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A ton of carbon here is the same as a ton of carbon there?

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Table of Contents

List of Tables

List of Figures

List of Maps

List of Acronyms

A&R	Afforestation and Reforestation Working Group
AIJ	Activities Implemented Jointly
AP	Accreditation Panel
BP	British Petroleum
CAN	Climate Action Network
CDF	Clean Development Fund
CDM	Clean Development Mechanism
CER	Certified Emission Reductions
CO2	Carbon Dioxide
COP	Conference of the Parties
COP/MOP	Conference of the Parties serving as the Meeting of the Parties
DNA	Designated National Authority
DNV	Det Norske Veritas
DOE	Designated Operational Entity
EB	Executive Board
ET	Emissions Trading
EU	European Union
EU-ETS	European Union Emissions Trading Scheme
G77	Group of 77
G8	Group of 8
GHG	Greenhouse Gases
IETA	International Emissions Trading Association
IPCC	Intergovernmental Panel on Climate Change
JI	Joint Implementation
LDC	Least Developing Countries
MOP	Meeting of the Parties
MP	Methodological Panel
NGO	Non-Governmental Organization
ODA	Official Development Assistance
PCF	Prototype Carbon Fund
PDD	Project Design Document
REDD	Reduced Emissions from Deforestation and Forest Degradation
RIT	Registration and Issuance Team
SD	Sustainable Development
SGS	Société Générale de Surveillance
SSC	Small Scale Working Group

UK	United Kingdom
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
US	United States
VER	Verified Emission Reductions
WB	World Bank
WBCSD	World Business Council for Sustainable Development
WDM	World Development Movement
WTO	World Trade Organization
WWF	World Wildlife Fund

Abstract

This research paper explores how the Kyoto Protocol's Clean Development Mechanism inserts itself in the antagonistic relationship of a green capitalism. While expanding the accumulation by dispossession forces of capitalism, is being considered legitimately green behind a face of apolitical and neutral. This mechanism is explored through two perspectives: a structural critique on the ideological underpinnings of it, and an actor and power analysis, which reflects the politics embedded within its privatized governance architecture. The CDM is considered instrumentally constructed in a process of neoliberal expansion and private governance within the climate change negotiations, as well as reinforcing the very social values that are the root of this environmental problem.

This paper tries to clarify how large investments in technological transfers to developing countries in the name of 'sustainable development' in exchange of carbon credits or 'permits to pollute' for industrialized countries is deepening the capitalistic process of accumulation by dispossession in a local and a global level. From an activist perspective, this paper hopes to contribute to the understanding of the changing configurations of power within the CDM governance so that structural changes on the power relations can be assessed for a transformative action.

Keywords

[climate change] [Clean Development Mechanism] [politics] [power] [private governance] [green capitalism]

Chapter 1
Introduction: Hiding Capitalism under the Green Rug

Climate change is real. It is as an expression of the ecological crisis of capitalism, which embodies the complexities of unequal distribution of impacts, historical responsibility on emissions, the right for using the atmosphere capacity as well as the entrenched use of fossil fuels for reaching and maintaining economic growth (Gupta 1997). This leads to considerable dispute on whom and what should be involved in the solution. A particular world polity and ideology based on 'liberal environmentalism' (Bernstein 2005) started mandating how interdependent states should deal with common problems by devolving power to global market forces and non-state actors, leading to an international response in 1997 with the creation of a global carbon market via the Kyoto Protocol.

Liberal, or free market environmentalism, studies market processes that supposedly offer win-win solutions to sustain economic growth. At the heart of it are well-specified property rights enforced by governments and the assumption that economic growth and environmental quality are compatible. While the Protocol binds industrialized countries to reduce their emissions by an average of 5.2 per cent from 1990 levels, the core deal of this agreement was held together with the creation of 'flexible mechanisms' (Wara and Victor 2008) from which the 'Clean Development Mechanism' (CDM) is the only one that involves developing countries. The CDM enables emission-reduction or 'offset' projects in developing countries to earn credits that industrialized countries trade for in the carbon market to meet their targets under the Protocol, allowing the most polluting corporations and governments the ability to buy low-cost credits to 'offset' their pollution somewhere else. The CDM has thus become the largest emissions offset market ever created (Idem 2008).

This paper argues that the CDM plays a central and vital element in the expanding agenda of capitalism in two fundamental ways. First, materially, it allows the creation of financial markets, securing the conditions for accumulation and capital reproduction, and second, ideologically, it searches to legitimize the ongoing commodification of nature (the atmosphere in this case) reinforcing a 'green capitalism' where legitimacy becomes an essential part for its own existence. Furthermore, as legitimacy is intimately related to power and politics (Bernstein 2005), this paper also analyzes how in order to create and maintain a legitimate governance, the key tasks for implementing and regulating the scheme have been outsourced to the private sector, leading to the 'privatization of the climate governance'.

'Green capitalism', a term being inserted into the environmental movement, believes that creating new 'green' efficient technologies will create 'green' jobs, corporations, and will allow the economy to grow as more technology is adopted. Market principles will ensure the private sector's participation and that consumers will buy low-energy bulbs and efficient cars.

However, who will benefit from it and at who's expense, are questions barely discussed.

The global economic system and its embedded unsustainable path are founded on the models of development and economic growth, which along with Western domination, diffused throughout the world. Characterized by capitalism, industrialization, liberal democracy, individualism and rationalism, the unsustainable results are evident, as environmental degradation accrues. As Welford (1997:7) argues, "[the] dominant corporate culture … believes that natural resources are there for the taking and the environmental and social problems will be resolved through growth, scientific advancement, technology transfer via private capital flows, free trade and the odd charitable hand-out". Hence, as nature is considered a form of capital, 'environmental sustainability' has also been altered to provide the basic conditions for preserving capital as 'economically sustainable'.

In this regard, Marxist David Harvey (2003) explains the underpinnings of contemporary capitalism, through the 'accumulation by dispossession', which was intensified by the most recent wave of neoliberal globalization. He argues that the acceleration of privatization and financialization are creating a form of accumulation in which states exercise their power to preserve property rights and other market institutions while dispossessing, in this case, those who live in and with the privatized nature. Hence, the commodification of the global atmosphere entails loss of rights, means of production, and social contracts in the name of neoliberalism. Localities are being dispossessed not by the conventional form of property rights but by the application of complex ownership constructs at the global level. "Today the global reach of property rights is enforced also via the structural power of dominant actors in the international arena" (Andreasson 2006:7)

The carbon market represents indeed, a clear example of globalized accumulation strategies whereby the capital or carbon credits achieve higher rates of profit under the Emissions Trading scheme because of their low-cost investment relative to the high-cost of domestic reductions in the industrialized countries. The CDM is a very sensitive and complex mechanism embedded in politics with competing and overlapping discourses such as North and South, sustainability and cost-effectiveness, local and global, public and private, modern science and indigenous technologies (Backstrand and Lovbrand 2006). Thus, the CDM constant need for legitimacy is inherent to its accumulation ambition since its environmental purposes have been derived from market logic. While the search for legitimacy made the private sector attempt to engage with the climate governance actions, the mechanisms developed in the private climate governance are primarily driven by the search for accumulation (Paterson 1996).

Fundamentally, "the legitimacy of business activities is a deeply political issue, and activities directed toward sustaining this legitimacy in the face of regulatory pressure and public distrust should be understood in this context" (Levy and Newell 2005:4). The 'privatization of the climate governance' is thus inserted in multi-actor negotiations by which the private sector has been made responsible for implementing 'clean-technology' projects, monitoring their environmental standards, and providing funds. Though, this paper does not

argue that their power is absolute, but that their influence is increasing and their strategies diversifying as global governance is more diffused and decentralized (Idem 2005).

