, then founded an environmental consulting agency (GAC), and continued to advise Conama. Many



of his GAC employees are environmental engineers who have rotated between government and their positions at GAC.

Aylwin's government preferred Conama over an environment ministry because it was a 'coordinating' or 'transversal' agency that dovetailed well with Aylwin's 'transversal' coalition of parties. Aylwin's supporters used the concept of 'transversality' to project a conciliatory transition based on consensus and negotiation, as opposed to a retributive one (interviews, 10/12/2010, 11/16/2010, 06/09/2009, 06/02/2011). At the time, transversality evoked a style of politics based on negotiation, compromise and consensus across political parties, embodied by the Concertación, the coalition of parties that led Chile from dictatorship to democracy. Concertación leaders hoped that compromise and consensus would avoid the ideological confrontations they believed had led to the military coup of 1973. Transversality also resonated with Chile's 'anti-politics' tradition because it privileged decision-making by negotiation rather than through confrontation.

Guided by these beliefs, Concertación leaders thought Conama would derive authority from its capacity to introduce environmental issues to sectoral ministries through negotiation, not confrontation. They saw a 'transversal' Conama as producing an administrative re-allocation of tasks; Conama would move environmental issues off the President's desk onto those of sectoral ministries, in a process they described as decentralization (by this they did not imply any territorial re-allocation of authority). By contrast to Conama, a possible environment ministry risked 'irrelevance' as a 'Ministry of No' that would derive power by blocking projects and 'opposing progress'. Whereas a transversal Conama would be able to overcome partisan divisions through compromise and consensus, and thus embodied the 'anti-politics' ideals of the time, transition-era law-makers believed an environment ministry that might impose its will by blocking projects would be left isolated or confined to an 'environmental ghetto' (Interviews, 06/13/2011, 07/26/2011, E. Silva 1996b).

However, advocates of an environment ministry feared a coordinating agency would lack legal authority to be effective (Interviews, 11/16/2010, 06/ 02/2011, 04/27/2011). They proposed converting the Ministry of Public Lands, which managed state-owned land and housed a tiny Ecology Committee, into a new Environment Ministry. Led by geographer and Minister of Public Lands Luis Alvarado, those who supported creating a ministry were experts in agriculture, biology, ecology and similar fields. Their members included Juan Gastó, a prestigious ecologist. Many spent the 1980s in rural communities, public health agencies or in agricultural extension (interview, 16/11/2010). Their training and experiences – grounded in forestry and agriculture in the countryside - put them far from Chile's technocratic elite of urban engineers and lawyers, like Asenjo and Katz (E. Silva 1996a). Conama's triumph over a ministry thus involved marginalizing some forms of expertise (geography, agriculture) in favor of others (lawyers, engineers).

Some also feared the Ministry of Public Lands. One former state official involved in the EIA asked rhetorically, 'What does the Ministry of Public Lands have to do with projects that occur on private lands?' (interview, 06/13/2011). Public Lands threatened the division of private and public property many considered hard won by the dictatorship and the foundation for growth. To counter transforming Public Lands into an Environment Ministry, some threatened to place Conama within the Ministry of Planning, associated with Pinochet's most free-market social policies. As a compromise, Conama was housed within the Ministry of Interior, from where the President could support the new agency and keep it in check (interviews, 06/13/2011, 11/16/2010). Conama was further restricted by a new board of ministers from productive sectors (e.g., mining, agriculture, public works). Here lies a central irony: though by design Conama was anti-politics, grounded in Chilean ideals of consensus and coordination, in practice its authority lay in political power, with mixed results (Ruthenberg et al. 2001, Tecklin et al. 2011).

The World Bank supported Conama, albeit reluctantly. The government requested support after Conama had been created by decree, and in 1992 the World Bank lent Chile US\$11 million to implement what it skeptically called the 'Chilean model' of environmental governance (Ruthenberg et al. 2001). In the early 1990s, most countries around the world were creating environment ministries, not coordinating agencies (Orihuela 2013). However, the Bank's loan documents accepted Chilean policy-makers' arguments that there was no 'single "good-practice" approach for the most effective institutional arrangement.' (Ruthenberg et al. 2001, p. 3). The Bank supported Chilean policy-makers' commitment to economic growth over environmental protection (World Bank 2001, p. 4). Nonetheless, more than international best practices, Chile's new environmental coordinating agency was the result of Chilean technocrats' vision for how best to introduce environmental governance without threatening their priority: to safeguard political stability and economic growth.

