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Hybrid Governance in Practice

Public and Private Actors in the Kyoto Protocol's Clean Development Mechanism

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Hybrid Governance in Practice

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Public and Private Actors in the Kyoto Protocol's
Clean Development Mechanism



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The photo is cropped.

Till Tobias

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List of Papers

This thesis is based on the following papers, referred to in the text by their roman numerals. All papers are reprinted with the permission of respective publisher.

- I Paulsson, Emma (2009). A review of the CDM literature: from fine-tuning to critical scrutiny? *International Environmental Agreements: Politics, Law and Economics* 9:63-80.

(After the publication of this article, I married and changed my surname.)

- II Lund, Emma (2010). Dysfunctional delegation: why the design of the CDM's supervisory system is fundamentally flawed. *Climate Policy* 10:277-288.

- III Rindefjäll, Teresia, Emma Lund & Johannes Stripple (2011). Wine, fruit, and emission reductions: the CDM as development strategy in Chile. *International Environmental Agreements* 11:7-22.

This article is the result of a collaborative research process. Teresia Rindefjäll collected the empirical material, and Teresia Rindefjäll, Emma Lund and Johannes Stripple wrote the article.

- IV Lund, Emma (2012). Environmental diplomacy: comparing the influence of business and environmental NGOs in negotiations on reform of the clean development mechanism. *Environmental Politics*, DOI: 10.1080/09644016.2012.737253

- V Lund, Emma (2013). Who is driving? Public and private agency in the implementation of the CDM. *Carbon Management* 4(1):57-68.

List of Abbreviations

CAN	Climate Action Network
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CMP	Conference of the Parties to the UNFCCC serving as the Meeting of the Parties to the Kyoto Protocol
COP	Conference of the Parties (to the UNFCCC)
DNA	Designated National Authority
DOE	Designated Operational Entity
EB	Executive Board
EU-ETS	European Union Emission Trading Scheme
IETA	International Emissions Trading Association
NGO	Non-Governmental Organization
UNFCCC	United Nations Framework Convention on Climate Change
WWF	World Wide Fund for Nature

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While I was struggling writing my master's thesis, I clearly remember saying to my then boyfriend, now husband, Tobias, who was, at the time, in the midst of the hardships of finishing *his* dissertation, "If I ever get the idea of applying to graduate school, please stop me. If it is this hard to write a master's thesis, you *know* I don't want to write a dissertation!"

What eventually persuaded me to change my mind was the opportunity to pursue a PhD in environmental politics, and to do so as part of a larger research project. The first two years of my doctoral studies I was part of the project 'Effective Climate Collaboration for Clean Development', generously funded by the Swedish Energy Agency. Although I still experienced the process of writing a dissertation as a rather lonely endeavour, I very much appreciated the initiated discussions with Lars J. Nilsson, Joakim Nordqvist and Linn Takeuchi from the Department of Environmental and Energy System Studies, and with Karin Bäckstrand, Johannes Strippel and Teresia Rindefjäll from my own department. Not least the writing of Paper III together with Teresia and Johannes was a very creative and rewarding process.

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When you are in the midst of a research process, thoughts about how to solve this or that problem often revolve in your head far beyond working hours. During these years, doing music has been a great source of recreation for me. While playing the violin in a piece of chamber music with friends, or singing an intricate motet by Bach in the choir, I have found that it is practically impossible to continue thinking about research, and I cannot think of a better way to refresh the mind. I therefore want to extend my thanks to all my friends who share this interest with me, you helped with keeping me sane!

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1. Introduction

Climate change is without a doubt one of the most serious challenges facing humanity today. As the use of carbon-emitting fossil fuel technologies is deeply integrated into the global economy, it is also a very difficult problem to solve. Consequently, climate change has been characterised as a ‘malign’ problem (Andresen and Boasson 2012), and even as a ‘super wicked’ problem (Levin et al. 2012). More and more often, it is argued that in order for the global society to have a chance of solving the most pressing global problems, the private sector needs to become actively involved. In the literature on global governance, and especially in the subfield of global environmental governance, there is a growing interest in new forms of governance involving both public and private actors (Abbott 2012, Andonova et al. 2009, Arts 2006, Börzel and Risse 2005, Bäckstrand 2008, Pattberg and Stripple 2008). In this case, ‘private’ actors can mean both profit-making actors such as private companies, and non-profit actors such as non-governmental organizations. In this thesis, it is used synonymously with ‘non-state’ actors.

The environmental domain has become “a laboratory for new modes of governance par excellence” (Arts 2006:182), and many scholars look at this development with enthusiasm, arguing that we are witnessing “promising new approaches to solving problems of governance” (Young 1997a p. 1). The pooling of resources and burden sharing between public and private actors is said to increase the problem-solving capacity where resources are limited, reducing the burden on the state (Abbott 2012). Non-state actors can not only provide economic resources, it is argued, but also contribute with their knowledge (Börzel and Risse 2005, Brühl 2002). In the case of climate change, involving the private sector seems necessary, since the very objects whereby emission reductions can be achieved are mostly built and owned by private companies (Brühl 2002 p. 374). Yet, the increased involvement of private actors also raises concerns about the potential for conflict between the public interest and the motivations of profit-oriented actors to participate in international governance (Newell 2005 pp. 30-31). Doris Fuchs has pinpointed these conflicting views on the role of business in global governance:

“On one hand, business has provided a source of hope for global governance optimists who perceive huge benefits to be drawn from the involvement of business in the pursuit of global problem-solving. These observers emphasize the potential contribution not only of the financial resources of business but also of its know-how,

decentralized organisation, and pursuit of efficiency. On the other hand, business has been one of the major sources of concern for global governance pessimists who fear corporate world rule and highlight potential threats to democracy” (Fuchs 2007 p. 40).

So far, research has mainly focused on mapping patterns of private actor involvement within and across international institutions. Therefore, Tallberg and Jönsson (2010) recently argued that the next step of research should be a systematic inquiry into “where, why, and with what consequences” these actors partake in global governance (p. 11). This thesis contributes towards that call through a case study of one interesting example of private actor participation in global environmental governance: the clean development mechanism (CDM) of the Kyoto Protocol.

The Clean Development Mechanism

The CDM is one element of what is usually described as the ‘climate regime’, a set of multilateral environmental agreements negotiated under the umbrella of the United Nations Framework Convention on Climate Change (UNFCCC), which was created at the Earth Summit in Rio de Janeiro in 1992. The Kyoto Protocol of 1997 established binding emission reduction targets for developed countries,¹ and also introduced three ‘flexible mechanisms’ that could be used to reach these targets: emissions trading, joint implementation, and the clean development mechanism (UNFCCC 1997). Through the CDM, actors from developed countries can use emission reductions from developing countries to count against their own binding emission reduction targets, either through carrying out projects themselves, or through buying the resulting credits, called Certified Emission Reductions (CERs).

It was far from evident in the negotiations leading up to the Kyoto Protocol that a mechanism like the CDM would be part of the final agreement, and the CDM has sometimes been described as ‘the Kyoto surprise’ (Werksman 1998). In the negotia-

¹ The Kyoto Protocol lists all countries with binding emission reduction targets in its Annex I. When distinguishing between countries with and without emission reduction targets under the protocol, the terms ‘Annex I countries’ and ‘non Annex I countries’ are therefore often used. However, in order to facilitate the reading for those not familiar with this language, I have decided to use the terms ‘developed’ and ‘developing’ countries to describe these two groups of countries throughout the thesis, although these are of course far from neutral terms.

tions, developing countries argued that developed countries should meet their emission reduction targets mainly through domestic action. In May 1997, Brazil made a proposal on a 'clean development fund', imposing financial penalties on developed countries that failed to comply with their emission reduction targets, and channelling the money towards emission-reducing activities in developing countries. Late in the negotiations at the climate summit in Kyoto in 1997, this clean development fund was repackaged into a clean development mechanism through an unusual alliance between Brazil and the US, which was strongly in favour of market mechanisms. It is somewhat ironic that the US, which had been the strongest proponent for the CDM in the negotiations leading up to the Kyoto Protocol, later refused to ratify the protocol.² The large differences between the clean development fund and the CDM were not spelled out in the negotiations, and many developing countries did not fully understand the implications of the agreement (Lütken and Michaelowa 2008, pp. 6-7). The detailed rules and regulations needed for implementing the CDM were agreed upon in Marrakesh in 2001 (UNFCCC 2001).

The aim of the CDM, as stipulated in the Kyoto Protocol, is to provide low-cost emission reductions to the developed countries that have taken on binding emission reduction targets under the Kyoto Protocol, while at the same time contributing to sustainable development in the developing countries hosting the projects (UNFCCC 1997). Only states have binding emission reduction targets under the Kyoto Protocol, but private companies can use credits from CDM projects to reach their targets under international, national, or regional emission trading schemes such as the European Union Emission Trading Scheme (EU-ETS). Actors from developed countries (public or private) hence invest in CDM projects and can either use the resulting Certified Emission Reductions (CERs) to reach their own emission reduction targets, or sell them on the market to make a profit. Alternatively, projects can be initiated by an actor in a developing country, and the emission reduction credits sold on the market to finance the project ('unilateral' projects). The CDM has also given rise to a host of firms specializing in different tasks relating to the CDM, such as technology

² Shortly after he took office in 2001, President George W. Bush refused to submit the Kyoto Protocol to the Congress for ratification. However, he was not alone in his opposition. Already prior to negotiation of the Kyoto Protocol, the US Senate in 1997 passed the Byrd-Hagel resolution, saying the US should not sign any protocol that failed to include binding targets and timetables for both developing and industrialized nations or that would result in serious harm to the economy of the United States (Lütken and Michaelowa 2008).

providers, project consultants, and traders (see Schneider et al. 2010 for an interesting overview). Typical CDM projects today are renewable energy projects like the construction of new hydro, biomass and wind power installations. Yet, a small number of projects capturing and destroying some industrial gases with extremely high global warming potential account for a large proportion of generated credits. The dominating host countries are China and India. Latin America also attracts large numbers of projects, whereas Africa has seen few projects so far (UNEP Risoe 2012). An innovative feature of the CDM is the 'adaptation levy': a share of proceeds corresponding to two per cent of the CERs issued from each project is set aside for an adaptation fund intended to assist the most vulnerable developing countries to adapt to the adverse effects of climate change (UNFCCC 2001).