Similarly, speculative capital has neoliberalism as its ideal policy framework: deregulation, low inflation (cheap money for leveraging), privatization, and no state interference (Davis 2006). The carbon market is driven by market actors who can have direct investments in offset projects and also in secondary markets as verification processes, derivatives, hedge funds or as in the case of developing countries, by attracting more foreign investment as well as new channels of funds.

Moreover, the allocation of carbon credits within industrialized countries for starting the trading provided vast benefits for the ones with already high levels of pollution while disadvantaging developing countries, which are giving away their 'pollution rights' at the lowest cost. Hence, the decision to assign a price to pollution has already been a process of accumulation by dispossession. As Wood (1995:47 in Rogers 2000) states:

> "The process of appropriation and accumulation which remain unaccounted for when we accept the 'rationality' of the economy explain why environmental problems are difficult to address. The ethical or moral aspects of the funnelling of wealth on the one hand (and the exploitation of nature and humans that goes with it), and the abdication of collective responsibility on the other, are almost never discussed in the context of environmental issues".

Therefore, the CDM appears like an ideal strategy for neoliberalism to deal with climate change: while creating a new commodity, the right to pollute, it simultaneously establishes the apparatus which can legitimize it. So, as the carbon market is expanding, more corporations and polluting industries participate in the climate change 'mitigation' actions by offsetting their pollution whilst being considered environmentally aware and 'carbon neutral' without necessarily making any reduction or structural change. The CDM therefore represents an intensification of 'green capitalism'.

The UN Commission on Global Governance (1995:2-3) indicates that:

> "At the global level, governance has been viewed primarily as intergovernmental relationships, but it must now be understood as also involving non-governmental organizations, citizen's movements, multinational corporations, and the global capital market. Interacting with this are global mass media of dramatically enlarged influence"

With this understanding of global governance, power relations are seen as non-existent. Profit-seeking corporations and citizen movements of marginalized groups are considered equal legitimate actors. As Kamat (2004) argues, this pluralisation of the public sphere constitutes the privatization of governance where not only the state is moved from its role of representing civil society interests but also multiple private interests are being represented at the global level in the form of partnerships and co-operation. The neoliberal pluralisation of governance is, as a consequence, starting to consider markets as almost non-negotiable within the global decision-making tables.

Moreover, "the separation of the economic from the political –which is so taken for granted as a given and yet so specific to capitalism- provides capitalism with a very important defense mechanism against environmental resistance because economic concerns dominate while the political aspects of capitalism fade into the background" (Hay 1994 in Rogers 2000). Yet the inherent contradiction of capitalism could face a legitimization crisis whereby its increasing need of limitless expansion (and extraction or pollution) could put a threat on the accumulation process.

These arguments address the complex interplay of power, structures and agency in the CDM governance, where hegemonic ideologies frame what is counted as knowledge and where certain spaces have marginalized voices for alternative understandings. This paper addresses the political dimensions that led this mechanism to be deeply entrenched in techno-scientific techniques with an understanding of the environment as management and domination. Undoubtedly, climate change is an important scientific question that leads to different framings of the same problem. However, whether the earth is warmer by 2 or 3 degrees is out of this paper's scope.

Several studies concerning the CDM have already being written among scholars from different line of thoughts, focusing mainly on its governance and scope -mostly forest offsets (Lecocq and Ambrosi 2007,Michaelowa 2000,Repetto 2001,Streck 2007,Wara 2006,Wittneben 2007), the private sector influence (Newell 2005), its technocratic underpinnings (Backstrand and Lovbrand 2006), the sustainable development objective (Driesen 2007,Holm 2005,Kolshus et al. 2001,Sutter and Parreño 2007,Thorne and Lèbre 1999), the politics of the negotiations for its creation (Cass 2005,Gupta 1997,Hovi et al. 2003,Williams 2005), and its relation to globalization and capitalism (Jasanoff and Long Martello 2004,Paterson 1996). On the other side, the activist's critique tackle mostly the CDM underpinnings and its implications for developing countries and local communities (Bachram 2004,Bachram et al. 2003,Carbon Trade Watch 2008,CEO 2000,Climate Action Now 2008,Ghosh 2007,Lohmann 2005, 2006,Paterson 1996,Smith 2007a, 2007b).

This research aims to enhance the literature by assembling several pieces of this mechanism focusing on various entry-points into the instrumental use of the CDM in the climate governance through a structural and power analysis. However, since the CDM is fully dependant on governance policies, much of the negotiations post-Kyoto could deeply affect its structure and functioning and thus this study has to be understood within the current context.

The paper is organized into 7 chapters. In the subsequent chapter, an examination of power, politics and an analytical framework are presented. The third chapter presents the CDM in three parts: the negotiation process as a contextual framework, the implications of its market-driven logic, and an explanation of the mechanism ways of operation. The fourth chapter is a critical discussion of the characteristics and assumptions that drive the underpinnings of the CDM. The fifth one gives an account of the most important actors involved and their relations in this scheme leading to the creation of a 'Power Map'. This map illustrates the role of the private actors, the structure of the mechanism in relation to its two main objectives (creating carbon credits and achieve sustainable developing in the host countries), and

the established spaces for participation. The sixth chapter analyses how power operates throughout the mechanism in the form of visible, hidden and invisible power. And the final chapter presents the conclusions of the research, inserting the CDM in the global political agenda.

Chapter 2
Conceptual framework

A conceptual discussion of politics and power will be addressed in this chapter due to their importance in the analysis of the global and local responses towards climate change as well as of the struggles to maintain and challenge the status quo and control over resources. Finally, a 'Power Framework' is presented which combines the theoretical concepts with the main actors that play a role in both, reinforcing and/or contesting the CDM at different levels.

2.1 Politics as Power

Politics comprises the discourses and struggles over the organization of human possibilities. As such, is about power and the capacity of social agents, agencies and institutions to maintain or transform their social and physical environment (Held 1989). This paper will deal with politics as one of the views of Heywood (1997) that examines politics as power, placing it at the heart of *all* collective social activity concerned with the production, distribution and use of resources.

In this regard, new forms of 'governance' construct politics by re-defining agencies, authorities and even citizenships in a new sphere of supranational politics. Both the 'local' and the 'global' crucially depend on the formation of knowledge and its interaction with power and hence, the way environmental problems are framed and represented are inescapably linked to the approaches in which they are ameliorated or solved (Jasanoff and Long Martello 2004). The issues that are meriting the world's attention have everything to do with interests and control on specific knowledge, including the scientific ones.

Much of the current political environmental approaches, oriented around efficiency and cost-effectiveness are reinforcing the power of 'business as usual', where an enemy for the economic actors is the potential of state regulation. A dominant view on the use of market instruments for *managing* environmental concerns is reinforced (Doyle and Mceachern 1998). The 'greening' of politics at national and global levels –mainly as a result of environmental disasters and the movements' pressure for having it on the agenda- is resulting in rhetoric for justifying politics as usual and marginalizing those who attempted deeper policy change.

Consequently, the market-oriented policies of Kyoto have left local and indigenous communities as invisible or unimportant. "[The negotiations] depict vast areas of the world's forest and land as underutilized and as therefore available for carbon-driven management or tree planting. They portray global emissions trading policies as technical rather than political in character and imply that they will generate few social consequences" (Jasanoff and Long Martello 2004:104). As a result, there is a perception of having governance without politics, while these unaccountable and undemocratic institutions are on the contrary, embedded with political as well as economic interests.

Dahl (1968:10) argues that "power refers to subsets of relations among social units such that the behaviors of one or more units (the responsive units, R) depend in some circumstances on the behavior of other units (the controlling units, C)". This definition encompasses various levels of power relations and is commonly associated with a negative connotation such as repression, wealth, force, corruption or abuse. Dahl's analysis of power is still influential although many have criticized it as a narrow perspective (Haugaard 2002).