Despite World Bank support and the proposal's limited scope, President Aylwin's environmental framework law faced an uphill battle in a legislature packed with conservative and libertarian legislators. Many were concerned to keep Conama small; it was capped at just 62 employees. Senator Sebastián Piñera even proposed to staff Conama only with existing public employees whose prior positions in another agency would then be cancelled (LH19.300, p. 509-13). Other lawmakers feared regulatory over-reach and therefore narrowed Conama's focus to a few principles: incremental improvements, realism, polluter pays, and participation. A socialist senator argued a 'modern Chile had to be realistic' and improve standards gradually, so as not to threaten economic growth (LH19.300, p. 247). Others resisted adding references to 'sustainability' or 'equity' for fear these terms might politicize environmental politics. Some legislators claimed that 'sustainability' was

implied and did not need to be explicitly included. Others resisted adding 'equity' to the definition of sustainable development; Senator William Thayer explained, '... I do not see how improvements in quality of life, if they are rational, can be inequitable.' (LH19.300, p. 951). Although advocates of equitable and sustainable development prevailed, arguing the need to signal the government's 'change of culture', these terms changed few attitudes. For example, Senator Sebastián Piñera claimed that no one thought it desirable to legislate air quality standards in response to the needs of people with lung disease (LH19.300, p. 959).

In response, President Aylwin countered that Conama would be 'capable' despite its small size because of 'complementary laws' that would soon be passed and an 'objective EIA' (LH19.300, p. 17, Pisani 2001). Conama might lack the legal authority of a ministry, but President Aylwin argued the new agency's effectiveness lay in its capacity to introduce clear rules. In his view, environmental degradation resulted from the country's 718 'incoherent, fragmented and inorganic' legal texts (LH19.300, p. 10). The new President saw legal disorder as a regional malady: 'In Latin America there are abundant environmental laws and codes, almost perfect from an ideological and theoretical point of view, that are inapplicable because of the disjuncture between the institutions responsible for those laws and their content.' (LH19.300, p. 11, see also Hilbink 2007). However, despite the posturing towards the authority of rules and an objective EIA, many lawmakers remained committed to a political process based on negotiation and consensus. Secretary of State Edgardo Boeninger, a technocrat par excellence (Joignant 2011) and a close ally to Aylwin, told Congress, 'When there is no precision that can be summarized in one number, quantity, or indisputably clear concept, [arbitrary decisions] can be avoided only through procedures that produce [consensus].' (LH19.300, p. 467).

In practice, managing the EIA consumed Conama. Between 1992 and 2010, Conama reviewed 855 EIA projects and 15,552 smaller declarations (interviews 04/29/2011, 07/27/2011). The World Bank's loan was spent primarily in training 2,000 civil servants in how to manage EIAs and the resulting information. By contrast, Conama's capacity to issue environmental quality and emission rules stalled (interviews 06/02/2011, 08/03/2011, 11/16/2010, 11/04/2010A, 11/04/2010B). Between 1994 and 2011, Conama issued only 31 environmental emission and quality standards, mostly to regulate air quality (n = 20), particularly vehicle emissions (n = 12). Approval was slow: on average, Conama took 9 years to pass the five legal standards approved between 2007 and 2011. Approval was slow because proposed standards typically spent years cycling through Conama, external reviewers, and an Advisory Council, until the president approved them (interviews, 07/26/2011, 08/03/2011). Thus, despite President Aylwin's calls for 'clear rules', Conama's capacity to issue these



in the form of environmental quality standards stalled because the process was designed to be participative and achieve consensus - a cumbersome procedure that was not reformed in 2009-2010.

