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Wine, fruit and emission reductions: CDM as development strategy in Chile

Teresia Rindeljäll, Emma Lund* and Johannes Stripple

Abstract

The Clean Development Mechanism (CDM) is expected to lower the costs for developed countries to meet their emission reduction targets, and to contribute to sustainable development in developing countries. As host countries set their own sustainable development requirements, fears have been raised about a 'race to the bottom' as countries use less demanding criteria to attract investors. Our research on Chile confirms this hypothesis, but suggests that the 'race' is not simply a structural feature of the CDM, but a deliberate strategy. Chile has chosen to use CDM as a tool to attract foreign investments, a choice reflecting the emphasis on economic development in Chile's development strategy.

Key words: Clean Development Mechanism (CDM), Chile, Kyoto Protocol, Sustainable Development

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Abbreviations

CDM	Clean development mechanism
CONAMA	Comisión Nacional del Medio Ambiente
DEA	Declaration of environmental impact
DNA	Designated national authority
EIA	Environmental impact assessment

Introduction

Carbon markets around the world have not emerged spontaneously, but have been crafted and shaped by political decisions. Carbon markets do not therefore operate by the invisible hand, but depend on governmental agreements for generating both the supply and the demand for carbon dioxide emission reductions. The Clean Development Mechanism (CDM) entered late in the Kyoto negotiations (under the climate convention) as part of three flexibility mechanisms that were supposed to make the new treaty more acceptable to the US. Ironically, the US did not ratify the Kyoto Protocol, but the CDM has nonetheless been established and defended as an important mechanism by the parties to the protocol. The CDM is a governance mechanism operating at the boundary between the rich and the poor world. It is designed to tap into a variegated political geography and to transcend levels of authority and areas of decision-making. Within the CDM, a developed country actor is allowed to use emission reductions from a project developed in a developing country to count against its own binding target, either by financing the project or by buying the reduction credits. It ultimately enables a connection to be made between a site of responsibility (North), and a site of implementation (South). The CDM is intended to lower the cost of complying with the emission targets agreed in the Kyoto Protocol to Annex 1 countries (developed countries with binding emission targets under the Kyoto Protocol), while at the same time facilitating technology transfer, increasing the flow of capital from rich to poor countries, and spur sustainable development in the global South.

Scholarly research on the CDM usually situates it 'beyond' the public sphere and hierarchical forms of governance. The CDM is often taken to exemplify a broader contemporary turn in environmental policymaking towards market liberalism, flexibility, and pluralism, where the governance of the CDM involves 'agency beyond the state' at different political levels and across various jurisdictions. Authority is seen as delegated to a range of non-nation state actors with various responsibilities in the CDM project cycle. While this image of the CDM certainly identifies important governance aspects of the mechanism, it also downplays the ways in which states govern the CDM, not at the international level, but at the domestic level. Here, we agree with Newell et al. (2009) who argue that research on clean development (including the CDM) in developing countries, must complement the focus on 'governance from above' with a focus on 'governance from below' and deal with those domestic mechanisms and processes that ultimately determine whether carbon emission will be reduced and social benefits will occur. An example of such research is nicely covered in the recent special issue on 'Varieties of carbon governance' in *The Journal of Environment and Development* (e.g. Fuhr and Lederer 2009) which shows how the governing rules of the CDM, emanating from the international level, are responded to and acted upon very differently at the national level.

According to the CDM rules, the country where a project is implemented (known as the 'host country') has the right to determine which project proposals fall within their national sustainable development priorities, and reject those that do not. Many countries have set up a list of sustainable development criteria that project proposals are compared against, but national governments can also use taxes to steer investments towards particular sectors (such as renewables) in line with the country's development priorities. In the early CDM literature many scholars worried about the prospect of a so-called 'race to the bottom', in other words that the market-based character of the CDM would induce host countries to set low standards for sustainable development in order to attract projects (see Holm Olsen 2007:62; cf. Pearson 2006). Now, the time has come to investigate this claim empirically.