Bachrach and Baratz criticized Dahl's perspective mainly on the lack of an institutional bias' analysis in which not only does A exercise power over B in evident decision-making (as in Dahl) "[b]ut power is also exercised when A devotes his energies to creating or reinforcing social and political values and institutional practices that limit the scope of the political process to public consideration of only those issues which are comparatively innocuous to A" (Bachrach and Baratz 1962:30). That is to say that power may be being exercised even when no observable conflict occurs (i.e. preventing action or silencing debates). Moreover, they added the non-decision-making process idea as the suppression of a latent challenge to the values or interests of the decision-maker.

Lukes on the other hand, established Dahl's and Bachrach and Baratz's theories as two 'dimensions of power' that assume the existence of conscious and observable interests, to which he adds a third one by redefining power in terms of 'interests' (Haugaard 2002). He argues that "to assume that the absence of grievance equals genuine consensus is simply to rule out the possibility of false or manipulated consensus by definitional fiat" (Lukes 1974:43). The three-dimensional conception of power assert that conflict exists in "a contradiction between the interests of those exercising power and the *real interests* of those they exclude" (Lukes 1974:44)

Similarly, Foucault's work on discourse and power is helpful for reflecting on how we know what we know; whose interests and values it might serve; under what circumstances it is produced and more importantly, how it is possible to think differently. He is less concerned on focusing power as oppression but rather in leading resistance to power, in which individuals are seen as agents embedded in power relations that permeate within all relations in society rather then passive victims (Mills 2003). Therefore, power is not stable since it can be challenged at any moment and hence, carries a transformative potential.

Discourse for Foucault is both, the means of oppression and the means of resistance; and it should be considered as a system that structures and constrains the way we perceive reality. "Discourses are not once and for all subservient to power or raised up against it, any more than silences are… [they] can be both an instrument and an effect of power, but also… a point of resistance and a starting point for an opposing strategy. Discourse transmits and produces power; it reinforces it, but also undermines it and exposes it, renders it fragile and makes it possible to thwart it" (Foucalt, 1978:100 *in* Mills, 2003:54).

Foucault believed that power must be analyzed as something which circulates and is spread throughout society, and not as located in specific

institutions as the state, police or governance institutions. He argued that power could be found more clearly in the relationship between the individual and the institution and thus, "it is necessary to look at the way in which institutions operate and the way that they are constrained also by the demands and resistance of individuals within the organization as well as individuals and groups outside it" (Mills 2003:50).

In addition, a Gramscian perspective on Hegemony is useful for enhancing the understanding of diffused power. He defined it as "the 'spontaneous' consent given by the great masses of the population to the general direction imposed on social life by the dominant fundamental group; this consent is 'historically' caused by the prestige (and consequent confidence) which the dominant group enjoys because of its position and function in the world of production" (1971:12). In this regard, hegemonic forces have been very successful in framing particular definitions such as 'free market', 'sustainable or 'clean development' as representing the general interests and not just specific ones. 'Cultural hegemony', on the other hand, was used by Gramsci (1971) to address the relation between culture and power under capitalism. It is a starting point to (re)-think crucial issues (Lears 1985), and has to be understood within a multilayered analysis of historical (material) bases and intellectual contexts.

2.2 Analytical Framework

In order to examine the dynamics of power within the CDM, the analysis of various levels of powers vis-à-vis different actors makes possible to examine the "degree to which conflict over key issues, and voices over key actors, are visible in given spaces and places" (Gaventa 2005:14). This goes further from the conception of 'power over' by recognizing power when constraining participation, excluding opposing views or discourses, and institutionalizing and shaping the established spaces to only what is wanted or needed. Though, it also considers the possibility of unexpected effects that those spaces can have whereby "even the most instrumental of interventions [can have] the potential for transformation" (Cornwall 2004:85).

The proposed framework distinguishes three levels of power that are related to Lukes' three-dimensional conception of power as well as Foucault's analysis: visible, hidden and invisible, from which mainly the last two shape the effectiveness of citizen participation and may lead to powerlessness, conflict, marginalization, and resistance. Thus, various strategies are required so that political awareness and participation can be more inclusive by exercising alternative sources of power (Veneklasen and Miller 2002) (See Table 1).

Consequently, according to Foucault "if power is diffused throughout all social relations rather than being imposed from above; if it is unstable and in need of constant repetition to maintain… then it is difficult to see power relations as simply negative and constraining" (Mills 2003:47). However, with such a diverse agenda it is not easy to co-ordinate resistance, "but perhaps Foucault would argue that strategies to counter a complex power relations within a globalized economy and society need not to be unitary and unidirectional" (Mills 2003:48).

Table 1. Three-dimensional power framework

	Visible power	Hidden power	Invisible power
	Observable decision-making	*Setting the political agenda and non-decision-making*	*Shaping interests and meaning of what is accepted*
Levels of power	Definable aspects of political power (formal rules, structures, authorities, institutions, and procedures of decision-making).	Controlling who gets to the decision-making table and what gets on the agenda.	Problems are kept away from the minds and consciousness of different players involved. Grievances are shaped to serve the interests of others.
Main Actors reinforcing and contesting the CDM	Formal institutions and authorities (UNFCCC COP/MOP, CDM Ex. Board, World Bank, etc);	COP/MOP, Corporative lobbies, NGOs, World Bank, brokers.	Hegemonic discourses. Undemocratic institutions. Internalized forms of powerlessness. Mainstream Media
	Legal instruments - visible mechanisms of power shape the formal ground rules of society - Kyoto Protocol (art.12).	Decision-making closed to public accountability. Established spaces and forms for participation impeding a more powerful reaction. Treatment of information. Movements and NGOs reinforcing and contesting the status quo	Discourses from most Civil Society and Mass Media seeing Kyoto as a first step. Movements and NGOs reinforcing and contesting the status quo. Affected local communities, leaders labeled troublemakers.

Framework built by Lukes, 1974 and Gaventa, 1980 with the Institute of Development Studies Participation Group, and consolidated by VaneKlasen and Miller (Veneklasen and Miller 2002)

Chapter 3
The Kyoto Protocol and the CDM: the World at the Crossroads

3.1 Negotiating the atmosphere

During the 1960s and early 1970s numerous severe climatic events[1] clearly identified the human dependence on climate and pushed for increased research (Paterson 1996). The 1972 UN Conference on Human Environment in Stockholm marked the beginning of organized international efforts to address environmental problems while also promoting economic development (Vig 1999). The UN Environmental Programme (UNEP) was created for coordinating a regional and global environmental policy consensus. In 1987 the World Commission on Environment and Development (or the Brundtland Commission) issued the report 'Our Common Future' correlating sustainable development with economic growth. The next year, the UN adopted the first resolution[2] dealing with climate change and mandated the Intergovernmental Panel on Climate Change (IPCC) to achieve scientific consensus (Newell 2006,Vig 1999). The Earth Summit at Rio, Brazil in 1992 generated international treaties on climate change and biodiversity, and finally in 1994 the UN Framework Convention on Climate Change (UNFCCC) entered into force with the ratification of 165 countries (UNFCCC 2008b).

The initial enthusiasm of negotiators, the public pressure in some industrialized countries, and the momentum of the process, set the discussions for international obligations to begin in 1992 (Gupta 1997). While the European Union (EU)[3] advocated for domestic regulatory adjustments and/or taxes as the only legitimate mechanisms, the United States (US) steadily affirmed that the international response had to be guided by efficiency and cost-effectiveness (Cass 2005). Yet in 1994 industrialized countries made non-binding commitments to reduce their emissions to 1990 levels by 2000 whereas developing countries under the 'common but differentiated responsibilities' principle of the UNFCCC, brought to the table their necessity for adaptation funds and technology transfers (Michaelowa 2000).