#### Reform: appeals to 'technical-legal' criteria

During the 2000s, environmental conflicts accumulated, the OECD admonished Chile's weak environmental regulations and, as a result, Conama and EIAs faced a crisis of legitimacy (Costa Cordella 2012, Sepulveda and Villarroel 2012). Through EIAs, lawmakers learned about the environment. Whereas in the early 1990s legislators argued for Conama and EIAs based on superficial harms, like billboards along highways, trash on the beach, and the loss of Chile's beautiful landscapes (LH19.300: p. 245, p. 459, p. 847), 20 years later conflicts around EIA projects were linked to significant environmental harms. During the Congressional debates about the reform, legislators called out the names of EIA projects that communities in their districts had opposed: energy projects at Los Robles, San Pedro, Castilla, Guacolda, and La Higuera; industry that threatened rivers like the Copiapó, Caren, and Choapa; and toxic pollution at Los Pelambres, Tocopilla, Chañaral, Ventanas, Puchuncaví, La Calera (LH20.417). Far from the technocratic ideals that informed its creation, by 2009 many saw Conama as a profoundly political entity.

Political in this context meant that the authorities had given EIA approval to infrastructure and industrial projects whatever the science or affected communities might have said. Several projects convinced many citizens that political intervention in the EIA was rife. In the late 1990s, Conama approved the EIAs of the hydroelectric dam Ralco and the pulp mill Celco Valdivia despite local opposition and after clandestine political maneuverings (Carruthers and Rodriguez 2009, Risley 2014). In the 2000s, Conama approved the Pascua Lama mine's EIA despite public concerns over the impacts on glaciers. Community leaders denounced this as a 'policy of completed actions' whereby locals participated in the EIA under false pretenses (French et al. 2015). In 2011, the hydroelectric project HidroAysén was similarly approved despite legal irregularities, national opposition, and questions about the accuracy of its EIA (Cuadra Montoya 2012).

By the late 2000s, activists and legislators who had become convinced that the EIA was politicized proposed an antidote to EIAs' credibility crisis: isolate the process from politics to make the evaluation 'more technical'. President Michelle Bachelet (2006-2010) and her environment minister, Ana Lya Uriarte, agreed<sup>1</sup>; their proposal to reform Conama, debated by the legislature during 2009 and 2010, isolated EIAs from politics by replacing Conama with a politically autonomous EIA Agency and eliminating

'political' voices from the committee that in each region votes to approve or reject EIAs, called COREMAs (there are 15 COREMAs, one per region). In the view of a multi-partisan cross-section of legislators, state officials and civil society representatives, the new EIA Agency gained autonomy from politics because its director would no longer be appointed by the President, but by the Environment Minister. In Congress, socialist legislator Marco Enriquez Ominami explained that the idea was to create an EIA Agency with the same political autonomy as the Central Bank (LH20.417, p. 896 and 903). As Felli (2015) argues, the creation of autonomous regulatory agencies, that do not answer to elected officials, is evidence of the removal of the state and its 'political' authority from public life in favor of depoliticization by transferring issues to 'technical' institutions.

Regarding the reform of COREMAs, the executive government's proposal identified political voices with regional governors and with (indirectly) elected officials, called regional councilors. Again, a multi-partisan crosssection of Chilean actors saw governors and councilors as 'political' because they are political appointees, rather than members of the permanent state bureaucracy. By contrast, they saw state officials who work in state agencies with jurisdiction over things like water or forests as 'technical' because of the nature and terms of their work (to administer natural resources as permanent state employees). Thus, to isolate EIAs from politics, Bachelet's government proposed to remove the 'political' voices of regional governors and regional councilors from COREMAs, and leave only 'technical' state agency officials (interviews 11/09/2010, 11/04/2010A, 04/27/2011, 06/02/ 2011, 07/27/2011).

However, a group of legislators and activists were not convinced that this reform would depoliticize the COREMAs. Evidence of this opposition lies in the public comments given in Congress in 2009, as the reform debates began. A member of a left-wing think tank called the proposed entities 'new, small COREMAs'. An environmental NGO representative complained that with this reform one political body was being replaced by another. A Chamber of Construction spokesperson said: 'with the argument of the politicization of COREMAs, now things are taken to a meeting of [ministerial representatives] that only centralizes environmental decisions even more than before' (LH20.417, p. 120).