This paper turns to Chile, a successful neoliberal market-based economy that has combined macroeconomic stability with poverty alleviation, and explores how the CDM is viewed and governed in this context. The research, which partly builds on interviews with key members of the Chilean CDM community,¹ focuses on how the host-country prerogative to define sustainability within the CDM plays out in practice. We argue, in brief, that Chile has chosen to use the CDM as a tool to attract foreign investments, treating carbon credits as just another export product, and only putting marginal emphasis on securing the CDM's contribution to sustainable development. The 'race to the bottom' in terms of sustainable development requirements becomes a deliberate choice, that mirrors the emphasis on *economic* development in Chile's development strategy.

The paper is structured in two main parts. In the first part we begin with summarizing the debate on CDM and its contribution to sustainable development in terms of three expectations, and then discuss the scope for host country agency in securing CDM's contribution to sustainable development, drawing on earlier research on this topic. The second part focuses on CDM governance in Chile. Here, we first introduce the Chilean CDM bureaucracy and Chile's project portfolio, and then discuss CDM governance in Chile in terms of agency (a race to the bottom by choice) and structure (the neoliberal economic context). Lastly follows a conclusion, where we summarize our argument on the CDM in Chile and discuss the theoretical implications of the Chilean case.

CDM and sustainable development: taking stock of the debate

When it comes to the politics of climate change, the CDM is the only formal instrument for collaboration between developed and developing countries under the current climate regime. Article 12.2 of the Kyoto Protocol spells out the objectives of the CDM as being to "assist Parties not included in the Annex I in achieving sustainable development and in contributing to the ultimate objective of the Convention, and to assist Parties included in Annex I in achieving compliance with the quantified emission limitation and reduction commitments under Article 3" (UNFCCC 1997), but provides no guidelines as to how to interpret the objective of sustainable development. As explained in the introduction, it is the prerogative of the host country to assess whether a proposed CDM project contributes to its sustainable development priorities. Whereas developed countries commonly emphasize the environmental aspect of climate change and the need to de-carbonize the world, the foremost priority in developing countries remains overcoming poverty and reaching a decent standard of living. In this regard, the CDM as a mechanism for collaboration aiming at both greenhouse gas mitigation and promotion of sustainable development can reduce tensions but can also illustrate how the tensions between achieving both objectives simultaneously are actually borne out in practice.

Sustainable development: a background

The report of the World Commission on Environment and Development in 1987 with its conception of sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (1987:43) effectively brought together developmental and environmentalist strands of thought. From being treated as largely separate and often mutually exclusive concerns, their interconnectedness was explicitly recognized. Economic growth was no longer portrayed as a threat to sustainability but an essential part of development (cf. Lélé 1991). In this context, the concept of sustainable development is defined in comprehensive terms as incorporating environmental, economic as well as social

¹ All interviewees are listed in the reference section, under the heading Personal Communication (pc).

dimensions. Notwithstanding this multidimensionality, the environmental aspect tends to be the overriding concern and locus of analysis in the theoretical literature on sustainable development (Olhoff et al. 2004). However, in order to discuss the concept in reference to the CDM, which explicitly aims at bridging the interests of developed and developing countries, it is necessary to take seriously the various aspects of the concept, particularly the environment and development interface.

The current sustainable development agenda reflects, in various ways, a merger between several different strands of development thought and the environmental agenda. First, in its human-centred approach it mirrors the rather recent recognition of the need to put a human face on development and to expand the concept of development beyond the domains of economics to include social, political and cultural aspects, i.e. *human* development. Amartya Sen has been highly influential in this respect, being involved in the pioneering work to promote development as “a process of expanding the real freedoms that people enjoy” (1999:3) and in participating in the UNDP work to develop the human development index (HDI). The HDI measures not only progress in income distribution but also factors related to well-being such as education and health. With this view of development, economic growth has come to be seen as a means rather than an end. In a similar vein, the concept of *pro-poor growth* has gained increasing ground during the last few years, underlining the non-automatic relation between growth and poverty reduction and the importance of poverty alleviation and equity-enhancing measures for long-term development. The ideas of human development as well as pro-poor growth also reflect the participatory turn in development thinking and environmental global governance. During the 1990s, the involvement of affected actors in governance, particularly those on the margin, was increasingly promoted as beneficial for process aspects such as transparency and accountability but also for ensuring more effective and legitimate decision-making (Cornwall 2000).