Even though the constitutive rules of the CDM were negotiated in a state-centric framework at the Conference of the Parties to the UNFCCC (COP), the CDM provides a very active role for private actors compared to most other inter-governmental governance processes. Kulovesi (2007 p. 152) aptly describes the CDM as "a dynamic, innovative, albeit somewhat complicated process, whereby the implementation of a multilateral environmental agreement takes place based on the interaction between public and private actors." The highest authority of the CDM is the Conference of the Parties to the UNFCCC serving as the Meeting of the Parties to the Kyoto Protocol (CMP). But as the CMP only meets once a year, the day-to-day decision making has been delegated to the CDM Executive Board, with ten members and ten alternate members elected by the CMP. The Kyoto Protocol also envisages the participation of the nationally established Designated National Authorities (DNAs) for giving their approval to projects. The mandatory 'letter of approval' of the host country DNA is intended to guarantee that projects contribute to the host country's sustainable development priorities. But even though public actors formally govern the CDM, private actors are very much involved in the implementation of the mechanism. First and foremost, a majority of the project owners and project developers implementing the actual projects are private companies. Another important task entrusted to private actors is the supervision of projects to make sure that they comply with regulations. This task has been delegated to the Designated Operational Entities (DOEs), which are private companies accredited by the EB. Furthermore, various non-governmental organisations also actively contribute to and lobby the CDM policy process, both at CMP and EB level. These organisations are both environmental NGOs (ENGOs) and business NGOs (BINGOs), but for understanding the CDM governance process, the close ties between the companies implementing the CDM and the BINGO IETA (International Emissions Trading Association) are particularly interesting. All these interactions between public and private actors are displayed in Figure 1 below.

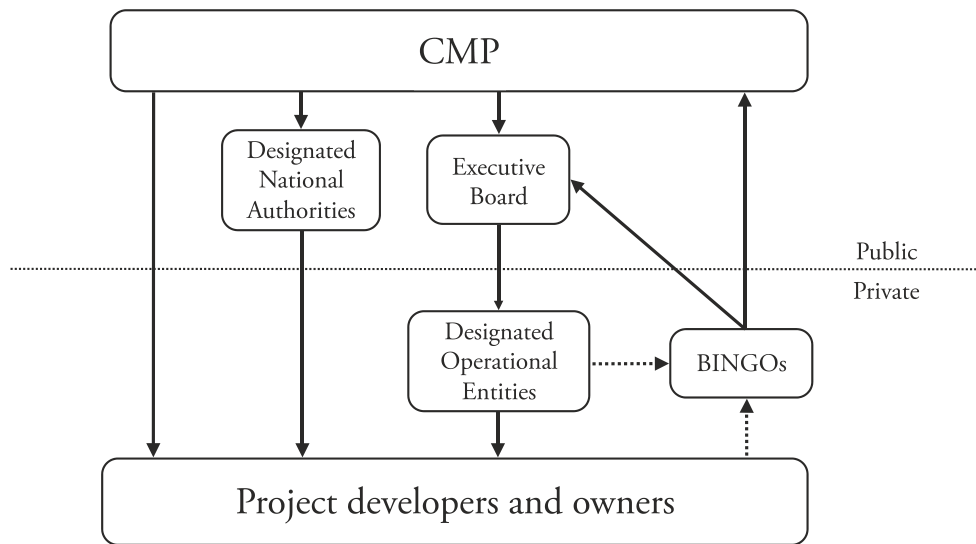


Figure 1. Public-private interactions in the CDM.

To involve market actors in implementing an international environmental agreement has not been very common throughout history (Green 2010), but given that climate politics has risen to prominence during an era of heightened neo-liberalism, it is not surprising that the world of climate governance has become a laboratory for experiments in market-based approaches to regulation (Bulkeley and Newell 2010, p. 32). However, while the increased involvement of private actors in global environmental governance can hardly be contested as an empirical phenomenon, the effects of this development are far more disputed.

The CDM has many supporters, not least in the business community, who point out that the mechanism has managed to attract considerable funding from private actors for emission reductions in developing countries (e.g. Ahonen and Heimdal 2012). On the other hand, critics argue that the mechanism primarily serves the needs of corporations from industrialized countries who can buy their way out of their obligations to reduce emissions at home, rather than the interests of the local communities where projects are implemented. Condemning the CDM as “carbon colonialism” (Bachram 2004), they accuse it of further deepening the North-South gap (Gilbertson and Reyes 2009). However, other more moderate voices argue that while mechanisms like the CDM may have the potential for abuse, at the same time they create the potential for making emission reductions a matter of market opportunity rather than economic loss, which may be an important contribution (Matthews and Paterson 2005). The first commitment period of the Kyoto Protocol

(2008-2012) came to an end on December 31, 2012, but a decision was taken at the climate negotiations in Doha in 2012 to extend the protocol with a second commitment period (UNFCCC 2012). This means that now is a good point in time to look back at and assess the experiences of the CDM.

Aim, scope, and research questions

At an overarching level, the aim of my PhD project is to increase our understanding of private actor participation in global environmental governance and its contribution to global problem-solving capacity, drawing upon the CDM as an empirical example. In the five articles included in the thesis (see list on p. 6 for bibliographical details), I have approached this theme from different angles, both theoretically and empirically. Whereas paper I (“A review of the CDM literature: from fine-tuning to critical scrutiny?”) provides a review of previous research on the CDM in order to summarize the main themes and to identify neglected areas, papers II-V take a closer look at the different roles of public and private actors in various parts of the mechanism. In 2007, when I wrote paper I, research on the CDM was still an emerging field, and most scholars concentrated rather narrowly on the ‘fine-tuning’ of the CDM. Drawing upon Cox (1981), I introduced a distinction in the paper between ‘problem-solving’ and ‘critical’ research, and argued that while much of the existing research on the CDM could be characterized as ‘problem-solving’, scholars should also try to take a step back and study the CDM in a more theoretically oriented way. This may involve using critical theory, as suggested by Cox, but I would argue that it may also mean performing an open-ended but theoretically guided analysis along the lines of Hale and Held (2011), who suggest that “thoughtful, context-rich, and theoretically guided analysis” (p. 25) is typically the best way to assess the effectiveness of private actor participation in global governance. This is the approach that I have strived to follow in my own research. Empirically, I was struck by the limited attention paid to the role of private actors in project supervision, which became the topic for paper II. This paper (“Dysfunctional delegation: why the design of the CDM’s supervisory system is fundamentally flawed”) uses delegation theory to analyse why project supervision has not worked satisfactorily in the CDM, concluding that the design of this delegation arrangement is incompatible with basic insights from delegation theory. Paper III (“Wine, fruit, and emission reductions: the CDM as development strategy in Chile”), which is co-authored with two colleagues, studies the CDM on the ground in one of the host countries, Chile, and discusses the scope for host country agency in steering CDM investments. It argues that, although Chile is a rather strong host country that should be able to steer investments towards prioritized areas, the

Chilean CDM authorities have, at least initially, focused on maximizing investments. As the capacity of public actors to govern in the CDM cannot be understood without reference to the market logics inherent in the mechanism, this paper provides an important complement to the papers focusing more specifically on the roles of private actors in the CDM. Paper IV (“Environmental diplomacy: comparing the influence of business and environmental NGOs in negotiations on reform of the clean development mechanism”) constructs a theoretical framework for assessing the influence of business and environmental NGOs in the negotiations on how to reform the CDM, and discusses how the dynamics of this negotiation process are affected by the fact that business is so deeply involved in the implementation of the mechanism. It also taps into the issue of the democratic legitimacy of NGO participation in multilateral negotiations. Paper V (“Who is driving? Public and private agency in the implementation of the CDM”), finally, takes a broader view and looks at the agency of both public and private actors over the development of the CDM, with particular focus on the implementation of the mechanism. Here, it is argued that while private actors have had a large influence on the development of the CDM through acting as ‘street-level bureaucrats’ in the implementation of the mechanism, the agency of public actors is still vital both for upholding trust in the CDM and for creating a demand for emission reduction credits.