These criticisms were based on the view that, within COREMAs, state agencies are represented by a 'political' voice: that of the regional ministerial representative, who is appointed by the minister, who sits in the national capital. For example, within COREMAs, the Water Agency (which reformers thought of as 'technical') is represented by the regional minister for the Ministry of Public Works, who answers to the Minister for Public Works, who is appointed by the President. Because of this chain of command, critics saw the new proposed COREMAs as 'political'. Moreover,

during the legislative debates, legislators re-instituted regional governors because some legislators worried that the new COREMAs centralized power in the hands of the state. In the end, reformers' efforts to make COREMAs more 'technical' and less 'political' led only to the elimination from COREMAs of local representatives (the indirectly elected regional councilors) and of a historically pro-environment ministry (Public Lands). Thus, under the guise of making COREMAs more 'technical', the reform increased the central state's control over EIA decisions.

Why was political autonomy pursued in such contradictory ways, centralizing power while claiming to depoliticize decision-making? The reform reflects dominant understandings of the term 'technical' as pertaining to the rules, a tendency to see state officials as the best guardians of those rules, and a reluctance to consider scientists or other specialized professionals as relevant to such decisions. Since the 1990s, a handful of legislators proposed to make EIA decisions 'more technical' by improving the information in EIAs: they called for requiring data-based reports and the participation of engineers, and criminalizing the falsification of data.<sup>2</sup> During 2009-2010, some legislators persisted in promoting a place for science. One right-wing legislator exclaimed, 'No one can act according to impressionistic criteria, typical of Chileans: "I'm surprised by... I believe that...". No, here is pure science at the service of the nation!' (LH20.417, p. 1956). His colleague from a different party demanded, 'No more politicians in charge of exclusively technical issues! ... The usual thing is for a technically trained person to [revise and approve EIAs], with knowledge and skills, and who is also committed to defending our natural patrimony and good living conditions.' (LH20.417, p. 1960). But these views did not prevail; instead, Chile's legislature rejected all proposals that sought to expand the voice of science in EIAs. This is best illustrated by budget allocations: legislators allocated approximately US\$35 million for the ministry, US\$8 million for the enforcement agency, and US\$200,000 per region for scientific studies - funds that are insufficient to sustain a research-based, environmental information system (LH20.417, p. 525-26).

Legislators from across different political parties opposed expanding the voice of scientific experts in EIAs. Libertarian senator Andres Allamand stated: 'In the "technical" realm there are no absolute truths. And given this reality, what is the only forum that can distinguish between right and wrong? Obviously, a political forum...To subordinate political decisions to technical expertise is absurd.' (LH20.417, p. 907). Socialist Jaime Gazmuri explained 'I am very critical of what we have done [with environmental policy, but that does not lead me to think that complex problems should be handled by organisms autonomous from political power. That was already tried and corresponds to Plato's old idea of "government by experts"... It is not practical.' (LH20.417, p. 911). With statements like

these, legislators defended the responsibility of elected representatives to safeguard the environment and expressed their distrust of scientists and of 'technical' state officials. Senator Andres Allamand sarcastically exclaimed, 'who could be the member of a technical body that, on all regulated issues, could force regional ministerial representatives [to make certain decisions]? We would have to bring in aliens to do this task' (LH20.417, p. 1899). At issue here is who speaks for 'the technical' - is it scientists, state officials, or 'aliens'? In invoking aliens, Senator Allamand highlights the idea that, to many legislators, state officials lack political and legal authority vis-à-vis their politically appointed superiors and also lack scientific or technical expertise. In short, in Allamand's view, in Chile no one exists to sit on the kind of technical body that the new COREMAs aspired to be.

For many lawmakers, activists, and state officials, 'more technical' did not mean 'more scientific' or 'expert based' but 'according to the rules'. Members of civil society made this clear in Congress during the public comments period. A representative from the NGO Chile Sustentable celebrated that the new COREMAs will have 'greater technical guarantees that applicable rules will be met' (LH20.417, p. 123). Another civil society representative believed the new COREMAs would ensure EIA decisions were left to state officials that can apply 'legal-technical criteria' (LH20.417, p. 144). State officials agreed; many complained that they received pressure not from businesses but from the government, and they saw the solution in clear rules that would constrain their discretionary powers. Rules, in state officials' view, protected them from political pressure by dictating the correct course of action (interviews 11/09/2010, 11/04/2010A, 04/27/2011, 06/02/2011, 07/27/2011). As described by an EIA Agency regional director:

We do not do anything outside the EIA's rules and regulations or the law. We want to narrow things down, so nothing is subjective in any sense. We want to narrow the gaps. Instructions, guides, admission tests, we want these to be more regulated and based on conventions. (Interview 03/15/2011)

In short, the COREMAs reform suggests that a cross-section of Chilean actors involved in environmental governance believed that state officials are 'technical' not because of their scientific or professional expertise but because they perfunctorily apply the rules.