Expectations on CDM's contribution to sustainable development

In light of its twin goal of achieving cost-effective reductions of greenhouse gases and contributing to sustainable development, the CDM has been portrayed as a ‘win-win mechanism’ and ‘a bridge between North and South’ (Holm Olsen 2007:61). These characterizations reflect the optimism with regard to CDM's ability to reconcile conflicting interests between developed and developing countries over the issues of climate change and development. Possible benefits from climate change mitigation on development objectives, underlying the win-win idea behind the CDM, can be related to all three dimensions of the sustainable development concept, i.e. the *economic* (transfer of finance and technology, income and employment generation, energy sufficiency), *social* (adaptive ability, infrastructure, health benefits from reduced pollution, poverty reduction, and rural development) and *environmental* (cleaner air and water, reduced contamination, prevention of natural resource degradation) (Olhoff et al. 2004; Holm Olsen 2007; Cosbey et al. 2006; JIQ 2007).

Depending on expectations, the CDM's contribution to sustainable development can be assessed very differently. Three different levels of expectations on the CDM's contribution to (sustainable) development can be identified, resulting in three different assessments. First, for many developing countries, the main benefit expected from the CDM is an additional flow of investments. This expectation has indeed been fulfilled for a number of countries, but it has over time become increasingly clear that CDM investments follow traditional flows of foreign direct investments, and many of the least developed countries have attracted few, if any, CDM projects so far (UNEP Risoë 2010). If host countries' main expectation on the CDM is that it should bring an additional

investment flow, it is easy to understand that a 'race to the bottom' occurs, where host countries compete for limited investments through lowering their requirements on projects. Sustainable development is here narrowly interpreted as *economic* development.

Second, the link between the CDM and sustainable development can be seen as the CDM's possibility to channel investment flows towards prioritized areas of renewable energy, and to reform the energy system of developing countries through making low-carbon energy sources a more competitive alternative. From this perspective it is seen as problematic that the financially most attractive CDM projects are large projects reducing emissions of industrial gases at very low cost, projects that do not contribute at all to a reform of the host country's energy system (Wara, 2007). With these expectations, investments *per se* are thus not seen as enough to contribute to sustainable development, focus is on the effects of these investments on a structural level.

Third, however, the CDM is expected by many to contribute to sustainable development in the *multidimensional* sense of the term. In literature on the CDM from a developing country perspective, the needs of the poorest and most vulnerable groups are often brought to the fore and poverty reduction is emphasized as the overarching goal of sustainable development and locus of CDM projects (Gundimeda 2004). In effect, a number of studies have shown that the CDM so far has failed to contribute significantly to sustainable development beyond the narrowly defined environmental benefits that emission reductions represent (Holm Olsen 2007; Sutter and Parreño 2007; Schneider 2007). Even though some of the CDM's possible contributions to sustainable development are directly connected to GHG abatement, such as energy supply, many others are more indirect in character. Accordingly, as is pointed out in Joint Implementation Quarterly (2007:1), "it would be incorrect to conclude that all expected contributions to sustainable development would be 'automatically' delivered when a project reduces GHG emissions according to plan". The CDM process (and its translation into practice) has received substantial criticism for not providing enough incentives to treat the sustainable development objective on a par with the emission reductions objective (Holm Olsen 2007; Pearson 2006; Schneider 2007). The fundamental structure of the CDM as a market mechanism results in a preference for low cost emission reductions over sustainable development effects, since the latter remain un-priced on the global market (cf. Ellis et al. 2007; UNDP 2006; Pearson 2006). A project developer thus has few obvious incentives to look beyond the cost-effectiveness of the project and incorporate activities that would contribute to sustainable development.

What is the scope for host country agency?