As demonstrated in the papers, private actors are involved in the CDM in many different ways. One purpose of this introductory essay is therefore to show how the complex patterns of public-private interactions in this mechanism can be understood theoretically. A first research question can thus be formulated as follows:

- *How can different forms of private actor participation in global governance be theoretically conceptualized?*

Although not made explicit in the articles, one theme that runs through the entire research project is the link between private actor involvement and effectiveness. In this introductory essay, I wish to highlight this theme more clearly, and relate the results from the articles to the broader debate on the merits of private actor participation in global environmental governance. Therefore, my second research question is:

- *How has the involvement of private actors in the CDM affected its effectiveness?*

Despite the fact that the CDM is often mentioned as an interesting example in the literature on private actor involvement in global environmental governance, surprisingly few studies on the CDM have focused on this characteristic (exceptions include Kulovesi 2007, Streck 2004, and Stripple 2010). So far, most research on the CDM has centred on evaluating the performance of the mechanism and proposing reforms, either at an overarching level (e.g. Boyd et al. 2009, Bumpus and Cole 2010, Ellis et al. 2007, Olsen and Fenhann 2008, Sutter and Pareño 2007), or in individual host countries (e.g. Buhr et al. 2012, Corbera and Jover 2012, Fuhr and Lederer 2009).

What distinguishes this thesis from previous studies is that it focuses specifically on the involvement of private actors in the CDM, and explicitly aims at investigating the suggested link between this feature and the effectiveness of the mechanism. The contribution of the thesis is therefore twofold. Not only does it provide empirical detail to research on the involvement of private actors in global environmental governance, but it also contributes to further developing our theoretical understanding of this phenomenon.

Research design

The CDM contains a relatively high level of private actor involvement compared to other multilateral environmental agreements, but although it is still unusual in this sense, it is representative of a growing trend where states increasingly choose to delegate parts of the implementation of such agreements to private actors (Green 2010). This makes it a good case to study if we want to increase our understanding of private actor participation in global environmental governance, in line with the aim set out in this thesis. The CDM is also often endorsed by its supporters as a good example of how public and private actors can work together towards a common goal, increasing the effectiveness of global environmental governance. In this sense, it can be considered a 'most likely' case for finding the suggested link between private actor involvement and effectiveness, and the present study can thus be described as 'theory testing' (cf. George and Bennett 2005 pp. 120-123, Eckstein 2000 pp. 148-149).

As further discussed in chapter two, the interaction between public and private actors in global governance may take on many different shapes, and public and private actors also interact in different ways in various parts of the CDM. Whereas the entire CDM can be thought of as one case of involvement of private actors in global environmental governance, its various parts studied in the individual articles exemplify a number of different types of public-private interaction. The research design of this thesis thus follows what Yin (1989 pp. 49-50) labels an "embedded single case study", with the CDM as the overarching case, and a number of different instances of public-private interaction within the CDM as sub-units. This research design provides an increased number of observations, and enables interesting comparisons between sub-units (Yin 1989, cf. Gerring 2007 pp. 27ff.). The instances of public-private interaction studied in this thesis do not represent an exhaustive list of all public-private interactions found in the CDM, but it can be argued that they exemplify the most important types in the mechanism. As private companies play an important role in the CDM, focus in the thesis is mainly on these actors, but the role of non-governmental organisations (NGOs) in the CDM negotiations will also be

analysed. The connection between the organisation of the CDM as presented above, and the papers included in the thesis, is illustrated in Figure 2. Paper I is not visualized in the figure as it is mainly a review of previous literature.

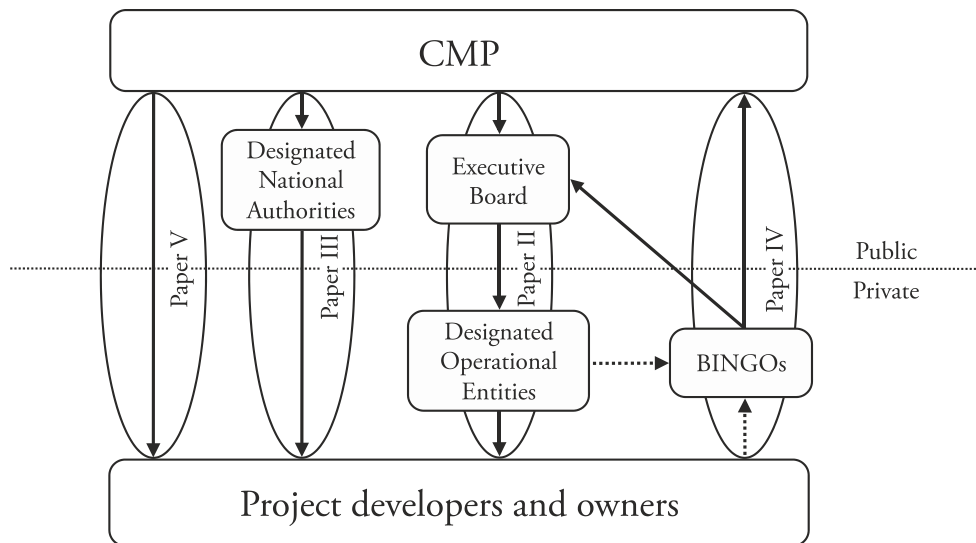


Figure 2. How the papers relate to the organisation of the CDM.

Methods

In line with recommendations for case study method (Yin 1989), a range of different research methods has been used in this thesis. As the papers included have different empirical and theoretical foci, they also use different methods. Whereas each individual paper contains more detailed information on the methods used, the following section summarizes the methods used and elaborates some on the research process.

My first introduction to the field was gained through a thorough reading of the existing academic and policy literature on the CDM, which later provided the material for the research review in paper I. This review not only gave me a good overview of the field, but also allowed me to identify pertinent topics for further research. Secondary literature was of course used also in subsequent papers, especially in paper V where it formed an important part of the empirical material. As the CDM is part of

the climate regime under the United Nations Framework Convention on Climate Change (UNFCCC), official documentation from the climate negotiations, such as decision texts, has also been a central part of my material. However, in order to gain an understanding of the role of private actors in the development of the CDM, reports and position papers by private actors have been an important complement to official documentation, especially in papers IV and V which, to a large extent, build on text analysis. Reports and position papers were used both to trace the positions of different actors over the negotiations, and, when analysed in conjunction with official documentation, to establish an historical account of the development of the CDM over time.

Early on in my graduate studies, I had the opportunity to take part as an observer at the climate negotiations at the fourteenth Conference of the Parties to the UNFCCC (COP14) in Poznan in 2008, and at COP15 in Copenhagen in 2009. As a researcher with Lund University, I was registered as a 'non-governmental' observer, which gave me access to the conference venue, all 'side events', and most plenary sessions. However, for the most part the actual negotiations do not take place in plenary, but in more or less informal groups. Sometimes, these informal groups are open to observers, but it is often hard to keep track of the issues being negotiated as informal sessions are frequently relocated or postponed on short notice. Especially at COP15 in Copenhagen, which saw an unprecedented number of registered observers, it was also difficult to get into sessions since only a limited number of seats were assigned to observer organisations. As a researcher, you often gain a better understanding of the negotiations through reading the daily summaries provided by the Earth Negotiations Bulletin (an independent reporting service published by the International Institute for Sustainable Development, IISD) than through trying to track the negotiations on site. Nevertheless, following the negotiations in real life and experiencing the hectic atmosphere in the corridors without doubt enriched my understanding of the multilateral context that the CDM is part of, and contributed as an important background to the analysis performed in paper IV. In terms of substance, however, the most rewarding experience from attending these negotiations was the opportunity to go to the side-events arranged in conjunction with the negotiations, where a wide range of actors provide input to the negotiation process (broadly defined). Through listening to the vivid discussions among business representatives, environmental NGOs, researchers, and members of the CDM Executive Board about problems experienced in the implementation of the CDM, I got a fuller picture of the issues at stake. This experience did not only fill an important function as a reality check, but was also instrumental for my process of identifying topics for further research.

However, even if my observations at the negotiations gave me an increased understanding of the institutional settings around the CDM, other methods were

needed to get a grip on the actual projects. An important source of empirical material in this regard has been the UNEP Risoe CDM Pipeline, where all official documentation on CDM projects is collected and presented in an easily accessible way (UNEP Risoe 2012). This database helped me obtain an overview of the more than 9000 CDM projects that have entered the project pipeline to date. The possibility to follow trends over time has been especially useful, and provided an important part of the empirical material for paper II. The database was also used in paper V.

Finally, paper III builds primarily on material collected through interviews with local stakeholders involved in the CDM project cycle in Chile, representing involved authorities, project developers, and environmental organisations. These interviews were prepared and carried out by Teresia Rindeljäll, one of the co-authors of the paper. She also transcribed and translated the interviews from Spanish to English, and summarized the main results for the first draft of the paper.

Outline of the thesis

As explained above, this thesis consists of five articles previously published in peer-review journals, in combination with this introductory essay. The papers included in the thesis analyse the involvement of private actors in different parts of the CDM. Together, they provide a multi-faceted picture of this new governance mechanism. The introductory essay is intended to present the collected contribution of the articles, through answering the two research questions introduced above. In addition to providing a theoretical conceptualization of private actor participation in the CDM, the introductory essay will therefore focus especially on the link between private actor involvement and effectiveness.

In the following chapter the theoretical approach of the thesis will be further elucidated, responding to the first research question introduced above. In chapter three, focus will be on the issue of effectiveness. After an initial discussion on how to measure effectiveness in the CDM, this chapter analyses the link between private actor involvement and effectiveness in the different parts of the CDM. Through examining the relevant empirical results and drawing together the conclusions from the individual articles, it answers the second research question. Chapter four, finally, provides some concluding remarks on the future of the CDM, theoretical implications of the study, and future research.