The 2009-2010 reforms centralized power into ministries in three additional ways. The reform first centralized environmental politics by creating a whole new ministry, and then maintained - under a new name - the board of ministers that previously advised Conama. As occurred 20 years earlier, anti-environmentalist legislators feared an Environment Ministry would be obstructionist and countered it with a Ministry for Sustainable Development. During the 2009-2010 legislative debates, progressives and conservatives compromised to scale this back from a ministry to a Council of Ministers for Sustainability whose job would be to keep the new Environment Ministry in check. Like Conama had before it, the Environment Ministry has sectoral ministries like Energy, Mining, Economy, Treasury and others reviewing its every step. A Congresswoman stated the problem with this Sustainability Council bluntly, saying 'We will give the Environment Minister all the tools she needs, but I also emphasize that at the Council [of Ministers for Sustainability] she will always have monsters next to her' (LH20.417, p. 531) - those 'monsters' being the sectoral ministries whose priorities are at odds with environmental stewardship. Third, the reform also put ministries in charge of reviewing appeals against EIA decisions. Previously reviewed by an Advisory Council of civil society representatives, this change meant that yet another council of ministers, composed of the same 'monsters' from sectoral ministries, became responsible for reviewing appeals against EIA decisions. Taken together, these changes made a highly centralized government even more centralized by putting more authority in the hands of ministers, who are appointed by the President.

#### Discussion

During Conama's creation and reform 20 years later, legislators sought to depoliticize environmental politics in different ways. In the 1990s, technocrats trained as engineers and lawyers promoted consensus to create an 'anti-politics' Conama. President Aylwin appealed to clear rules and the EIA's technical qualities to assure legislators that Conama would be effective despite its small size and institutional weakness. At this time, lawmakers did not appeal directly to 'technical' criteria; instead, technocrats were influential. By the late 2000s legislators and citizens recognized that this model had failed to depoliticize controversial environmental decisions. In 2009-2010, instead of appealing to technocrats' arguments or to values like consensus, legislators supported isolating state officials from 'politics' so their decisions would reflect only 'technical-legal criteria', meaning rules and regulations. This belief resonates with Chile's positivist tradition where public servants are 'slaves of the law' (Hilbink 2007) that draw their authority from the rules, rather than from skills, expertise or local knowledge.

In both the transition and reform periods, law-makers made 'antipolitics' arguments to support a specific kind of environmental authority - a coordinating agency that in the early 1990s became Conama, and a politically autonomous agency that in 2010 became the EIA Agency. And yet, in both cases, 'anti-politics' arguments eventually led to the creation of institutions closely tied to the central executive government: Conama was placed within the Ministry of the Interior and relied directly on the President's authority; since the 2009-2010 reform EIA

decisions are made by Presidential- and Ministerial-appointees. Thus, purportedly 'technical' agencies are in practice highly political because their authority depends on the President. While a few civil society organizations denounced this shift during the 2009-2010 reform, many supported it, including the important environmental NGO Chile Sustentable. Activists' support for centralizing authority as a way to make EIA decisions more 'technical' reflects dominant understandings of legitimacy in decision-making: after transition-era ideals around consensus failed to depoliticize environmental politics, many sought to achieve this by adopting the ideal of state officials acting as 'slaves of the law.'

Moreover, the centrality of the state highlights the absence of environmental sciences from Chilean environmental politics. In liberal democracies, science is commonly considered a an 'objective' resource that law-makers draw on to depoliticize decision-making (Backstrand 2003, Brown 2009, Pellizzoni 2011, Kinchy 2012). However, as P. Silva (2009) and Brown (2009) describe, appeals to science and technocratic expertise can be polarizing; should decisions be based on citizen participation, as advocates of direct democracy argue, or on expert assessments, as advocates of 'government by experts' would have it? The answer gets to the heart of questions of legitimacy in liberal democracy. The case of Chile's environmental politics shows that a similarly polarizing debate can occur where science plays a marginal role in decision-making, by replacing scientific expertise with 'rules' as the force that injects competence and objectivity into decision-making.