As already mentioned, it is the prerogative of the host country to assess whether a proposed CDM project contributes to its sustainable development priorities. In this context, there is potential, as Olhoff et al. argue (2004:11), for national authorities to "use the SD dimension to evaluate key linkages between national development goals and CDM projects, with the aim of selecting and designing CDM projects so that they create and maximize synergies with local development goals". The delegation to host countries of the task to ensure the sustainable development contribution of projects thus provides leeway for ambitious sustainable development strategies, but also for less stringent approval processes. Experiences so far suggest that approaches to sustainable development vary greatly, as does the stringency of assessment (Ellis et al. 2007; Cosbey et al. 2006; Schneider 2007).

Many countries have set up a check-list for sustainable development, that projects are compared against, but the stringency of the criteria and their application varies. Brazil, for example, has an ambitious set of criteria developed in collaboration with a research institute, and the Designated National Authority (DNA) in charge of the CDM in Brazil is renowned for its thorough assessment of projects (Friberg 2009). India, on the other hand, also uses a check-list approach, but the Indian criteria for sustainable development have been described as broad and all-encompassing, and the Indian DNA seems to focus more on facilitating the CDM in India than on safe-guarding its contribution to sustainable development (Benecke 2009). China uses another approach, trying to steer CDM investments towards Chinese priorities through a differentiated tax-scheme. Whereas the 'royalty fee' levied for projects falling into the priority areas defined by the Chinese government (energy efficiency improvement, development and utilization of new and renewable energy sources, and methane recovery and utilization) is only 2%, N₂O projects are taxed at 30% and HFC and PFC projects are taxed at 65%. The revenues from these levies are channelled into a fund aimed at financing sustainable development projects in China (Schroeder 2009). Colombia also gives tax breaks to certain CDM projects, and to qualify, project operators must devote half of their income from CERs to projects aimed at achieving local social benefits (Cosbey et al. 2006). However, in practice the variety of approaches, and the sometimes low standards set by host countries have contributed to the underrepresentation of projects that significantly contribute to sustainable development in the multidimensional sense of the word among currently registered projects (Cosbey et al. 2006; Lecocq and Ambrosi 2007; Sutter and Parreño 2007).

The fact that host countries in general have not taken the opportunity to use the CDM strategically to promote sustainable development is usually explained by two factors: first, a lack of capacity, and second, that they may be tempted to set low standards for sustainable development in order to attract CDM investments, the so-called 'race to the bottom' (Holm Olsen 2007; Newell et al. 2009; Pearson 2006). Both these factors are likely to affect least developed countries most. Not only do stronger host countries such as China have a higher institutional capacity to steer investments towards prioritized areas, but since they are attractive countries to invest in they can also afford to pick and choose between different foreign direct investments opportunities (Newell et al. 2009). Investors are likely to be more reluctant to invest in less developed countries, as transaction costs are higher (Ellis et al. 2007). To solve the problem of the perceived race to the bottom in terms of sustainable development requirements, suggestions have been made that sustainable development criteria should be developed at the international level (c.f. Olsen and Fenhann 2008; Boyd et al. 2009). However, this would mean that host countries' prerogative to define their sustainable development priorities is violated. The lack of significant sustainable development effects in the multidimensional sense of the term may in effect also be explained by conscious decisions by host countries to let one of the dimensions (primarily economic development) override the others. If the host country prerogative to define their sustainable development priorities is respected, all implemented CDM projects at least formally contribute to sustainable development, as they have received a letter of acceptance indicating that they meet the sustainability criteria of the host country (Benecke 2009). Different host countries have different priorities, and what may look like a 'race to the bottom' may in fact be a conscious strategy on the part of host countries, choosing to focus on the potential benefits from the CDM as a strategy for economic development.