2. Theorizing the CDM

Regime theory

As the CDM is part of the climate regime under the UNFCCC, a natural starting point for theorizing the mechanism is *regime theory*. For several decades, this has been one of the dominating approaches for studying multilateral environmental agreements. Even though the concept of an international regime was initially defined quite openly as “principles, rules, and decision making procedures around which actor expectations converge in a given issue area” (Krasner 1983 p. 1), research on environmental regimes later became rather state-centric, focusing mainly on institutions formally accepted by states (e.g. Keohane et al. 1993).³ So far, little research has been done within regime theory on the effects of involving private actors in international environmental regimes, but the role of private actors is increasingly attracting attention within the literature. Not least the role of business is seen as vital. Wettstad (2006) argues that the role of industry in international environmental regimes “should be given (even) more attention ahead, not least in light of the increasing attention given to market-based flexible policy instruments [...] After all, industry is a very important target group, controlling the effectiveness of policies to a far higher degree than NGOs” (Wettstad 2006 p. 321).

The effectiveness of international regimes has been one of the major research themes within regime theory since it was first developed during the 1980s and 1990s (Levy et al. 1995). Whereas early research on regime effectiveness focused on establishing whether regimes had any effect at all, research has increasingly come to focus on which regimes are more effective, and why. In this endeavour, several factors have been identified that influence the effectiveness of different regimes, such as the

³ This is true for research about *environmental* regimes. The situation is quite different for research on human rights regimes, where the role of private actors has attracted considerable attention.

nature of the problem to be solved, the distribution of power between the actors involved in the negotiation process, and the institutional design. Of these factors, the institutional design has attracted quite a lot of attention, not because it has proven to be the most decisive factor for explaining effectiveness, but because it can be changed (Andresen et al. 2012 pp. 9-10). If we know which institutional designs work better, new regimes can be more wisely crafted. Towards this aim, Mitchell (2006) suggests that researchers should try to identify the 'active ingredients' in environmental regimes that contribute towards increased effectiveness.

Following this research tradition, the active role of private actors in the CDM can therefore be seen as an interesting ingredient in the institutional design of the climate regime, which should be analysed in terms of its contribution to increased effectiveness. But even if regime theory is becoming more interested in the role of private actors in international environmental regimes, research is still sparse. Young (1999) concludes that "evidence does not support any simple generalization that regimes involving the active participation of these nonstate actors are more effective than those in which such actors play a more marginal role" (Young 1999 p. 274). More research is thus needed. For studying the effects of involving private actors in international environmental regimes in more detail, however, we need to be able to distinguish between different types of private actor involvement. For this purpose, the literature on global environmental governance provides a more useful toolbox.

Global environmental governance

The literature on global governance claims that we observe "the emergence of governance structures in international life which are based on private authority, private regimes, or some mix of public and private actors" (Risse 2004 p. 290). According to Risse (2004 p. 291), these new modes of global governance are characterized by two features: "the inclusion of non-state actors, such as firms, private interest groups, or nongovernmental organizations (NGOs) in governance arrangements" and "an emphasis on non-hierarchical modes of steering". As no hierarchical governance system exists at the international level, global governance is always to some extent 'without government' (Rosenau 1992). However, also *intergovernmental* governance is increasingly becoming "governance with governments plus other actors", as hybrid governance arrangements are proliferating in a number of policy domains (Zürn and Koenig-Archibugi 2006 p. 239). While the concept of global governance is not tied to any specific issue area, empirical research has mainly focused on the fields of environmental policy and development policy (Tallberg and Jönsson 2010). Given

the theme of this thesis, the literature reviewed here mainly draws upon experiences from the environmental domain.

Although some would question whether a global governance ‘theory’ exists, there is at least a body of literature on global governance which highlights the rise of private actors and increased public-private cooperation in the global arena, as described above. However, within this broad literature the term ‘global governance’ is used with several different meanings. While some use it as an analytical concept to describe the empirically observed increase in private actor participation in world politics and the new forms of institutions resulting from this development (Biermann 2006, Dingwerth and Pattberg 2006), others use the term to denote a normative vision of how societies should address the most pressing global problems through involving global civil society in the functions of global governance. The visionary usage is common among practitioners, e.g. in the report from the UN’s Commission on Global Governance (1995), but can also be found among scholars. Although the differences between the empirical-analytical and the normative usage of the term may seem significant, and are often emphasized in the literature (see e.g. Dingwerth and Pattberg 2006, Hewson and Sinclair 1999), in practice the boundary between them is often blurred. A large part of the academic literature on global governance starts in an implicit normative assumption that global governance is a potential solution to problems of managing global issues, and focuses on how to further increase the legitimacy and effectiveness of global governance arrangements (e.g. Abbott 2012, Brühl 2002, Dingwerth and Pattberg 2006, Conca 2005, Risse 2004, Schäferhoff et al. 2009, Young 1997a, 1997b). Once again, others criticize this vision of global governance, and see the increased involvement of private actors as a sign of a broader ideological change and the spread of liberal environmentalism (Levy and Newell 2005). Global environmental governance is seen here as “neither normatively neutral nor materially benign” (Elliott 2002 p. 58).

I agree with the more critical voices that researchers should not embrace the promises of the global governance proponents at face value. Nevertheless, I often find the critical strands of the global governance literature problematic as theoretical perspectives, in the sense that they do not allow for an open-ended analysis of reality. Instead, the results of the analysis are already evident from the outset. This thesis therefore uses the term ‘global governance’ in the empirical-analytical sense, and the CDM is thus seen as an example of the rise of public-private interaction in the global arena identified by this literature. However, even within the more analytical strand of the literature, the concept of global governance itself is defined rather broadly, and more specific concepts are needed if we are to understand how the participation of private actors in the CDM relates to other examples of private actor participation. In the literature on global governance, several concepts are discussed, and in the following section some of these will be reviewed and related to each other.

Conceptualizing private actor participation in global governance

As an empirical phenomenon, private actor participation is recurrent in global governance, not least within the environmental domain. But if we compare empirical examples of private actor participation given in previous literature, we see that private actors participate in very different ways, with vast differences not only in the types of tasks performed, but also in terms of the distribution of authority between public and private actors, and the degree of institutionalization. Private actors may cooperate with public actors in implementing multilateral agreements, either in hierarchical delegation arrangements (e.g. Green 2010), or in non-hierarchical partnerships (e.g. Bexell and Mörtz (eds.) 2010, Bäckstrand 2008). They may participate in international negotiations as lobbyists (e.g. Betsill and Corell (eds.) 2008), and they may engage in purely private governance arrangements without public involvement (e.g. Cutler et al. 1999). How do these different forms of private actor involvement in global governance relate to one another?

A popular theme within the literature on global governance is the rise of ‘public-private partnerships’. Börzel and Risse (2005) define “transnational public-private partnerships” as “institutionalized cooperative relationships between public actors (both governments and international organizations) and private actors beyond the nation-state for governance purposes” (p. 198). Between the two end positions of private self-regulation and public regulation, Börzel and Risse present a continuum of governance arrangements including both public and private actors. This continuum ranges from ‘private self-regulation in the shadow of hierarchy’ (with high autonomy of private actors), over ‘delegation to private actors’ and ‘co-regulation of public and private actors’, to ‘consultation and co-optation of private actors’ (with high autonomy of public actors). This mapping of different types of private actor participation is rather useful for getting an overview of what private actor participation may mean in practice: in paper V I use this categorization for describing the different types of governance found in the CDM. However, Börzel and Risse’s definition of public-private partnerships is very broad compared to most other definitions. According to Bexell and Mörtz (2010), who make a review of the literature on public-private partnerships, the bottom line for all such partnerships is that they are “voluntary cooperative arrangements on public policy between actors from two or more societal spheres (state, market, and civil society) with non-hierarchical decision-making procedures” (p. 6). An important difference between this definition and the one provided by Börzel and Risse is the emphasis placed on non-hierarchical decision-making procedures. Even though Börzel and Risse themselves acknowledge non-hierarchical modes of steering as an important characteristic of public-private partnerships (2005 p. 197), many of the examples included in their mapping involve hierarchical relationships between public and private actors. As a matter of fact, of the different

types of private actor involvement they identify, only 'co-regulation of public and private actors' would qualify as a public-private partnership using the more narrow definition.

If the term 'public-private partnership' is to be reserved for non-hierarchical governance arrangements between public and private actors, we need another concept that can be used to label the broader range of public-private interactions described by Börzel and Risse. This thesis follows the example of Andonova et al. (2009), Bäckstrand (2008), and Pattberg and Stripple (2008), who use the term 'hybrid governance' to capture the ground between 'public' and 'private' governance. But how are we then to distinguish between different forms of hybrid governance? In previous literature, different types of hybrid governance arrangements have been classified according to their function (Andonova et al. 2009, Bäckstrand 2008), or the mode of governance involved (Pattberg and Stripple 2008). But when trying to make theoretical sense of different forms of hybrid governance, what is interesting is not primarily their function, but rather the organization of the public-private interaction. For this purpose, Pattberg and Stripple's categorization based on mode of governance, using the categories 'hierarchical', 'market' and 'network' (2008 p. 373), is more interesting, although it could be questioned whether the categories 'market' and 'network' should be presented as being on the same analytical level as the category 'hierarchical' when they can also both be described as 'non-hierarchical' modes of steering.