In reforms to Chilean environmental politics, a multi-partisan crosssection of actors appealed to rules and regulations - under the guise of 'technical' criteria - as if these were neutral and separate from the state. Rules are appealing; they promise to hold everyone to the same standard, and to extend the state's authority, irrespective of local ecologies or development plans. In practice, due to these same qualities, state officials who adhered strictly to the rules accentuated a crisis of representation: in Chilean environmental politics, there are no legitimate actors who can speak for local natural and social environments in a public institution. As senator Allamand said, perhaps only aliens could play the role of a scientifically literate, politically empowered, and publicly committed state official. In short, appeals to the rules have put advocates of direct democracy on a collision course with Chilean elites, because to expand public participation where state officials are 'slaves of the law' will likely lead to the articulation of demands that state officials cannot legally pursue, generating more disillusion and conflict.



#### Conclusion

Despite the successes of the 2010 reforms, the new institutions repeated some past mistakes. In the early 1990s, Conama started as a technocratic agency but became highly political because its authority emanated from the President's office. In 2010, despite efforts to isolate the EIA Agency from politics, critics claim EIAs remained as politicized as before. The reforms failed to depoliticize contentious environmental politics and strengthened the authority of the central state, all justified on the premise that 'technical criteria' meant making decisions based on rules, not politics. Rules are used in Chilean environmental politics much like science is used elsewhere - as an 'objective' voice that lies outside of politics. But appeals to the rules run counter to demands for citizen participation. State officials who are 'slaves of law' have little capacity to respond to public demands. Thus, when appealing to the rules, legislators are perpetuating the infamous elitism of Chilean politics, but through new means. Democratizing decision-making and strengthening the representation of local interests in Chilean environmental politics requires improving the capacities and legitimacy of sub-national governments, expert bodies and civic organizations.

#### **Notes**

- 1. For three years, Uriarte was a minister without a ministry: President Bachelet appointed Uriarte by decree, so she could prepare the legislative proposal that led to the 2009-2010 reforms.
- 2. Congressional Bulletins N° 619412, N° 3.286-12, N° 4394-12, and a proposal by Senator Alejandro Navarro (no number listed).

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#### References

Backstrand, K., 2003. Civic science for sustainability: reframing the role of experts, policy-makers and citizens in environmental governance. Global Environmental Politics, 3 (4), 24-41. doi:10.1162/152638003322757916

Baer, M., 2014. Private water, public good: water privatization and state capacity in Chile. Studies in Comparative International Development, 49 (2), 141-167. doi:10.1007/s12116-014-9154-2