Governing the CDM in Chile

How does the host country prerogative to define sustainable development in the CDM play out in a country like Chile, being rather successful in attracting CDM projects? Even though Brazil and Mexico dominate the Latin American CDM market, hosting 41% and 20% of the projects in the pipeline respectively, Chile is the third most successful country on the continent, hosting 9% of the Latin American projects. The Chilean project pipeline currently holds 74 projects, of which 36 are registered and 38 are at the validation stage (UNEP Risoe 2010). 51 projects are approved by the Chilean DNA (CONAMA 2010). The project portfolio is dominated by hydro projects, landfill gas and biomass projects (UNEP Risoe 2010).

The CDM project cycle in Chile

The Chilean DNA (Designated National Authority) was established in May 2003 at the CONAMA (Comisión Nacional del Medio Ambiente), with a delegation of operational activities to an interministerial executive committee. Representatives on the committee include members from the CONAMA, the Ministry of Foreign Affairs, the Ministry of Agriculture, the National Energy Commission and the National Council for Clean Production. If needed, a representative from the Ministry under which the project falls is included in the committee (CONAMA 2003). This means that no additional institutions have been elaborated for the purpose of CDM activities (cf. Coto and Morera 2004).

In order to be considered for approval by the CDM Executive Board, a CDM project must submit a description of the project and a letter of approval from the host country DNA indicating that the participation is voluntary and that the project contributes to national sustainable development requirements (UNFCCC 2001). In Chile, the sustainable development requirement is equated with either a completed EIA (environmental impact assessment) or a DEA (declaration of environmental impact). Although some attention is directed towards the social and economic aspects of development, the EIA (and by implication the CDM process) largely concentrates upon environmental effects, treating social and economic considerations as secondary at best (cf. Claro 2007, pc; Sanhueza 2007, pc; Salazar 2008, pc). Apart from the procedural rules of the EIA, no explicit criteria exist (cf. Coto and Morera 2004). Nevertheless, according to André Laroze, a member of the executive committee, recommendations that go beyond the EIA may sometimes be issued by the committee if they perceive that local development needs have been inadequately integrated into the project (2008 pc). According to involved actors at the CONAMA, equating sustainable development with an approved EIA was deemed the most appropriate solution for the CDM in Chile. By using a well-functioning existing infrastructure, a costly new build-up was avoided (Main 2007, pc; Garcia 2007, pc).

Concern for sustainable development is a quite recent, not yet wide-spread, phenomenon in Chile (CONAMA 1998). In 1994, the current environmental law was promulgated, promoting a vision of sustainable development as “[t]he process by which the quality of life is improved in a sustainable and equitable manner, based in appropriate measures to keep and protect the environment in a way that does not compromise the prospects of future generations” (CONAMA 1994:2, author’s translation). The law also established the creation of CONAMA (Comisión Nacional del Medio Ambiente). Strictly speaking, the promotion of sustainable development does not lie within the mandate of CONAMA. However, in the absence of other actors willing to take on the issue, CONAMA has made some effort to incorporate it into its work (Salazar 2008, pc). Although CONAMA until recently was an inter-ministerial commission rather than an independent ministry, this approach means that sustainable development has been framed as an environmental issue rather than a broader socio-political choice. In

practice, the lack of budgetary resources and adequate competences has meant that the work on sustainable development has been treated as an add-on to core environmental activities (Salazar 2008, pc).

Considering that different stakeholders tend to prioritize different dimensions of sustainable development, the focus of the host country assessment of projects is dependent upon who is involved in the process and who has leverage (cf. Holm Olsen 2007; Nelson and de Jong 2003). Whereas the possibility exists to include actors from various sectors in the host country process of defining what constitutes sustainable development, it has been the exception rather than the rule. As Holm Olsen (2007:62) points out, "it is often the resource-strong stakeholders who are able to define the terms for the carbon trade". The way in which Chile has chosen to govern sustainability in the CDM has received criticism from local civil society activists. As the EIA is primarily concerned with compliance with environmental laws, it may be questioned to what extent the EIA process actually embraces a methodology that acknowledges the full range of sustainable development aspects. Edmundo Claro, an environmentalist advocate, argues that the definition of sustainable development used in Chile with regard to the CDM process is a minimal one, which implies that projects that do not adversely affect the environment are considered sustainable (Claro 2007, pc).