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[1] The Sahel five-year drought, the 1962 drought in the then Soviet Union, the monsoon failure in India, 1972 Typhoon 'Didang' in the Philippines, drought in Europe in 1976 (Paterson 1996)

[2] The resolution is 'Protection of the Atmosphere for Present and Future Generations of Mankind': http://daccess-ods.un.org/TMP/9849007.html

[3] The EU is treated within this paper as a block since their public decisions and participation in the climate actions have been as such. It recognizes the importance of the politics inside but they are beyond its scope.

The US and its supporters[4] proposed in 1995 at the first Conference of the Parties (COP) in Berlin, the Emissions Trading scheme as well as the inclusion of developing countries into the Joint Implementation mechanism, which normatively would provide cost-effective ways to domestic emission abatements. Although the latter proposal was strongly rejected with the support of the EU, by the G-77/China group and NGOs, the JI was accepted as a legitimate instrument but without the participation of developing countries. It was clear for the EU that domestic emission reductions would be expensive to achieve in the near future and thus trading offered a less costly approach. However, its initial opposition and strong public support for domestic reductions made it difficult to alter its position without undermining its legitimacy (Cass 2005). The debate was starting to be framed towards market-oriented policies by the US and its supporters.

With the constant justification of bringing developing countries 'on board', the CDM or the 'Kyoto surprise' (Werksman 1998) was a late intervention in the negotiations. It emerged form the Brazilian delegation proposition, accepted by the G-77 and China, to create a 'Clean Development Fund (CDF)' on the basis of the 'polluter pays' principle. It would apply penalties for industrialized countries that exceeded their targets in order to finance clean energy for mitigation (90%) and adaptation projects (10%).

During the COP 3 in Kyoto in 1997, where economists were actively focusing in the costs of each measure (Gupta 1997) together with internal disagreements in the G77/China group (Holm 2005), the CDF was transformed into the CDM. This allowed for projects in developing countries to create credits that can be utilized by industrialized countries to meet their emission reduction obligations. "Fines were transformed into prices; a judicial system was transformed into a market" (Lohmann 2006:51). Similarly, the EU trying to maintain its legitimacy affirmed, "flexibility must never become a backdoor through which rich countries can get away by paying other countries instead of doing their homework"[5] (Cass 2005:52). The disputes among and within the Umbrella Group, the EU and the G77/China reflected important economic and political interests as well as divergent positions towards the agreement (See Annex I and II).

The Kyoto Protocol established binding targets for industrialized countries with the admission of the instruments proposed by the US called 'flexible mechanisms'. However, various issues on the implementation and regulation were left open. The EU was advocating for a joint target which later became known as the 'EU Bubble'. The Buenos Aires COP in 1998 decided on a work program to resolve those issues by 2000 and agreed on the 'Activities Implemented Jointly' between industrialized and developing countries, with a four-year pilot phase of offset projects in the developing world without crediting (Michaelowa 2000).

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[4] Canada, Japan, Australia, New Zealand and Russia. In 1998, the US proposed among those countries to create the 'Umbrella Group' (Cass 2005); in response to the EU internal trading that started after 1998 (Lohmann 2006).

[5] Statement by Bjerregaard after a September 1998 informal meeting in Japan, quoted in Cass, 2005.

During the COP 6 at The Hague in 2000, the US position, "almost captured by business" (Faure and Vig 2004:349), acknowledged that to establish a limit on the use of flexible mechanisms would signify a high domestic cost target. Moreover, the possibility of the 'EU Bubble' placed the US at disadvantage. Consequently in 2001, Bush's administration confirmed a unilateral decision for the US: deprive the climate regime from the world's largest polluter, in turn urging other nations, including developing countries, to undertake voluntary actions (Faure and Vig 2004). This declaration came in spite of the US important influence over the Kyoto decisions. Nonetheless, the EU was seeing the climate negotiations not only through economic and environmental lenses, but also political. This element was as important, if not higher (Hovi et al. 2003).

To secure the commitments of Russia, Canada and Japan[6], the EU radically shifted its position by promoting Emissions Trading as a legitimate strategy. It accepted to advance with more availability of CDM credits, even though the country seeking those targets, the US, had absconded. The persistence on the Kyoto agreement matches the desire of the EU to stand forth as an international leader in climate politics whereby the strategy was directed "towards the development and reinforcement of the EU 'foreign policy'" (Hovi et al. 2003:15). Concurrently, most environmentalists and NGOs recognized the agreement as a 'first step' and thus any criticism towards the Protocol was considered not as opposing the free-market environmentalism "but as playing into the hands of US oil interests as endorsing a do-nothing position" (Lohmann 2005:205).

Corporations on the other side, highly involved in the emission of GHGs, have a crucial role in the climate negotiations promoting business-friendly solutions through their lobbies. The interaction among corporations and governments has historically resulted in developmental paths with increased emissions, and since accumulation of capital is dependant on fossil energy in different ways, corporate lobbies have been of great influence on the climate policy (Paterson 1996).

The Kyoto Protocol was ratified and entered into force in 2005, binding[7] "developed countries to reduce their GHG emissions below levels specified for each of them in the Treaty. These targets must be met within a five-year timeframe (2008-2012), and add up to a total cut in GHG emissions of at least 5% against the baseline of 1990" (UNFCCC 1998). The Protocol helps industrialized countries to meet these targets by using flexibility mechanisms: Emissions Trading scheme, Joint Implementation and the Clean Development Mechanism. The so-called Bubbles allow a group of countries to have a join

[6] The Protocol's conditions to enter into force were: it must be ratified by at least 55 countries and must account for at least 55 percent of industrialized countries emissions.

[7] A failure to meet a target means that that state must make up the difference in the second period, plus a penalty of 30 percent and its ability to sell under emissions trading will be suspended (UNFCCC 2008b). However, any country can drop out and not comply the targets, which would probably cause the demand and supply of permits to shift (Mckibbin and Wilcoxen 2002).

target and adopt their own internal policies. Until now, the EU Emissions Trading Scheme (EU-ETS)[8] is the only one.

The carbon market's ideological fabrication reflects the battle of interests and power played during the negotiations for persuading partners and possible allies towards hegemonic convictions, whereby the various actors have to deal with an involuntary ecological interdependence. Consequently, the Kyoto debate was instrumental in re-affirming the neoliberal legitimacy in moments of global governance crisis.[9] According to Bernstein (2005b), this legitimacy challenge was diminished in part by the very success of liberal environmentalism in which the climate agreements subordinated environmental purposes for economic goals. The debate was therefore, as much about framing the public debate as it was about the rules governing trading (Cass 2005).

3.2 A Market-Driven Instrument

The CDM is a market instrument that derives from neoclassical economics with the assumption that efficiency will direct social action away from harmful behaviour towards mitigation or conservation (Rosales 2005). It is the neoliberal hegemony, based on neoclassical economics, which widely persuades the belief that markets operate efficiently with no government interference (Paterson 1996) and given the right economic conditions the desirable technological change will automatically occur (Beder 1996).

During the 1980s the traditional legislative instruments for environmental policy were criticized for being considered inadequate and insufficient. Public opinion pressured for tightening environmental standards to private corporations (Beder 1996). However, in order to avoid stricter and more costly regulations, businesses and governments turned to economic instruments. At the same time, the environmental movement was having a difficult time going in opposite direction from the idea of 'economic growth' (Rogers 2000). Thus, the expanding of the free-market system towards the environment made economists able to enrol the support of other interests groups, even those having conflicting interests (Beder 1996), such as businesses and NGOs.

CDM advocators claim that the absence of property rights encouraged overconsumption (pollution) and contributed to the problem referred as 'the tragedy of the commons' (Swingland 2003) and on the other side, that regulation places a high cost on industry and impedes economic growth (Beder 1996). A 'proper' price will place the resources away from those who wish to exploit them or at least, ensures that the social benefits of exploitation exceed the social costs (Beder 1996). In this regard, "the market price of the emission credits would be lower than abatement cost in the absence of trading

[8] The EU-ETS started with Phase I (2005-2007). It is now in its Phase II until 2012 and is already negotiating the 'climate package' for the Phase III.