- Brown, M.B., 2009. Science in democracy: expertise, institutions and representations. Cambridge, MA: MIT Press.
- Camus, P. and Hajek, E., 1998. Historia Ambiental de Chile. Santiago: Andros Impresores.
- Cárcamo, F., et al., 2011. Crónica de un conflicto anunciado: tres centrales termoeléctricas a carbón en un hotspot de biodiversidad de importancia mundial. Revista Chilena de Historia Natural, 84, 171-180. doi:10.4067/S0716-078X2011000200003
- Carruthers, D., 2001. Environmental politics in Chile: legacies of dictatorship and democracy. Third World Quarterly, 22 (3), 343-358. doi:10.1080/01436590120061642
- Carruthers, D. and Rodriguez, P., 2009. Mapuche protest, environmental conflict and social movement linkage in Chile. Third World Quarterly, 30 (4), 743-760. doi:10.1080/01436590902867193
- Costa Cordella, E., 2012. El SEIA en crisis? Conflictos ambientales y ciudadanía. Derecho y Humanidades, 20, 357-374.
- Cuadra Montoya, X., 2012. Las trayectorias de la movilización contra HidroAysén: el malestar es sobre lo político, la propuesta es democratizadora. Anuari del Conflicte Social, 1, 1155–1176.
- Doberstein, B., 2004. EIA models and capacity building in Viet Nam: an analysis of development aid programs. Environmental Impact Assessment Review, 24 (3), 283–318. doi:10.1016/j.eiar.2003.09.001
- Farrell, A.E. and Jager, J., eds., 2006. Assessments of regional and global environmental risks: designing processes for the effective use of science in decisionmaking. Cambridge, MA: MIT Press.
- Felli, R., 2015. Environment, not planning: the neoliberal depoliticisation of environmental policy by means of emissions trading. Environmental Politics, 24 (5), 641–660.
- Fischer, F., 2000. Citizens, experts and the environment: the politics of local knowledge. Durham: Duke University Press.
- French, A., Barandiaran, J., and Rampini, C., 2015. Contextualizing conflict: vital water and competing values in glaciated environments. In: C. Huggel, et al., eds. The high-mountain cryosphere: environmental changes and human risks. Cambridge: Cambridge University Press, 315-336.
- Glasson, J. and Neves Salvador, N., 2000. EIA in Brazil: a procedures-practice gap. A comparative study with reference to the European Union, and especially the UK. Environmental Impact Assessment Review, 20 (2), 191-225. doi:10.1016/ S0195-9255(99)00043-8
- Goldman, M., 2005. Imperial nature, J.C. Scott, ed. New Haven, CT: Yale University Press.
- Goldman, M., 2007. How "Water for All!" policy became hegemonic: the power of the world bank and its transnational policy networks. Geoforum, 38 (5), 786-800. doi:10.1016/j.geoforum.2005.10.008
- Hilbink, L., 2007. Judges beyond politics in democracy and dictatorship: lessons from Chile. Cambridge, UK: Cambridge University Press.
- Hochstetler, K., 2011. The politics of environmental licensing: energy projects of the past and future in Brazil. Studies in Comparative International Development, 46 (4), 349-371. doi:10.1007/s12116-011-9092-1
- Joignant, A., 2011. The politics of technopols: resources, political competence and collective leadership in Chile, 1990-2010. Journal of Latin American Studies, 43 (03), 517-546. doi:10.1017/S0022216X11000423



- Kinchy, A., 2012. Seeds, science, and struggle: the global politics of transgenic crops. Cambridge, MA: MIT University Press.
- Kolhoff, A.J., Driessen, P.P.J., and Runhaar, H.A.C., 2013. An analysis framework for characterizing and explaining development of EIA legislation in developing countries-illustrated for Georgia, Ghana and Yemen. Environmental Impact Assessment Review, 38 (C), 1-15. doi:10.1016/j.eiar.2012.04.004
- Larrain, S., 1999. Chile sustentable: propuesta ciudadana para el cambio. Santiago: LOM Editores.
- Li, F., 2009. Documenting accountability: environmental impact assessment in a Peruvian mining project. PoLAR: Political and Legal Anthropology Review, 32 (2), 218-236. doi:10.1111/plar.2009.32.issue-2
- Liverman, D.M. and Vilas, S., 2006. Neoliberalism and the environment in Latin America. Annual Review of Environment and Resources, 31, 327-363. doi:10.1146/annurev.energy.29.102403.140729
- Majone, G., 2002. The European Commission: the limits of centralization and the perils of parliamentarization. Governance, 15 (3), 375-392. doi:10.1111/gove.2002.15.issue-3
- Mardones, R., 2007. The congressional politics of decentralization: the case of Chile. Comparative Political Studies, 40 (3), 333–358. doi:10.1177/0010414006290108
- Markoff, J. and Montecinos, V., 1994. El irresistible ascenso de los economistas. Desarrollo Economico, 34, 3-29. doi:10.2307/3467228
- Martinez-Alier, J., 2002. The environmentalism of the poor: a study of ecological conflicts and valuation. Cheltenham, UK: Edward Elgar.
- Mascarenhas, M. and Scarce, R., 2004. "The intention was good": legitimacy, consensus-based decision making, and the case of forest planning in British Columbia, Canada. Society & Natural Resources, 17 (1), 17-38.
- Mayol, A. and Azócar, C., 2011. Politización del malestar, movilización social y transformación ideológica: el caso "Chile 2011". Polis, Revista de la Universidad Bolivariana, 10, 163-184.
- Moulian, T., 2002. Chile actual: anatomía de un mito. Santiago: LOM Ediciones.
- Orihuela, J.C., 2013. Converging divergence: the diffusion of the green state in Latin America. Studies in Comparative International Development, 49 (2), 242-265. doi:10.1007/s12116-013-9147-6
- Owens, S., Rayner, T., and Bina, O., 2004. New agendas for appraisal: reflections on theory, practice, and research. Environment and Planning A, 36 (11), 1943–1959. doi:10.1068/a36281
- Pellizzoni, L., 2011. The politics of facts: local environmental conflicts and expertise. Environmental Politics, 20 (6), 765–785. doi:10.1080/09644016.2011.617164
- Pisani, L., 2001. Chile: environmental institutions development project. Document of the World Bank: implementation completion report (loan 3529-CH). Available from: http://www-wds.worldbank.org/servlet/WDSContentServer/IW3P/IB/2000/ 10/24/000094946 00081505321044/Rendered/PDF/multi page.pdf. pp. 1–95.
- Risley, A., 2014. "It's not easy being green": environmental advocacy and policymaking in Chile. Society & Natural Resources, 27, 421-435. doi:10.1080/ 08941920.2013.861559
- Ruthenberg, I.-M., Ahmed, K., and Brandon, C., 2001. A decade of environmental management in Chile. Environment Department working paper; no. 82. Environmental economic series. Washington, DC: The World Bank. Available from: http://documents.worldbank.org/curated/en/2001/07/1570700/decadeenvironmental-management-Chile. pp. 1–92.