CERs as export commodities: the Chilean project portfolio

To some extent, the architecture of the CDM (e.g. rules about additionality and eligible methodologies) determines which projects get implemented in host countries. But Chile's current portfolio of registered projects is also an expression of the project approval criteria set by the Chilean DNA. While Chile has no outspoken ambition to prioritize certain project types, we might nevertheless ask what implications Chile's mode of governing the CDM has had on their project portfolio. In 2006, the International Institute for Sustainable Development (IISD) compared the sustainable development effects of all CDM projects registered up until then, analyzing the information available in the Project Design Documents (PDDs) using multi-criteria analysis (Cosbey et al. 2006). In this study, Chilean projects scored from 9 (methane capture) to 32 (biomass) out of 100. The relatively unimpressive average score of 19 points can be explained by the constitution of the portfolio of registered projects. Project types that are seen to bring few intrinsic sustainable development benefits, such as methane capture and landfill gas projects, dominate, together with the potentially more beneficial biomass projects (cf. Cosbey et al. 2006). Since 2006, the Chilean project portfolio has diversified somewhat, but among the registered projects landfill gas capture and methane avoidance are still dominating, even though biomass and hydro projects are becoming more common (UNEP Risoe 2010).

Agency: a race to the bottom by choice

The approach adopted towards the CDM in Chile, as institutionalized in the procedural framework and the criteria for sustainable development, has clear implications for the outcome in terms of registered projects. So far, the approach adopted by the Chilean DNA does not seem to ensure CDM projects that significantly contribute to sustainable development, at least not in the multidimensional sense of the term. Many of the Chilean CDM projects have only negligible sustainable development benefits, especially with regard to social aspects such as local development and poverty alleviation. From a social perspective, the EIA is clearly an inadequate tool to secure sustainable CDM projects. The objective of the EIA is to ensure that projects comply with existing environmental laws rather than to make an overall assessment of their impact (cf. Herrera 2008, pc).

In effect, the portfolio of registered projects reflects a CDM process that is characterized by ad-hoc decisions and lack of clarity regarding sustainable development criteria. Both weaknesses are prevalent over the Latin American continent where participation in the CDM has been more opportunistic than strategic (Figueres 2004). Moreover, as with most DNAs, the Chilean DNA has largely limited itself to project identification and evaluation without aspirations of changing economic development policy (Figueres 2004). Instead, CDM projects and the CERs generated from them are largely treated like a non-traditional export commodity, in line with wine and fruit (cf. Conca 2007, pc; Sanhueza 2007, pc). As described by a Chilean civil society representative; "it [the CDM] is viewed as business pure and simple, as a product which is produced and can be exported" (Ruz 2008, pc). This way, CDM is seen and treated like an investment tool and a way to attract foreign capital more than an instrument to contribute to sustainable development in the wider sense of the word. For instance, despite the fact that poverty alleviation lies at the core of the Chilean 'growth with equity' development strategy, the CDM does not seem to be regarded as an important instrument in this regard. As a member of the Chilean CDM executive committee argued; "It [the CDM] does not have harmful effects on sustainable development, but neither does it contribute significantly...as an instrument it is not very important" (Laroze 2008, pc). Thus, contrary to the general hopes and expectations tied to the mechanism, the CDM in Chile is perceived as a largely marginal tool with regard to achieving *sustainable* development.

In essence, Chile has chosen to focus on the economic dimension of sustainability through prioritizing an efficient approval process. The Chilean DNA has adopted a minimal definition of sustainable development as compliance with environmental regulations. While civil society activists involved in the CDM in Chile emphasize social and environmental dimensions, the approach adopted by the DNA reflects a concern for effectiveness as a primary objective. The effort to integrate the CDM into existing structures is understandable and to some extent commendable – the gains from setting up a parallel system may be disputed. Without judging the normative implications of this, we might simply state that CDM is, in Chile, regarded as a tool and a vehicle for attracting foreign investment and promoting a certain kind of export, rather than as a tool for sustainable development in a broader sense. The Chilean case thus illustrates that the 'race to the bottom' in the CDM is not a structurally determined outcome, but a deliberate choice by an authoritative actor.