From an analytical perspective, the interesting dimension here is the distribution of authority between public and private actors. Is authority delegated from public to private actors in a top-down, hierarchical, governance arrangement? Or is authority truly joint, in a horizontal, non-hierarchical arrangement? Or, to add a third category, have private actors themselves acquired authority in relation to public actors in a bottom-up process, what Green (2010 p. 1) labels 'entrepreneurial authority'?⁴ This taxonomy might be a useful starting point for theorizing the roles of public and private actors in different forms of hybrid governance arrangements, in the CDM or elsewhere. However, while Börzel and Risse rank their different categories of public-private interaction referred to above according to the relative autonomy of public and

⁴ Green herself conceptualizes 'entrepreneurial authority' as a type of private authority, and it can, of course, be discussed whether it could be categorized as a type of hybrid authority. However, I would argue that when private actors take the initiative to get involved in public governance processes, this is quite different from purely private governance arrangements where public actors are not involved even as a target for private actor activities.

private actors, I would argue that the autonomy of participating actors cannot be determined solely by looking at the type of interaction. Rather, it also varies between cases within the same category depending on the detailed design of these interactions. The generic differences in the autonomy of public and private actors between these three categories of hybrid governance should therefore not be over-emphasized, and the autonomy of public and private actors in each individual case has to be assessed empirically in studies such as this one.

Hybrid governance and the CDM

Clearly, hybrid governance may take on many different shapes, with large differences in the roles played by the participating actors. Having thus defined the concept, how is hybrid governance institutionalized in the CDM? What are the roles for public and private actors? Before going into the roles played by private actors, we first have to acknowledge that *public* governance still plays an important role in the CDM, with the CMP as the highest authority, and the EB as the main governing body. The DNAs are also an example of the continued importance of public governance in the CDM. Another vital task for public actors, although not always acknowledged, is to create a demand for emission reduction credits from the CDM through taking on ambitious emission reduction targets.

At the same time, private actors are very actively involved in different *hybrid* governance arrangements in the CDM. Whereas the role of private actors in the implementation and supervision of projects are cases of hybrid governance arrangements with *delegated* authority, the lobbying activities of private actors in the CDM policy process can be classified as a case of *entrepreneurial* authority. However, it is not always possible to make a strict distinction between ‘delegated’ and ‘entrepreneurial’ authority. Even though private actors lobby the negotiations at their own initiative, they are also consulted in more institutionalized ways in the climate negotiations at the initiative of public actors. The Executive Board regularly issues ‘calls for input’ where private actors are able to provide their views on issues under consideration. The consultation of private actors in the CDM was further institutionalized through the launch of the ‘CDM policy dialogue’ at the UN Climate Change Conference in Durban in 2011. Throughout 2012, this panel of policy makers and representatives of business and civil society engaged with stakeholders in order to take stock of the lessons learned in implementing the CDM and to make recommendations for the way forward (CDM Policy Dialogue 2012). As the CDM Policy Dialogue is probably the closest we get to hybrid governance with *joint* authority in the CDM, this process would have been interesting to study more closely, but unfortunately, time did not allow for this.

3. The Effectiveness of Hybrid Governance

As pointed out above, parts of the global governance literature attach great hopes to the capacity of hybrid modes of governance to contribute to effective global problem-solving. The Commission on Global Governance argues that effective global governance “must build partnerships – networks of institutions and processes – that enable global actors to pool information, knowledge, and capacities” (Commission on Global Governance 1995 p. 4-5). Here, companies are seen not only as contributing to the problems, but also as being part of the solution (Brühl 2002). More recently, Abbott (2012 p. 560) has argued that a strengthened engagement between public and private actors could “significantly enhance sustainability governance”. Through re-allocating elements of governance authority to the actors best able to exercise them, and by drawing on the resources and capacities of private actors, such arrangements can reduce the burden on the state (Abbott 2012). However, critics point out that the engagement of private actors in global governance may also lead to distortions in policy objectives and geographical focus, as the choice of activities may be affected by the availability of private sector funding (Bull et al. 2004). Furthermore, democratic legitimacy is difficult to attain in governance arrangements involving private actors, and a trade-off between democratic legitimacy and effectiveness is sometimes identified (Börzel and Risse 2005 p. 212). On the other hand, proponents of global governance argue that the deliberative quality of decision-making in non-hierarchical modes of steering can actually increase the democratic legitimacy of global governance (Risse 2004). According to this view, the involvement of private actors in governance can be seen as a way for the state to engage private partners in the pursuit of public goals while at the same time enhancing stakeholder participation (Abbott 2012 p. 551).

High hopes are thus attached to the involvement of private actors for increasing the effectiveness of governance, but does empirical evidence support these claims? As described above, the CDM indeed seems to embody the rise in hybrid governance arrangements observed by the global governance literature. But, returning to the second research question, what effects has the involvement of private actors in the CDM had on its effectiveness? In order to be able to answer this question, we first have to define what we mean by effectiveness.

Assessing effectiveness

Whereas the literature on global governance is useful for theorizing the involvement of private actors in governance, it is not as developed when it comes to assessing its effectiveness. Here, regime theory still has the upper hand. The effectiveness of international environmental regimes can be thought of in several different ways. A distinction is often made between the ‘output’, the ‘outcome’ and the ‘impact’ of the regime (Underdal 2002, Young 2002). With this terminology, the output is the formal rules and regulations that comprise the regime. Although a strong output, in terms of strict rules and regulations, increases the likelihood of an environmental regime being effective, the agreement also needs to be successfully implemented in order to have an effect. The behavioural consequences that arise from the operation of an agreement are the outcome of the regime. What we would ideally like to measure, however, is the impact that the operation of the regime has on the environment. Does it solve the problem that spurred the creation of the regime in the first place (Young 2002)? Unfortunately, a problem when trying to assess the impact of international environmental regimes is that it is inherently difficult to make a causal connection between the operation of a regime and changes in the environment, tracing the effects of the regime through national and regional processes and ultimately to the effect on the environment (Wettestad 2006, c.f. Haug et al. 2010). Since reliable data about the changes in environmental quality attributable to international institutional action are lacking, Keohane, Haas and Levy (1993 p. 7) have concluded that research on regime effectiveness will have to focus on observable political effects of institutions rather than direct environmental impact. With the terminology used here, that means measuring outcome.

Effectiveness in the CDM

The CDM is one element of the Kyoto Protocol, which in turn is one of the main outputs of the climate regime. When discussing the effectiveness of the CDM, the interesting question is ultimately how it contributes to the effectiveness of this regime. On an overarching level, the aim of the climate regime is to achieve “stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system” (UNFCCC 1992). In the first commitment period of the Kyoto Protocol, developed states have committed to reducing their collected emissions to at least 5 per cent below 1990 levels in the period 2008-2012 (UNFCCC 1997). The limited level of ambition means that even if these goals would be fully implemented, and the protocol hence successful in terms

of outcome, this would only have a marginal effect on the concentrations of greenhouse gases in the atmosphere. In other words, the impact of the climate regime would still be minimal. Nevertheless, as the Kyoto Protocol is the only legally binding international agreement on climate change we have seen so far, assessing the effectiveness of its different parts is still of interest for anyone who wishes to see a strong climate regime in the future.

When assessing the effectiveness of the CDM, it is important to remember that the mechanism in itself was never intended to reduce greenhouse gas emissions, as emission reductions made by CDM projects in developing countries are used to compensate for emissions not being reduced in developed countries. Because of this, the CDM has often been accused of weakening the emission reduction commitments made by developed countries in the Kyoto Protocol (e.g. Bachram 2004). However, as the CDM lowers the cost for developed countries to fulfil their commitments, the CDM might have worked as a 'negotiating chip' in the Kyoto negotiations, enabling developed countries to take on stricter emission reduction targets than they would otherwise have done, and thus contributing to strengthening the *output* of the climate regime at the negotiation stage. Once in place, the main purpose of the CDM can be understood as aiming to increase the likelihood of developed countries fulfilling their commitments through lowering their costs for reducing emissions, and in this way strengthen the *outcome* of the climate regime. One way of measuring the effectiveness of the CDM is therefore to look at the extent to which the CDM has succeeded in providing cost-effective emission reductions to developed countries.

However, it should not be overlooked that the CDM has another goal as well, as it also aims at providing sustainable development benefits to developing countries. Even though the link between this second goal of the mechanism and the effectiveness of the climate regime is less apparent, the CDM's contribution to sustainable development in host countries was an important part of the negotiation deal struck between developed and developing countries, and the fulfilment of this goal is important for upholding the legitimacy of the Kyoto Protocol in the eyes of developing countries. In this thesis, the effectiveness of the CDM is thus defined as the extent to which the mechanism fulfils both of its two goals.

For the purpose of investigating the link between private actor participation and effectiveness, one of these goals is a better measure than the other, however. Whereas there are strong expectations that the involvement of private actors should lead to increased cost-effectiveness, there are no corresponding expectations that private actor involvement should also lead to enhanced sustainable development in host countries. On the contrary, the task of safe-guarding that projects contribute to sustainable development has been assigned to public actors, the host country Designated National Authorities. If the involvement of private actors does not contribute to increased effectiveness in terms of the sustainable development goal, this evidence is

therefore not enough to falsify the suggested link between private actor involvement and effectiveness. Nevertheless, if the involvement of private actors has a positive effect on cost-effectiveness but a negative effect on the goal of sustainable development, this result deserves our attention as it means that a trade-off may exist between the attainment of different goals. Therefore both goals will be discussed here.

Cost-effectiveness

In assessing if the CDM provides cost-effective emission reductions, two distinct factors are involved: whether the projects being implemented reduce emissions, and whether they do it at a low cost. Of these two measures, the cost of implementing the projects is much easier to assess than whether the projects really reduce emissions compared to 'business-as-usual'. Therefore, the following discussion will focus on the concept of *additionality*, that is, whether a project is implemented because of the CDM, or whether it would have been implemented even without the incentives provided by the mechanism.