Sepulveda, C. and Villarroel, P., 2012. Swans, conflicts, and resonance: local movements and the reform of Chilean environmental institutions. Latin American Perspectives, 39 (4), 181–200. doi:10.1177/0094582X12441519

Silva, E., 1994. Contemporary environmental politics in Chile: the struggle over the comprehensive law. Industrial and Environmental Crisis, 8 (4), 323-343.

Silva, E., 1996a. Conservation, sustainable development and the politics of native forest policy in Chile. In: G. MacDonald, D.L. Nielson, and M.A. Stern, eds. Latin American environmental policy in international perspective. Boulder, CO: Westview Press, 60-87.

Silva, E., 1996b. Democracy, market economics, and environmental policy in Chile. Journal of Interamerican Studies and World Affairs, 38 (4), 1-33. doi:10.2307/166257 Silva, E., 1996c. The state and capital in Chile: business elites, technocrats and market economics. Boulder, CO: Westview Press.

Silva, P., 2009. In the name of reason: technocrats and politics in Chile. University Park, PA: Penn State University Press.

Stein, E., et al., 2005. The politics of policies: economic and social progress in Latin America. Washington, DC: Inter-American Development Bank.

Tecklin, D., Bauer, C., and Prieto, M., 2011. Making environmental law for the market: the emergence, character and implications of Chile's environmental regime. Environmental Politics, 20 (6), 879-898. doi:10.1080/09644016.2011.617172

Tironi, M. and Barandiaran, J., 2014. Neoliberalism as political technology: expertise, energy, and democracy in Chile. In: E. Medina, I. Costa Marquez, and C. Holmes, eds. Beyond imported magic: essays on science, technology, and society in Latin America. Cambridge, MA: MIT Press, 305-330.

Wesselink, A., et al., 2013. Technical knowledge, discursive spaces and politics at the science-policy interface. Environmental Science & Policy, 30, 1-9. doi:10.1016/j. envsci.2012.12.008

World Bank Group, 2001. Memorandum and recommendation of the president of the international bank for reconstruction and development to the executive directors on a proposed loan in an amount equivalent to US\$11.5 million to the republic of Chile for an environmental institutions development project. pp.1-14.

#### Interviews

Interview with CIPMA member, 10/12/2010

Interview with activist, 11/16/2010

Interview with public policy analyst, 06/09/2009

Interview with state official, 11/09/2010

Interview with former Conama official, 06/02/2011

Interview with EIA official, 11/04/2010A

Interview with EIA official, 06/13/2011

Interview with EIA official, 07/27/2011

Interview with ministry official, 04/06/2011

Interview with ministry official, 04/29/2011

Interview with ministry official, 07/26/2011

Interview with ministry official, 08/03/2011

Interview with environmental lawyer, 11/04/2010B

Interview with environmental consultant, 04/27/2011