Structure: CDM, Chile and the neoliberal context

Newell notes that it is "impossible politically, and unhelpful conceptually, to attempt to understand carbon and clean development governance without reference to the broader political-economic context in which it is embedded and which it seeks to transform" (Newell 2009:427). Although the Chilean DNA has worked actively to attract CDM investments, this is not the only explanation to Chile's success on the carbon market. Undoubtedly, a large part of the explanation lies in the country's export-oriented, open and liberalized economy. Chile has, since the CDM's inception, managed to position itself as one of the best countries to invest in, due to its political stability, business-friendly politics and effectiveness of the DNA (Oleschak and Springer 2007; cf. Vergara 2007, pc; Brown 2007, pc). The CDM, being a market-based mechanism, is apt to thrive in this context. Since the neo-liberal restructuring in Chile during the military dictatorship under Augusto Pinochet in the 1970s and 1980s, Chile continues to be viewed as one of the most successful neoliberal economies in the world. The current development model, the 'growth with equity' strategy, is characterized by successful efforts to alleviate poverty, but just as much by a continued focus on macroeconomic stability and market-based solutions. Inequalities remain widespread. Notwithstanding important social progress as a result of economic growth and strategic measures, the development model

undoubtedly prioritizes economic growth over social equality. Thus, the treatment of the CDM is in line with Chile's overall (economic) development strategy. The same conditions, on the other hand, also provide part of the answer to why the social and environmental benefits of the CDM in Chile continue to lag behind. With a strong focus on the economic benefits of the CDM, the volume of CERs produced for export becomes the overriding concern, at the expense of strategic sustainable development objectives.

Looking ahead: agency for sustainable development?

Thus, the Chilean experience so far reflects existing tensions and trade-offs within the concept of sustainable development. Contrary to what is generally expected, the Chilean approach shows that developing country participation in the CDM is not always driven by an interest to use it for long-term development purposes, such as poverty alleviation and local development (cf. Sirohi 2007). In the Chilean case, other means than those provided by the CDM are both available and considered more effective for these purposes. Instead, the decision to adopt rather lax sustainable development criteria has enhanced the CDM's built-in bias of benefiting projects with a business orientation and few social and environmental benefits attached to them.

However, it would be unfair to claim that the CDM approach in Chile is completely devoid of sustainable development considerations. In line with the vision of the CDM as an investment tool, public officials emphasize technology transfer and diversification and effectivization of the energy sector as prioritized areas for investment (Main 2007, pc; Conca 2007, pc; Garcia 2007, pc). While neither goal is reflected clearly in the portfolio of registered projects, a number of measures are currently being taken in order to produce CDM projects in the energy sector. In this effort, Corfo, the Economic Development Agency, is a central actor. One of its functions in relation to the CDM is to act as a facilitator by promoting regulations that create favourable conditions for projects in the renewable energy sector.² Another central task is to provide financial support for pre-investment studies to small and middle-sized projects. Recently, measures have been taken to support bundling of projects in order to overcome transaction cost barriers (Garcia 2008, pc). Thus, to some extent the CDM seems to be increasingly used in a strategic way by the Chilean government. It remains to be seen to what extent the efforts to support this type of small and middle-sized renewable energy projects will translate into actual approved, and eventually registered, CDM projects. Although the Chilean authorities increasingly seem to appreciate that the CDM can be used as a tool to counteract the current energy crisis in Chile, the predominant view is still that the CDM is simply a way of attracting investment.

Conclusion

How is the state envisioned in different conceptions of global climate governance? A very brief overview of the intellectual landscape illustrates how this deceptively simple question has generated quite different responses throughout academia. Several approaches have assumed that the climate belongs to 'the international', which is accordingly understood as a discrete policy domain distinct from 'the domestic'. The international is the starting point for theories of regimes, common pool resources and interstate diplomacy. Whether conceived of in terms of anarchy or hegemony, the international is typically depicted as a political space where democratic government over a common resource is not possible. Climate governance becomes then a question of how to, among fragmentation and conflicts, achieve high levels of cooperation and coordination on the global scale (Hurrell 1992:1). While membership and access to the international belongs to the state, the state itself remains rather poorly understood.