The logic behind the CDM is that emission-reducing projects that would not be attractive to implement under normal circumstances will become viable through the extra benefits attained by being registered under the CDM (primarily the revenues from selling the resulting emission reduction credits). In other words, the CDM should provide the incentive for carrying them out. If a project would have been carried out anyway, it does not reduce emissions compared to business-as-usual and is thus not 'additional' in CDM terminology. If emission reduction credits obtained from such non-additional projects are used to compensate for increased emissions in developed countries, global net emissions will actually increase compared to a situation without the CDM, and the CDM would then contribute *negatively* to the outcome of the climate regime. If a CDM project is not additional, it can never be cost-effective no matter how cheap it is to implement, as the buyers of the resulting carbon credits will not get any 'bang for the buck' in terms of real reductions of greenhouse gases. Although the connection between additionality and cost-effectiveness should be obvious, it has rarely been explicitly discussed in the CDM literature (one exception is Takeuchi Waldegren 2012), but in this thesis the cost-effectiveness of emission reductions from the CDM will be discussed both in terms of the costs of implementing the projects, and their additionality.

Sustainable development

As different host countries have different priorities for sustainable development, the Kyoto Protocol does not define the way in which projects are to contribute to sustain-

able development, but assigns this task to the Designated National Authorities (DNAs) of the host countries. This means that, as per definition, all projects that receive approval from the host country DNA (which is a requirement for registration as CDM project) should contribute to sustainable development. Yet, many evaluations have concluded that the CDM does not deliver on the sustainable development goal, mainly because the sustainable development benefits of projects are not monetized, and therefore not prioritized by investors (e.g. Bumpus and Cole 2010, Olsen 2007, Sutter and Parreño 2007). Most previous studies have set up their own, external points of reference against which the CDM's contribution has been measured. However, as different actors have very different expectations on how the CDM should contribute to sustainable development, an alternative approach is to assess the CDM's effectiveness in providing sustainable development in relation to the expectations actually being articulated by each host country. This way, it is possible to find out whether the CDM's limited contribution to sustainable development is a consequence of projects not living up to the sustainable development requirements set up by host countries, or if these countries refrain from setting up ambitious sustainable development requirements in the first place. Both of these aspects are important when assessing the effectiveness of the CDM in providing sustainable development.

Empirical results

In the following section, the link between private actor participation and effectiveness in the governance arrangements discussed in papers II-V will be analysed.

Delegation of project implementation

In paper V, I take a look at the role played by private actors in the implementation of the CDM. Through the delegation of project implementation to private actors, the CDM is intended to use the market forces to identify the cheapest options for reducing greenhouse gas emissions. In this regard, the CDM is a prime example of how the involvement of private actors in global governance is tied to hopes of increased cost-effectiveness. The CDM had a slow start, however. In early evaluations, there were fears that high transaction costs would limit the number of projects being implemented, and thereby the ability of the mechanism to provide enough emission reduction credits to make a difference for developed countries in achieving their Kyoto goals (Fichtner et al. 2003, Michaelowa et al. 2003). During the first years of

the CDM, these fears seemed to have some merit as very few projects entered the pipeline. As noted in paper V, public actors such as governments and public-private partnerships (notably the World Bank's Prototype Carbon Fund) played an important role at this stage, investing in the yet unstable CDM in order to 'crowd in' the private sector on the market (Benecke et al. 2008). This strategy contributed to the CDM market taking off in 2005, and in terms of the number of projects being implemented, later evaluations describe the CDM as "a success beyond the wildest dreams of its early architects" (Grubb et al. 2011 p. 556). But have the projects being implemented resulted in cost-effective emission reductions?

As expected, project developers have been searching for the cheapest possible projects to implement, and the decision to let private companies identify potential projects has indeed had considerable effects on the types of projects entering the CDM project pipeline over the years. Beforehand, most analysts had expected that energy efficiency, fuel switching and forestry projects would be dominating the CDM, but instead the early CDM market turned out to mainly consist of projects reducing the emissions of a few gases created as bi-products in certain industrial processes. These gases have very high 'global warming potentials' compared to carbon dioxide, which means that a small reduction of these gases results in a large number of emission reduction credits at low cost, generating large profits for the project owner.

Initially, this unanticipated market development was interpreted in positive terms as a sign of the market doing its job in identifying the cheapest emission reductions available (Lecocq 2004). Still, the dominance of industrial gas projects later became criticized precisely from a cost-effectiveness perspective. In an influential commentary in *Nature*, Wara (2007) argued that it would have been much cheaper to address these low-cost emission reduction possibilities through targeted funding instead of through the CDM, as project owners were now able to sell the emission reduction credits from these projects at a very large margin of profit. Interestingly, no one had made this argument before the CDM highlighted these opportunities to make large emission reductions at low cost (Carbon Trust 2009), so in practice this was never really an option. As only a limited number of potential industrial gas projects existed world-wide, all of these opportunities had been reaped towards the end of 2006 (UNEP Risoe 2012). Since then, the composition of projects in the CDM pipeline has become more balanced, with renewable energy projects now being the most popular project type (ibid.).

The CDM has without a doubt been successful in terms of the number of projects being implemented, and market actors have as envisaged been looking for the cheapest projects to implement. In this sense, the involvement of private actors has fulfilled expectations. But are the projects they have implemented additional, that is, do they reduce emissions? Unfortunately, cost-effectiveness and clear-cut additionality rarely come together. With the exception of the industrial gas projects discussed

above, which use 'end-of-pipe' technologies to capture and destroy the emissions of certain gases resulting from chemical processes, most CDM projects do not depend solely on the revenues from the CDM for their viability. Projects such as the construction of a wind park, or the installation of energy-saving technology in a factory, could potentially be financially attractive to implement even without the revenues from the CDM. It is therefore difficult to know whether they are implemented because of the CDM or not.

From a cost-effectiveness perspective, the preferred CDM projects are the ones that are close to being viable under a business-as-usual scenario, but which need the additional revenues from the sale of CERs to become profitable. In these cases the net cost for implementing the project will be low, but at the same time it is clear that the CDM provides the incentive for carrying it out. As a comparison, a project that is very far from being profitable without the sale of CERs is certainly additional, but since the net cost for implementing the project is very high, the resulting emission reductions made will not be very cost-effective. At the other extreme, a project that is already very profitable before the revenues from the sale of CERs are taken into account would probably be carried out also without the CDM, which means that the emission reductions made are not additional. This project should therefore not be registered under the CDM.

In order to demonstrate additionality, most projects use the "Additionality tool" established by the Executive Board. This tool includes four steps: the identification of alternatives to the proposed project, investment analysis (demonstrating that the proposed project is financially less attractive than at least one other credible alternative), barrier analysis (showing that barriers exist that would prevent the project from being realized if it was not registered as a CDM activity), and common practice analysis (considering whether the proposed project type is already commonly deployed in the relevant sector or region) (Executive Board 2008). However, even if a project fulfils all these requirements, it is ultimately only the project owners who can really know whether a specific project would have been implemented if it were not for the prospect of registering it as a CDM project. A related problem is that at the point in time when the project owners make the decision to invest in a project, they will not yet know for sure whether the project will ever be successfully registered under the CDM and start delivering CERs. Under these circumstances, going forward with a project that is not profitable on its own is a very uncertain investment. This means that project owners will favour projects that are viable anyway (Hultman et al. 2012), and thus of questionable additionality. Consequently, over the years several studies have concluded that a large share of registered CDM projects is likely to be non-additional (Grubb et al. 2011, Michaelowa and Purohit 2007, Schneider 2007). As non-additional projects do not reduce emissions they cannot be considered cost-

effective. Thus, delegating the decision on which projects to finance and implement to private actors does not seem to have increased cost-effectiveness in the CDM.

Delegation of project supervision

In order to uphold the environmental integrity of the CDM, an elaborate supervisory system exists with the purpose of ruling out non-additional projects from being registered. In this supervisory system, the on-the-ground control of projects has been delegated to the Designated Operational Entities (DOEs), which are private companies accredited by the Executive Board (EB) to perform this task. Even though final decisions on projects are taken by the EB, these decisions are based on reports provided by the DOEs. As discussed in paper II, there are several theoretical reasons why delegating certain tasks to private actors (or 'agents' in the terminology of the delegation literature) may be a good thing, in addition to the expectations of increased cost-effectiveness already discussed. Through delegating project supervision to the DOEs, who for the most part are large risk management and certification firms with considerable experience in similar tasks, the EB (which in this case plays the role of 'principal') is able to draw on existing expertise, instead of having to develop that expertise internally. The DOEs can also specialize in different regions and project types, which increases the flexibility of the supervisory system. But delegation is also tied to some risks. If the gains from specialization are to be realized, principals cannot simultaneously have full control over agents. This means that principals will not know for sure whether agents do what they are supposed to do, or whether they follow their own preferences, resulting in 'slack' in the system (Hawkins et al. 2006). Especially when delegating to private firms, there is a risk that these actors will prioritize profit maximization at the expense of other concerns.