[9] The systematic destabilization of national economies such as Mexico, South East Asia, etc; production of bubble economies, mainly high-tech and housing markets; governance scandals such as the collapse of LTCM; etc (Petterson 2007).

opportunities. The sellers would receive payments that fully finance abatement activities and may also leave a surplus" (Bromley and Paavola 2002:167).

From the point of view of the financial markets, Kyoto is the perfect choice since it requires new trading markets to be established and creates new opportunities for arbitrage, hedging and derivatives (Davis 2006). However, in this market the need for monitoring and enforcement remains as in a centralized regulation policy framework thus markets are not necessarily 'less bureaucratic' (Beder 1996).

3.3 The Clean Development Mechanism

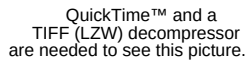
Operational since the beginning of 2006, the CDM is the only one that involves developing countries, which do not have any reduction targets for the first commitment period 2008-2012. The other mechanisms are Joint Implementation[10] and Emissions Trading (ET). Under the ET, industrialized countries receive an initial allocation of 'Assigned Amount Units', which are tradable permits that can be bought and sold among them under the Protocol as a market commodity (known as 'cap-and-trade'). It also allows trading with the reductions acquired under the CDM or the Joint Implementation. Therefore, if a corporation needs to emit above its permitted level, it can buy credits to cover this increase. Similarly, a corporation that manages to decrease its emissions below the cap could sell those spare credits.

The CDM normative is that "developed countries can identify lowest-cost opportunities for reducing emissions and attract private sector participation in emission reduction efforts. At the same time, developing nations benefit in terms of technology transfer and investment brought about through collaboration with industrialized nations" (UNFCCC 1992). This rhetoric of a win-win situation is believed to be crucial for having a meaningful participation by developing countries (Repetto 2001)

In this regard, the CDM allows emission-reduction (or emission removal) projects in developing countries to earn certified emission reduction (CER) credits. Each credit is equivalent to one ton of CO2 (UNFCCC 1992), which can be traded, sold and used by industrialized countries in order to meet their emission reduction targets. Article 12 of the Protocol (See Annex I) highlights the CDM 'double-dividend' characteristic by establishing as much emphasis on 'helping industrialized countries meet their commitments' as on 'promoting sustainable development' in developing countries (UNFCCC 1998). The idea is to assist developing countries onto a more sustainable path through, for instance, technology transfer, capacity building, and financial resources (Kolshus et al. 2001).

[10] As the CDM, it allows industrialized countries to receive credits by investing in GHG reduction projects in another industrialized country (mostly within economies in transition like Russia and Eastern Europe).

Figure 1. Relation between the CDM and Emissions Trading



Based on (Japan Quality Assurance Organization 2008)

Each project must qualify through a stringent public registration designed to ensure real, measurable and verifiable emission reductions that are 'additional' to what would have occurred without the project. The CDM Executive Board (EB), accountable primarily to the countries that have ratified the Protocol, oversees the mechanism, while the Designated Operational Entities (DOE) certify the projects' emission-reductions and removals. As a result, the EB will issue the CERs when validation and verification have been received from the DOE. However, in order to be considered for registration, a project must first be approved by the Designated National Authority (DNA), which is selected by each host country and is its prerogative to validate whether the project contributes to its sustainable development (UNFCCC 1992).

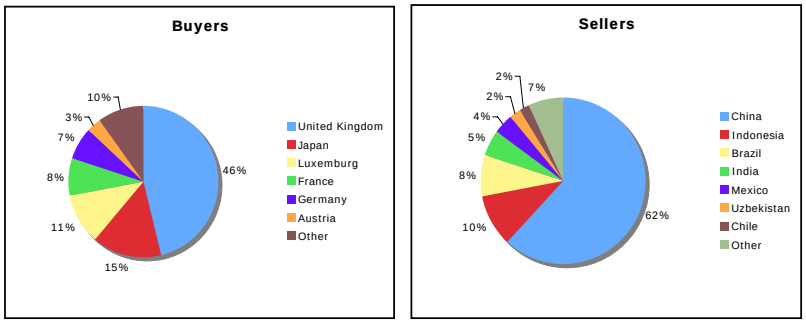
The cycle of a CDM project includes the following steps: project design, validation and registration, monitoring, verification and certification, and issuance (See Annex III). These involve different sectors of society: government, business, non-profit and private organizations, in cooperation between industrialized and developing countries.

According to the business consultancy Point Carbon, the CDM has grown more than expected "increasing from 563 Mt [million metric tonnes] and 3.9bn to 947 Mt and 12bn in 2007. This is an increase of 68 percent in volume terms, and a staggering 199 percent in value terms from 2006, and in total constituting 35 percent of the physical market and 29 percent of the financial market" (Roine et al. 2008:4). Beginning this year, industrialized countries and their corporations, will have to measure, estimate and account for their GHG[11] emissions and therefore, CDM projects are continuously increasing. This mechanism is considered to be a way to demonstrate meaningful participation by developing countries (Repetto 2001).

[11] Six gases listed in the Kyoto Protocol are considered 'equivalent': carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF6) (UNFCCC 1998).

But, who are the buyers and sellers? As shown in Figure 2, on the buyers' side the Europeans are dominating the market followed by the Japanese (15 percent). United Kingdom's large share (46 percent) covers CERs for re-sale more than domestic needs. However, altogether, the private sector is dominant with 78 percent of the volumes purchased (Roine et al. 2008). On the sellers' side, China has captured almost two-thirds of the project-based transactions market mostly due to its low-cost production of CERs. In this regard, "China is well ahead of other countries in the CDM pipeline with 53% of potential CER supply until 2012" (WB and IETA 2008:27). Indonesia and Brazil are following with 10 and 8 percent respectively and India with 5 percent, while the most capital-constrained countries, most notably those in Sub-Saharan Africa, are left out.

Figure 2. **Sellers and Buyers of CERs with the CDM**



(Roine et al. 2008:17).

The Marrakech Accords stipulate the 'supplementary requisite' for the use of the CDM whereby "domestic action shall constitute a significant effort" (UNFCCC 2001). However, there is no specific number for how supplemental or how much domestic action is considered a significant effort. Even though some countries advocate for precise numbers, such as the EU internal limit of 50 percent for the use of CDM and JI credits during Phase II, it is outside any legal framework.

Towards a 'Clean' Development?

The concept of the CDM is that as GHG are emitted they will result in a contribution to the global increases of temperature, regardless of where or which is the source. A ton of carbon is the same anywhere. Therefore, by making reductions where is most cost-effective to do so, one can 'offset', 'neutralize' or 'compensate' the pollution made somewhere else. Some of the lowest marginal costs of carbon abatement reside in the developing world, where it is believed that efficient technologies can reduce emissions more easily than in countries with a more established infrastructure.

Offsets are those projects that would not have taken place in the absence of CDM funds. This mechanism varies in complexity and design since there are still uncertainties on how the different GHG considered in the Protocol can be equalized throughout the projects. Moreover, carbon savings expected to be made in the future are counted as savings made in the present. Thus, the amount of CO2 emitted today is immediately placed in the atmosphere while

the period of 'neutralization' take place over a much longer period, in the case of plantations over 100 years (Smith 2007a).

On the other side, these projects are to bring also local and regional improvements (Kolshus et al. 2001). Establishing sustainable development as one of the main objectives was crucial for earning the support of developing countries (Thorne and Lèbre 1999). Although there has been substantial discussion around the concept of sustainability and how it should be enacted through policy, its strong connection with economic growth has been essential, materialized in transfers of clean-technology (Kolshus et al. 2001).