² See www.corfo.cl

Questions about the nature of the state, how it operates and how state institutions vary with historical and geographic context, are rarely raised (Bulkeley and Newell 2010:9). A related literature locates the governance of the climate within 'the global', a political space that has often drawn on Rosenau's recognition of non-state actors in the governing of collective affairs (e.g. Rosenau 1992). Biermann (2006), who also assumes the international to be a discrete domain, characterises global environmental governance as departing from international politics in terms of, for example, increased participation of non-state actors, public policy networks, supranational jurisdiction, partnerships and cooperation across the public-private divide. In sum, climate governance becomes either a question of what states do together, or a question of what is done beyond the state.

Let us now turn specifically to CDM governance from various angles. In terms of global governance, the trade in carbon emissions under the CDM is seen as an example of the erosion of state sovereignty and the proliferation of private actors in hybrid and network-based modes of governing (e.g. Bäckstrand 2008; Streck 2004). Furthermore, from a development perspective, CDM becomes interesting as it affects the livelihood of low-income communities in developing countries (e.g. Boyd et al. 2007; Corbera 2005; Brown and Corbera 2003). And finally, a critical political economy reading of the CDM draws attention to the unequal terms of trade in the new carbon economy, the triumph of capitalism over the state and, in some cases, even the retreat of politics (e.g. Lipschutz 2004; Matthews and Paterson 2005; Lohman 2006). To some extent, academic research across the board has at times lost sight of the state among networks and partnerships, North-South relations and structures of the international political economy. The state is assumed to be bypassed, displaced and irrelevant. Hence, what has been missing in contemporary writings is a more nuanced account of what the state actually does, and does not do, in global carbon governance. This is similar to Ken Conca's (2005) reconsideration of the state in global environmental governance, where he argues that research has to overcome overly dichotomous images of the state (here to stay or gone forever), and instead focus on what states can and cannot do in particular policy settings. The CDM, which by design grants states an important role, therefore becomes an interesting case where questions of 'global climate governance' have to be contextualized in terms of domestic jurisdictions, national political cultures and economic conditions.

Newell et al. (2009) deliberately try to grasp how the governance of clean development 'from above' produces diverse and uneven outcomes, once mediated and translated by forms of governance 'from below'. They call for attention to the mechanisms and processes at work in host countries, which shape whether emissions will be reduced and social benefits be produced. Fuhr and Lederer (2009:329) summarize in their overview how differently the CDM has been managed in India (Benecke 2009), China (Schroeder 2009) and Brazil (Friberg 2009), and argue that it is surprising to find such scope for national policy makers within an internationally initiated and top-down regulated market mechanism.

Our case study of CDM in Chile shows that although the Chilean authorities increasingly seem to appreciate that the CDM can be used as a tool to counteract the current energy crisis in Chile, the economic dimension of sustainable development is given clear priority in the Chilean approach. Instead of making the CDM process part of an integrated sustainable development strategy and elaborating criteria for the sustainability assessment, the approval process has been integrated into an already existing institutional infrastructure, not directly related to sustainable development. Thus, while the CDM is supposed to balance environmental concerns with economic growth strategies and poverty reduction, CDM practices in Chile illustrate how concern

for economic growth overrides the other dimensions of sustainable development. CERs are seen as a product produced for foreign markets, like wine and fruit, and the Chilean project portfolio reflects this view.

Early on in the scholarly debate on the CDM, fears were raised about a 'race to the bottom' with regard to sustainable development requirements on CDM projects. Our research on Chile confirms that hypothesis, with the important addition that the 'race' is not simply a structural feature of the CDM, but a deliberate strategy of some host countries. Some states, like India (Benecke 2009) and Chile choose to adopt a market facilitation role, even though they have the technical and financial capacity to defend the CDM's contribution to sustainable development.

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