Paper II argues that, in the case of the CDM's supervisory system, the potential benefits of delegation have not been delivered, and that the main reason for this is that the delegation to the DOEs is not designed in a proper way. Since the DOEs are contracted and paid for by the companies whose projects they are supposed to supervise, they want to gain a good reputation among these companies in order to attract more customers. This means that the DOEs have a strong incentive to let projects through the control easily in order to make their clients satisfied, which runs counter to the EB's preference of upholding a stringent control of projects. As both the sellers and buyers of carbon credits are primarily interested in the formal credits, not the emission reductions they should represent, none of the involved parties is negatively affected if non-additional projects are registered under the CDM. Unlike in other comparable delegation arrangements, there is therefore no third party in the CDM that can bring the principal's attention to slack in the system. It has been argued that

civil society actors such as environmental NGOs could fulfil an important role as ‘whistle-blowers’ in the CDM, bringing the principal’s attention to deficiencies in the work of the DOEs (Repetto 2001), and to allow for this, NGOs have the possibility to provide comments on project proposals during a 30 day period before projects are registered with the EB (UNFCCC 2005). However, civil society actors have a severe information deficit compared to project owners and DOEs which hinders them from fulfilling this role in a meaningful way, and in practice this opportunity has not been used very actively (Lövbrand et al. 2009).

As discussed above, one of the benefits expected from delegating project supervision to private companies is cost-effectiveness, and the competitive market for DOE services has indeed forced prices down. However, several studies report that the competition between DOEs has reduced the amount of time DOEs spend on each project, increased the share of unqualified staff and led to a high workload among DOEs, with the effect that many DOEs are not able to assess the documentation provided by project developers in a critical manner (Benecke 2009, Michaelowa 2009, Michaelowa and Buen 2012, Schroeder 2009). Even though the EB has increased its monitoring of the DOEs over the years in order to reduce slack in the system, the EB cannot have perfect control over the DOEs, and is not always able to detect and punish agents that do not follow their preferences.

The problems experienced here may at a first glance seem to be a direct effect of the delegation to private agents, since a public body charged with the task of supervising projects would not be subject to these competing loyalties, nor to the competition experienced by the DOEs. But as argued in paper II, the problems could also be avoided through a different design of the delegation arrangement. Instead of letting project owners contract the DOEs themselves, the EB could allocate DOEs to the projects. This would enable the EB to favour the DOEs that perform a rigorous control of projects, and thus solve the problem of competing loyalties. However, as noted in paper II, the problem with deficient control is further complicated by the current rules used for determining additionality, which leave much room for interpretation, making them difficult to apply in a stringent way no matter how good the intentions are. In order to reduce the arbitrariness of the CDM’s supervisory system, more stringent additionality rules are therefore also needed. Yet, as the system is currently constructed, the delegation of project supervision to private actors has not contributed to increased effectiveness.

Entrepreneurial activities by private actors in the CDM negotiations

Although less institutionalized than the delegation of project implementation and supervision to private actors, another important aspect of private actor participation

in the CDM is the lobbying by private actors in the negotiations, which can be classified as a case of hybrid governance with entrepreneurial authority. This is the topic of paper IV. As mentioned above, many NGOs, representing both business and environmental organizations, are accredited as observers to the climate negotiations.⁵ Here, they engage in discussions on the further development of the CDM through arranging and presenting at 'side-events' to the negotiations, as well as through more traditional lobbying activities. However, most of the literature on the role of nonstate actors in international negotiations treats business organizations and 'norm-driven' NGOs (such as environmental NGOs) separately. This separation has been criticized by scholars who argue that it theoretically makes sense to study these actors through a common lens (Meckling 2011, Sell and Prakash 2004). The strict division reduces the comparability of studies and may also affect the conclusions. Paper IV makes a theoretical contribution through drawing together the conclusions from previous studies of both these types of private actors into a coherent framework for explaining NGO influence, and then uses this framework to discuss the influence of business and environmental NGOs in the negotiations on CDM reform. The NGOs studied are the business NGO IETA (International Emissions Trading Association), and the environmental NGOs CAN (Climate Action Network) and WWF (World Wide Fund for Nature).

Applying the theoretical framework to the case of CDM reform, it is concluded that a majority of the explanatory factors in this case play out in favour of business as compared to environmental NGOs, and the business NGO IETA also seems to have been more successful in getting its policy proposals into the decision text. As IETA represents the companies implementing the CDM, this organisation has considerable knowledge about the mechanism that is attractive to the state delegates in the negotiations. Furthermore, the fact that the parties to the Kyoto Protocol are dependent on these companies for the successful implementation of the CDM grants IETA a structural influence in the negotiations. Even though the environmental NGOs active in the negotiations have a good reputation for putting environmental integrity before any other concerns, it is difficult for them to match the influence of IETA.

⁵ In the UN system, an NGO is normally defined as an organization which (1) is not formed by an intergovernmental agreement, (2) has expertise or interests relevant to the international institution, (3) expresses views that are independent of any national government, and (4) is non-profit (UNFCCC 2011a). Although the last criterion excludes companies, business organizations are accepted as NGOs.

In this case, it is perhaps not the participation of private actors as such that is most noteworthy, as this is by now a rather common practice in international negotiations. Instead, it is interesting how the hybrid character of the CDM affects the dynamics of the negotiation process. As discussed in paper IV, the large influence of business in the negotiations may be problematic both in terms of effectiveness and from a democratic point of view. In the NGO literature, an active participation of NGOs in international negotiations is generally interpreted in positive terms, as increasing the democratic quality of negotiations (Betsill 2008, McGrew 2002). NGOs are expected to contribute with new perspectives, as well as with relevant knowledge. But while business might provide skills and abilities that contribute to increased effectiveness, private economic interests and public interests also frequently diverge (Fuchs et al. 2010 p. 44). It is therefore not evident that the positive image of NGOs in international negotiations as "global eyes and ears" (Corell and Betsill 2001 p. 86) found in the literature on environmental NGOs can be extended to capture the role of business NGOs. Although paper IV does not discuss or value the proposals made by the different NGOs in the negotiations according to their contribution to the public interest, an overview of the proposals shows that whereas IETA's proposals generally aim at furthering cost-effectiveness, the proposals brought forward by the environmental NGOs mainly relate to the environmental integrity of the CDM. These are both valid concerns, but as true cost-effectiveness cannot be achieved if projects are not additional, in practice a balance between these two values is needed. If the influence of business NGOs in the negotiations undermines environmental integrity, private participation reduces rather than increases cost-effectiveness.

Public governance in a hybrid context

Whereas it is the role of the DOEs and the EB to assure that all CDM projects are additional, it is the responsibility of the host country Designated National Authority (DNA) to assure that the CDM fulfils its second goal: to contribute to sustainable development in host countries. This example of public governance in the CDM is studied in paper III. However, the scope for host country agency here must be understood in relation to the overall context of hybrid governance characterizing the CDM, where private actors steer investments according to a logic of profitability and cost-effectiveness. Although some early analyses identified a substantial overlap between potential CDM projects and the sustainable development priorities of host countries (Austin et al. 1999), later research has concluded that the CDM's contribution to sustainable development often has been low (Ellis et al. 2007, Olsen 2007). The projects that are most attractive to invest in from a cost-effectiveness perspective are rarely those that contribute the most to sustainable development, and left to the

market forces sustainable development benefits will therefore not be prioritized. The voluntary *Gold Standard*, which offers an independent certification for small-scale renewable energy and energy efficiency projects that produce social benefits for the local population, has been launched as one way to put a market value to sustainable development, but as noted in paper III, these 'boutique credits' are still a marginal phenomenon. To date, only 82 CDM projects are registered under the standard (Gold Standard 2012). The focus on cost-effectiveness resulting from the involvement of private actors in the CDM has therefore probably reduced the mechanism's contribution to sustainable development, measured against some external standard.

What about the role of the host country DNAs in assuring that all projects contribute to national priorities for sustainable development, then? In practice, few host countries have set up ambitious requirements on projects. Some previous studies have pointed to the risk of a 'race to the bottom' among host countries in terms of their requirements on projects' contributions to sustainable development, as they desperately compete for investments (Olsen 2007, Pearson 2007). In the end, it is an empirical question whether the low requirements on sustainable development contributions observed are a sign of such a 'race to the bottom', or if individual host countries are in fact able to steer investments and actively have chosen to prioritize maximizing investments. Paper III studies the case of Chile in this context. As Chile is a stable neoliberal economy that offers favourable conditions for investment, it has been successful in attracting CDM projects, and should therefore have good opportunities to pick and choose between projects in order to steer investments towards national sustainable development priorities. Still, the Chilean DNA has chosen to equal the sustainable development requirement on CDM projects with a completed Environmental Impact Assessment, not adding any further requirements to projects beyond those that already existed and in principle accepting all proposed projects. Interviews with Chilean CDM officials paint a picture of the CDM being used primarily to promote *economic* development, with CERs treated as another export product in line with wine and fruit.

The Chilean example confirms that even in cases where the host country should be able to actively steer investments towards specific sustainable development goals, economic development may still be the highest priority. Yet, it should also be acknowledged that host countries are not unitary actors, and our interviews indicate that some stakeholders in the Chilean case would have favoured other dimensions of sustainable development than just economic development being prioritized. Gradually, however, interest has also been growing among Chilean officials in using the CDM more strategically to channel investments towards renewable energy production, and authorities are now facilitating projects in prioritized areas. In the Chilean case, the host country DNA thus seems to have some agency, and is not completely in the hands of private investors.