The Marrakech Accords established that "it is the host Party's prerogative to confirm whether a CDM project activity assist it in achieving sustainable development" (UNFCCC 2001). Consequently, developing countries can subjectively (or conveniently) define their sustainable criteria. This objective is thus considered not to be assessed at the international level while the accounting for emission offsets is subject to a stringent international assessment. As highlighted by the UNDP (2006), social and environmental benefits are, unlike emission reductions, un-priced on the global carbon market and therefore tend to be given a low weight.

A Regulatory Pre-Requisite

What is known in the climate jargon as 'additionality' is a crucial pre-requisite for any offset project to be accepted as such, and at the same time, is one of the most controversial characteristics. The article 12 asserts that all projects must ensure "real, measurable and verifiable emission reductions that are *additional* to what would have occurred without the project" (UNFCCC 1998 emphasis added) (See Annex I).

The first draft of the Project Document (which every project developer has to complete) made by the CDM Executive Board included an 'Additionality Test' in which project developers were asked to "provide affirmation that the project activity does not occur in the absence of the CDM" (Pearson and Loong 2003:4). A paragraph added: "…the project itself would not occur in the absence of the CDM or the ability to register the proposed project activity as a CDM project activity" (Idem 2003:5). Therefore, the rules for avoiding existing projects were proposed.

However, the proposal was rejected by industrialized countries and business groups as, one could argue, it would have ruled out business-as-usual projects and caused carbon credit prices to rise, affecting the cost of compliance with their targets (Pearson and Loong 2003). Finally, the Marrakech Accords stated that a project must provide a "brief explanation of how the anthropogenic greenhouse gas (GHGs) by source are to be reduced… including why the emission reductions would not occur in the absence of the proposed project activity" (UNFCCC 2001). Consequently, there is a lack of explicit requirements for showing that the project would not have happened without the CDM. Yet, if a project was going to happen anyway, no real offset is being made at the global scale since *new* emissions need *new* 'compensations'.

Chapter 4
Legitimizing Discourses: a Win-Win Situation?

According to the dominant policy rhetoric, the CDM is a win-win solution that claims to benefit all actors. However, at a very fundamental level, the CDM is allowing the 'business as usual' scenario to continue by presenting itself as an efficient way to deal with climate change while largely maintaining the levels of pollution.

The biggest opposition the Protocol has faced so far is the 'not doing enough' discourse. The IPCC (1995) stated that GHG reductions of 50-70 percent are needed to halt global warming and yet Kyoto only requests 5 percent reductions; however, being considered a 'first step' has saved it from more severe critiques in this matter. Similarly, there is recognition, even from its supporters, that the CDM has various technical problems, which the managerial approach with a complex administrative architecture has tried to diminish. Yet, the web of procedures and players inevitably emphasizes the standardization and blueprint logic of the scheme. Finally, neither sellers nor buyers of CERs have a private interest in the actual delivery of the service[12], and both parties involved in the transaction share the interest of inflating the approved baseline[13] hence, there is a bigger potential for manipulation and conspiracy than in normal commercial transactions (Repetto 2001).

At the end of March 2008, there were 3,188 projects in the CDM pipeline, of which nearly one-third are registered (978) or in the process of registration (188) while around two-thirds are at validation stage (2,022) (UNFCCC 1992). As a result, the market infrastructure, institutions and regulators are battling to maintain pace with this CDM momentum (WB and IETA 2008). "As all scramble for a piece of the emissions trading pie, no equivalent level of activity is seen from credible verifiers or monitors. This imbalance can only lead to an emissions market dangerously reliant upon the integrity of corporations to file accurate reports of emissions levels as well as emissions reductions from projects" (Bachram et al. 2003:37).

This chapter critically examines the structure of the mechanism emphasizing on three crucial points of analysis: from the concept, from the objective, and from the regulation. The first deals with the essential concept of an offset project, what does it mean, who is benefiting and what is being legitimized with it. The second one analyses the instrumental use of 'sustainable development' as one of the CDM main objectives which was key for bringing developing countries 'on board' and yet lacks any procedure for its

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[12] As long as the buyer receives CERs, there is no private interest in whether or not the actual reduction took place. And as long as the seller receives payment, there is no private interest either and could save money with a poor implementation (Repetto 2001).

[13] "The baseline is the level of emissions that would have occurred without the project. This counterfactual baseline is hypothetical" (Repetto 2001:311).

implementation. And the last one assesses the unreliable use of the additionality pre-requisite for legitimizing the offset ideology.

4.1 From the Concept: Offsetting is not Reducing

The Protocol states that CDM projects (offsets) *are* emissions reductions, however, planting trees, fertilizing oceans, burning methane from landfills to generate electricity, or setting up wind farms cannot be verified to be climatically equivalent to each other or to reducing one's fossil fuel consumption (Lohmann forthcoming 2009). Moreover, since these offsets generate CERs that will allow emissions somewhere else, then there is no reduction happening at the global scale. On the contrary, it is creating new permits for the Emissions Trading scheme underestimating the caps established at the Protocol. Northern polluters can continue to pollute, and even increase pollution legitimately with the help of the carbon market as well as not be concerned about abatement actions.

Offsets distract attention from attempts to reduce dependence on fossil fuels (Bachram et al. 2003,Carbon Trade Watch 2008,Lecocq and Ambrosi 2007,Lohmann 2005, 2006,Pearson and Loong 2003,Smith 2007a). The focus is no longer on reducing emissions but on trading and claiming credits. Hence, businesses are less likely to complain about legislation when they can avoid complying if they do not meet their targets (Rosales 2005), in another words, the wealthiest actors are allowed to buy their way out.

In this regard, as the New York Times highlighted, "if a company or a country is fined for spewing excessive pollutants into the air, the community conveys its judgment that the polluter has done something wrong. A fee, on the other hand, makes pollution just another cost of doing business, like wages, benefits and rent" (Sandel 1997:A29). Hence, governments are offsetting events, such as the EU Presidency offsetting the G8 summit in 2005, and the UK Foreign Ministry's offset of annual air travel emissions with a South African wind project. Corporate brands and reputations are being created around the slogan of being 'carbon neutral' (Tyler 2007).

BP and Shell have been cultivating progressive corporate images and positioned themselves at the front of the offsets market. The corporations' opportunity to 'greenwash' their activities in order to present themselves as environmentally responsible is legitimazing business-as-usual forms of production and consumption. As Kevin Smith (2007a:10) affirms, "British Airways, which opposes aviation taxes and would never advocate that people simply choose not to fly unnecessarily can, through Climate Care, present its climate-conscious passengers with the option of flying free from concern over the impact of their emissions".

Brokers such as Climate Care, CarbonNeutral Company or Carbon Clear sell offset products to promote a so-called carbon neutral living. They offer consumers the possibility to take carbon neutral flights or go carbon neutral driving by buying some offset credits whereas certain amount of GHG is being dumped into the atmosphere. It is clear that the industrialized countries will reach their modest targets only with a broad use of the CDM offsetting projects (Benecke et al. 2008).

4.2 From the Objective: An instrumental use of 'Sustainable Development'

Kysar (2005) accurately questioned the market liberalism's compatibility with sustainable development (SD). The absence of a concrete definition of SD in the Protocol presents some difficulties for its implementation and regulation. Besides, throughout the Protocol's text, the term 'sustainable development' can only be found three times (Kolshus et al. 2001), reflecting the little weight that is placed on it. Hence, there is an unwritten assumption in the Protocol that projects that are good for carbon abatement must also be good for SD in developing countries (Austin and Faeth 2000).

The Brundtland Report[14] made a substantial effort to marry the environmental concerns with the pursuit of economic growth. It "claims that environmental degradation often impedes economic development and, controversially, that poverty frequently causes environmental degradation" (Driesen 2007:10), implying that economic growth will simultaneously safeguard the environment and assist poverty elimination. In this regard, as treated in the Protocol, "sustainable development is not a radical environmental or green concept, since it accepts the prime need for economic growth… it conceives the relationship between humans and nature in terms of the use of the environment by and for humans" (Doyle and Mceachern 1998:35).