As Chile is a comparatively successful country when it comes to attracting CDM projects, these experiences may not be directly translated to other host countries that are in a more exposed position, and more research is needed in order to draw any real conclusions on the CDM's contribution to sustainable development from the host country perspective. Nevertheless, the Chilean case shows that even though the hybrid character of the CDM has resulted in a focus on low-cost projects, it is not evident that the CDM should be considered a failure in terms of the benefits it delivers to host countries as there are many different ways of defining sustainable development. However, as project developers prefer to invest in countries with low risk, high regulatory stability and large implementation capacity (Carbon Trust 2009), most CDM projects have concentrated in large, middle-income countries whereas Africa and the poorest countries in Asia have essentially been by-passed. The uneven geographical distribution of projects, which is another consequence of the involvement of private actors in the CDM, in fact limits the CDM's potential to make any contribution at all in many developing countries.

Linking private actor involvement and effectiveness

Taken together, what do the experiences from the CDM tell us about the link between private actor involvement and effectiveness in global environmental governance? Effectiveness in the context of the CDM was defined above as the fulfilment of the mechanism's double goal: providing cost-effective emission reductions to developed countries and sustainable development benefits to developing countries.

The involvement of private actors is strongly tied to expectations about increased cost-effectiveness, and delegating project implementation to private companies has indeed led to a strong focus on identifying low-cost projects. But even though there are some examples of private actors identifying cheap emission reduction opportunities that had been overlooked by the international community, such as the projects reducing industrial gases, there are also strong indications that a substantive share of the projects being registered under the CDM probably would have taken place also under a 'business-as-usual' scenario. As projects must be additional in order to be truly cost-effective, the involvement of private actors in the CDM has therefore probably not contributed to increased effectiveness in this regard. The delegation of project supervision to the DOEs is tied to similar expectations about increased cost-effectiveness, through both specialization and competition. The competitive market for DOE services has indeed forced prices down, but at the same time it has reduced the amount of time that DOEs spend on each project, and lowered the quality of DOE assessments. Furthermore, due to the way delegation is

designed in this case, the DOEs have an incentive to prioritize satisfying their clients before safe-guarding the CDM's environmental integrity. The fact that many important tasks in the CDM have been delegated to private actors has also given these actors a structural influence in the negotiations on CDM reform, which means that private actors' preference for cost-effectiveness has also permeated the negotiations, at the expense of concerns about the environmental integrity of the mechanism.

When it comes to the CDM's contribution to sustainable development, this goal is not directly tied to expectations on the benefits of private actor involvement, and the task of assuring the mechanism's goal fulfilment in this regard has been entrusted to the host country Designated National Authorities. Yet, the CDM's inbuilt focus on cost-effectiveness may impact the host countries' ability to actually steer investments. In the case studied here, Chile, authorities initially seem to have used the CDM mainly as a way of promoting economic development, hence not even trying to steer investments, but more recently there is also a tendency to use the CDM in an increasingly strategic way for promoting investments in renewable energy. Still, because of the market logic, poorer host countries may not be able to steer investments in this way even if they would like to.

Even though it is admittedly difficult to measure regime effectiveness in terms of impact on the environment, is it possible to say anything about the CDM's contribution in this regard? The CDM has clearly been a success in the number of projects being implemented. As it has been frequently used by developed countries throughout the first commitment period of the Kyoto Protocol, it may have contributed to these countries successfully implementing their emission reduction commitments under the protocol. However, given that a large part of the emission reductions made through the CDM are likely to be non-additional, the climate would probably have been better off if developed countries had achieved their emission reduction commitments of the Kyoto Protocol without using the CDM. The *direct* effect of the CDM is hence probably an increase rather than a decrease of global emissions. Nevertheless, some researchers have also argued that the CDM may have had a positive *indirect* effect on global greenhouse gas emissions, through putting the issue of climate change on the agenda in host countries (Lederer 2010), and building up a significant group of professionals with substantive knowledge about how to manage and mitigate greenhouse gases in these countries (Friberg 2009). This means that in the long run, the CDM could actually also potentially contribute to reducing global emissions. However, as discussed above, it is very difficult to make causal connections linking the operation of a regime to changes in the environment (perhaps especially for this kind of indirect effects), and it is therefore an open question whether this positive indirect effect of the CDM will be large enough to outweigh the negative direct effect.

4. Concluding Remarks

Policy implications and the future of the CDM

At the climate negotiations in Doha in December 2012, parties finally agreed on extending the Kyoto Protocol with a second commitment period, starting on 1 January 2013, and ending on 31 December 2020 (UNFCCC 2012). Even though this decision formally secured the continuation of the CDM, many questions still remain, not least when it comes to the demand for certified emission reductions from the mechanism. The key message from the CDM Policy Dialogue, which recently brought together a broad range of stakeholders and experts with the aim of making recommendations for the future of the CDM, was that the CDM is now more or less collapsing due to the lack of demand (CDM Policy Dialogue 2012). The current lack of strong mitigation targets among the parties to the Kyoto Protocol has indeed drastically reduced demand for certified emission reductions (CERs) in the near future, even though the agreement in Doha on a voluntary mechanism to review the emission reduction commitments of developed countries under the Kyoto Protocol leaves a glimmer of hope for a rise in mitigation ambition (IISD 2012). Many market analysts had hoped that demand for CERs would be upheld through the establishment of new nationally established emission trading schemes in countries such as Korea, Australia and New Zealand (e.g. Kossoy and Guigon 2012). However, at the negotiations in Doha, the question of who should have access to the CDM became the subject of heated discussions, with some developing countries like Venezuela emphasizing that the CDM is not “just another business opportunity” but is linked to the level of ambition of developed countries emission reduction commitments, and therefore should only be available to developed countries with emission reduction commitments under the Kyoto Protocol (IISD 2012). Even though many countries were also deeply concerned about the plummeting demand for CERs that would result from such a restriction, the parties eventually did agree that only countries with emission reduction commitments under the Kyoto Protocol would be allowed to transfer and acquire CERs during the second commitment period (UNFCCC 2012).

Because of the limited demand for CERs, the CDM is likely to play a marginal role in the second commitment period of the Kyoto Protocol, but the discussion about how to reform the mechanism nevertheless continues. At the next round of the

climate negotiations, to be held in Warsaw in 2013, the ‘modalities and procedures’ for the CDM, outlined in Montreal in 2005 (UNFCCC 2005), will be reviewed for the first time, which opens the possibility to make more overarching reforms of the mechanism than the piece-meal alterations done so far. Judging from discussions in the policy community, the likely trend is a development towards more standardization in the mechanism, such as the use of benchmarks in additionality determination and the introduction of ‘positive lists’ for certain project types that are directly assumed to be additional (CDM Policy Dialogue 2012, Raab 2012).

Still, even if substantially reformed, the most important contribution of the CDM at this stage is perhaps not the projects being implemented (which are likely to be few in the coming years unless the parties to the Kyoto Protocol significantly strengthen their emission reduction commitments), but rather the lessons that can be learned for the future from this large-scale experiment of involving private actors in international climate governance. Through the Durban Platform, the parties to the UNFCCC have decided to develop “a protocol, another legal instrument or an agreed outcome with legal force” to be agreed upon by 2015 and implemented from 2020 (UNFCCC 2011b). Since one of the elements to be included in this new agreement is a new market mechanism, the experiences from the CDM will be of great value in the process of hammering out the details of this agreement.

Theoretical implications and future research

What conclusions can then be drawn from this study? A theoretical contribution of this thesis has been to demonstrate that private actor involvement in ‘hybrid’ governance arrangements is not a homogenous phenomenon, but can take many different forms. In Chapter 2, I introduced a distinction between hybrid governance with ‘delegated’, ‘joint’, and ‘entrepreneurial’ authority. These three types of private actor involvement display rather different characteristics, and it would therefore be problematic to try to make broad generalisations on the merits of private actor involvement without making clear which type of hybrid governance is studied. As shown in the thesis, the CDM is mainly characterized by the large number of tasks being *delegated* to private actors. Even though the mechanism also involves examples of private actors engaging in hybrid governance with entrepreneurial authority, the conclusions drawn here hence primarily refer to hybrid governance with delegated authority.

One of the main reasons for delegating certain tasks to private actors in global environmental governance is to increase cost-effectiveness, and in both examples of hybrid governance with delegated authority studied here (delegation of project

implementation and project supervision), private actors have indeed strived for cost-effectiveness. Nevertheless, a key conclusion of the thesis is that in practice the involvement of private actors in the CDM has not furthered cost-effectiveness in any of the examples studied. As counter-intuitive as it might sound, delegating these tasks to private actors rather seems to have *reduced* cost-effectiveness in the CDM. Even though private actors, following a logic of profit maximization, have actively strived for reducing costs, the concurrent reduction in the quality of both projects being implemented and of project supervision has offset any gains made in this regard. If projects are not additional, they can never be cost-effective, and this is why the interests of public and private actors in the CDM, although convergent in theory, frequently seem to diverge in practice. Also in the case of hybrid governance with entrepreneurial authority studied in the thesis (the lobbying activities of private actors in the negotiations on how to reform the CDM), business actors have prioritized cost-effectiveness over other concerns. The focus on cost-effectiveness has probably also reduced the opportunities for host countries to steer investments towards their sustainable development priorities, although more research is needed before any far-reaching conclusions can be drawn on this issue.

Is it a good idea to involve private actors in a future climate agreement, or any other global environmental governance arrangement? In the end, it all comes down to how it is done. Trying to channel the interests of private actors towards public interests such as climate protection might be both tempting and necessary for saving the environment, but as the example of the CDM shows, unless the involvement of private actors is wisely designed, engaging them in global environmental governance may reduce rather than increase effectiveness. Future research should therefore continue to scrutinize the merits of different types of hybrid governance arrangements.

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