Furthermore, while the concept is theoretically equally applicable to all countries, in discourse it has become synonymous with the developing world. The construction of SD with poverty and the poor is linked with the historical usage of the term 'development' (Williams 2005) and consequently, the responsibility and pressure of achieving it is already pushed again towards developing countries.

In view of that, the Indian CDM authority for instance, follows a fast-track approval for the projects. "It neither scrutinizes project documents nor monitors projects after clearance. Validation agencies … maintain a respectable silence about both delivery and sustainability aspects" (Ghosh 2007). However, developing countries' interest to participate in the CDM scheme essentially rests on obtaining additional funds beyond those already available through the ODA, even though the mechanism is surrounded by problems on monitoring, enforcement as well as high transaction costs.

Sutter et al. assessed 16 officially registered CDM projects with regard to whether they fulfil its two main objectives. "While a large part (72 percent) of the total portfolio's expected CERs are likely to represent real and measurable emission reductions, less than 1 percent are likely to contribute significantly to sustainable development in the host country" (Sutter and Parreño 2007:75). Therefore, a trade-off between the two objectives in favour of the cost-

[14] The Brundtland Commission, formally the World Commission on Environment and Development, was convened by the UN in 1983 to establish policies for SD. Its definition is: "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED 1987:8).

efficient one is being made. As Bobby Peck from the South African environmental justice organization 'GroundWork' notes, "companies that are able to avoid reducing GHG through carbon trading are also not going to be reducing the other pollution that causes harm to local communities next to these industries" (Lohmann forthcoming 2009).

Furthermore, most renewable energy projects are silent in their need for large quantities of land for its implementation (such as windmills, biofuels, plantations). Besides, these pressures on land property and people displacement, will also affect the price of traditional agricultural crops and timber, and hence agricultural food prices.

Due to the competition among developing countries to receive 'additional' funds, strict requirements are undermined in order to facilitate the entrance of new investors. Consequently, the CDM is legitimizing an environmental 'low-intensity' sustainability, where the definitions are not contested within the governance and powerful decision-making tables and its legitimization is more important than its accomplishment.

Thus, the CDM institutions become at some point contradictory when the UNFCCC explicitly address in Article 3.3: "…policies and measures to deal with climate change should be cost-effective so as to ensure global benefits at the lowest possible cost"(UNFCCC 1992). Yet, reaching emissions targets cheaply and mitigating global warming are fundamentally antagonistic.

4.3 From the Regulation: What would have happened without the project?

The controversy surrounding the 'additionality' prerequisite converges in that it requires identifying one distinctive business-as-usual storyline to compare with the storyline that comprises the project. However, "since what would have happened otherwise is unobservable, certification is speculative and subject to error" (Bromley and Paavola 2002:168). With countless 'without-project' scenarios, the selection of which one is to be used in measuring the carbon credits is a matter of political decision rather than economic or technical conjectures (Lohmann 2006). Besides, the question of whether some local or national circumstance changes to make the project no longer additional still remains.

The ambiguous language used at the Kyoto rules caused that for instance, as the Third World Network and CDM Watch organization pointed out, "in response to comments… about the non-additionality of a project in Peru, SGS [the validation agency, Société Générale de Surveillance] wrote that its instructions from the Dutch Government required only an environmental additionality test, and that 'in our opinion, the environmental additionality test does not screen out business-as-usual projects…'" (Pearson and Loong 2003:17). This illogical situation has led project developers and validators to use the additionality pre-requisite for their own convenience.

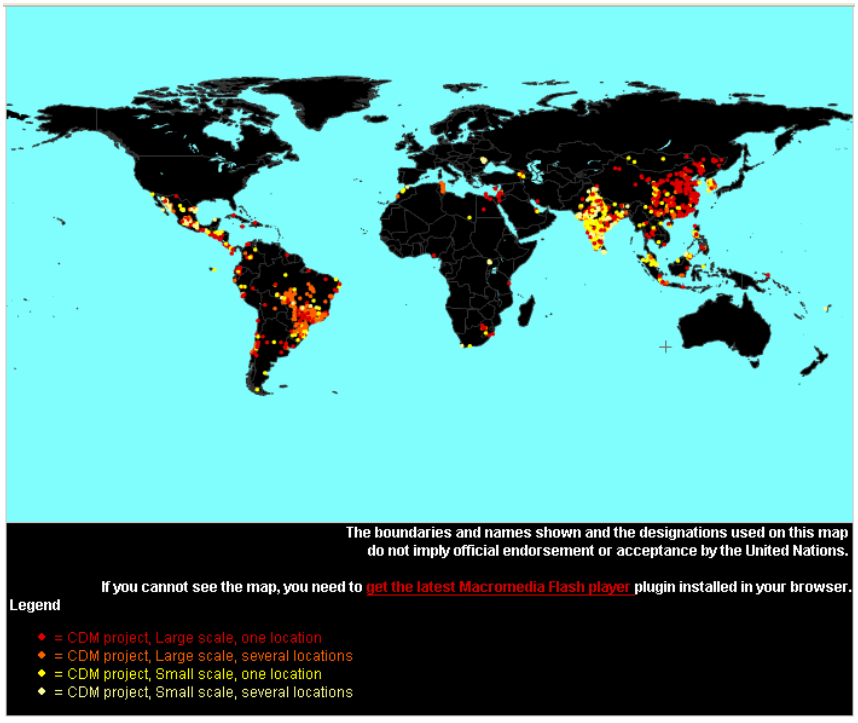
As a result, in many cases projects claim tardily CDM credits even though is evident they would have gone anyway. For instance, the Esi Dam in

Panama[15] was more than half complete when the Dutch government applied for 3.5 million tones of credits for it (Beder 2006). CDM credits are being issued without any 'authentic' emission offset and hence stepping on the core logic of the CDM.

At the same time, disincentives for developing countries' governments, municipalities and local communities to initiate programs supporting climate-friendly activities has being evidencing, as this might exclude them from receiving CDM funding (since the projects might no longer be considered additional). There is some indication for example, that Mexico City has held back climate-friendly policies in order not to put at risk the CDM investment (Lohmann 2006). This suggests that environmental policies are being substituted by CDM projects, resulting in a net increase of atmospheric carbon.

In this regard, if CDM investment flows to business-as-usual projects then it will inevitably flow to those countries that already attract the biggest share of foreign direct investment, even though its mandate is to promote equitable geographical distribution (UNFCCC 2006). Hence, while Asia and Pacific counts with 752 registered projects at the moment and Latin America and the Caribbean counts with 372, Africa only counts with 27 (UNFCCC 1992). Nonetheless, if additionality is enforced the price could rise to a level at which it could make some difference.

Map 1. Geographical distribution of CDM projects - November 2008



Source: (UNFCCC 2008a)

[15] Project 0871: Increase of Power Generation of the hydroelectric power station Fortuna in Panama-IPGFP (UNFCCC 1998)

From a developing country perspective, who is really benefiting within the G77/China block? Which countries are in fact receiving the 'sustainable development' benefits? The attractions of the additional investment and technology transfer are clear. But it must also be made clear that this represents a payment to ensure that the 'North' can continue polluting the atmosphere (Kelly 2000). Will the CDM become an instrument of foreign policy that creates new structural dependencies for the right to use the atmosphere? Are we facing a new type of colonialism were the expansion is no longer territories and countries but the atmosphere capacity?

Chapter 5
Main Actors and Power Relations

The power analysis within the structure and relation among the actors is key for understanding the climate politics. As the private sector is becoming more successful in applying institutional pressure in the policy arena (Hertz 2001), the corporate world, which has the most to loose from mitigation actions, has become responsible for mitigating climate change as well as regulating themselves. The critical role of the financial sector in the current climate governance has strengthened the structure and agency for private power to intervene, not only economically but also politically and socially.

Although states and state-based actors (international organizations) still hold the responsibility for the negotiated emission reduction targets, the CDM project cycle heavily relies upon the participation of a diverse set of actors including profit-seeking corporations, auditors, science boards, financial investors and international NGOs (Lovbrand et al. 2007). This has led to the privatization of governance which is thought to secure cost-effective emission reduction credits. However, accountability, democracy and participation issues within the decision-making processes and implementation are left untouched and uncontested.

The analysis of who is wining and who is loosing is strongly related to how the structure of the market has being constructed and which players have what power in which spaces. Therefore, the main actors involved in the CDM are presented in this chapter in order to elaborate a 'Power Map' that aims to relate the actors among themselves, the structure and with the two objectives of the CDM: issuance of CERs and sustainable development in the host countries. This relational and structural map illustrates the politics embedded within the CDM, which will be analyzed more in depth in the next chapter.

5.1 UN Bodies

The United Nations Framework Convention on Climate Change - UNFCCC

The UNFCCC, signed in the 1992 Rio Earth Summit and entered into force in 1994, is a legal framework that sets an overall foundation for intergovernmental efforts to tackle climate change. It acknowledges the climate as a shared resource and set "an ultimate objective of stabilizing GHG concentrations at a level that would prevent dangerous anthropogenic (human induced) interference with the climate system. Such level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened, and to enable economic development to proceed in a sustainable manner" (UNFCCC 1992). It has near global membership, with 192 countries having ratified it. In 1997, the Kyoto Protocol, which shares the Convention's objective, principles and

institutions, committed 35 industrialized countries to legally binding targets to reduce their GHG.

The Conference of the Parties (COP) is the prime authority of the Convention by which all member countries (or 'Parties') meet annually to evaluate the status of climate change. The COP serves as the 'Meeting of the Parties to the Kyoto Protocol' (MOP), which meets annually during the same period and its functions are similar to those carried out by the COP. Parties to the Convention that are not Parties to the Protocol (i.e. the US) are able to participate in the MOP as observers, but without the right to take decisions. The first COP/MOP was held in Montreal, Canada in December 2005, in conjunction with the eleventh session of the COP.

The Clean Development Mechanism Executive Board - EB

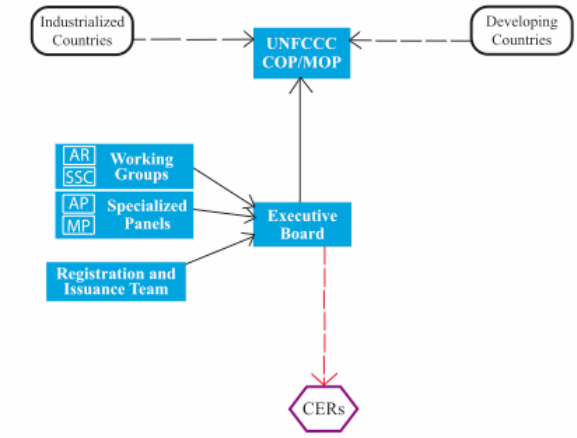
The EB manages and regulates the CDM as a whole. Is comprised of six members from developing countries and four from industrialized countries, whom are appointed and held accountable by the COP/MOP (UNCTAD 2003). Responsible of overseeing the CDM projects, it reports, maintains and recommends CDM rules, modalities and procedures; accredits the Designated Operational Entities; reports on the equitable distribution of CDM projects; makes CDM activities and opportunities public; manages the CDM registry; and makes the final CERs issuance (See Annex III).

It is entitled to establish committees, panels or working groups to assist its performance. The followings are functioning in the current structure:

- Methodologies Panel- MP: assesses new methodologies for baseline and monitoring.
- Accreditation Panel- AP: accredits, suspends, withdraws or re-accredits the Designated Operational Entities.
- Afforestation and Reforestation Working Group- A&R: develops procedures for the approval of A&R methodologies and projects.
- Small Scale Working Group- SSC: assesses the procedures and modalities for small-scale methodologies and projects.

Moreover, the 'Registration and Issuance Team' (RIT) assesses every registration and request for issuance of CERs that have been submitted by the DOEs. Chaired by a member of the EB on a rotating basis, it does not have voting power and their reports only function as an advice (UNFCCC 1992).

Figure 3. **UN bodies in the CDM governance**



5.2 Private regulation

The Designated Operational Entities - DOE

The DOEs are domestic or international legal entities with the administrative and management capacity and financial stability needed to carry out all functions required under the CDM (UNFCCC 1992). Most of them are private companies, often large risk management firms, which specialize in standardization, certification, verification, inspection and testing. The EB accredits the DOEs according to the Marrakech Accords requirements so that they can be hired by project developers as external auditors for validating the project documents (assess projects in accordance with CDM rules) or verifying the emission reductions in the field (assess if the project is reducing emissions as claimed and according to the stipulated methodology).

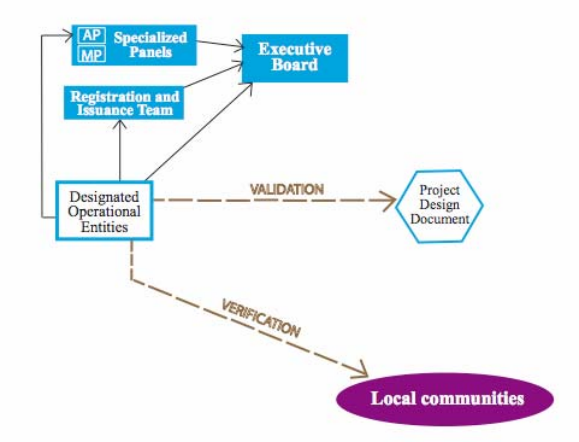
In order to prevent conflict of interests, the Marrakech Accords (UNFCCC 2001) impede DOEs from performing validation and verification on the same CDM project. However, upon request, the EB may allow a single DOE to perform both functions within a single CDM project, but there are no specified reasons for those exceptions.

The CDM is divided in 15 scopes or types of projects and each of the 18 registered DOEs are accredited for particular scopes on the validation and/or verification process (See Annex V). According to the UNFCCC (1992), only eight of them are accredited to validate in more than four scopes, and only three of them are accredited to verify in more than four scopes. Moreover, there is considerable overlap between the DOEs that validate and the ones that verify. The decisions about which projects may proceed under the CDM, more evidently at the verification stage, are controlled by only eight DOEs.

The verification documents, containing the amount of reduced CERs, are evaluated by the RIT and the EB. However, due to corruption concerns, the AP was created, composed of EB members and private actors who do not have to be nominated by their governments since the only criteria (beyond

basic competency requirements) is ensuring a regional balance in the body. (Green 2007).

Figure 4. Private regulation: DOEs validation and verification in the CDM cycle



5.3 Implementation Phase

The Designated National Authority - DNA

Each CDM project must be approved by a 'Designated National Authority', which is chosen by each developing country. Its main function is to certify that the project is voluntary and contributes to the sustainable development goals of the host country (UNCTAD 2003). Therefore, developing countries have to design their own sustainability criteria and only with the DNA approval can the project proceed for verification by the DOEs and be submitted to the EB for registration.

The role of the DNA is particularly important when an understanding of the CDM may be limited; hence, clarity on the Protocol rules as well as expertise in project structuring, finance, foreign investment, sustainable development and environmental laws is critical (UNEP 2004).

Project Developers

Project Developers, which can be public or private parties, are involved since the conception of the Project Design Document. Baseline studies, quantified emission reductions, tests for additionality and methodology selection are calculated and developed by them.

Many of the early CDM projects are implemented independently by Host Country participants, and the CERs sold directly to the buyer. For instance, "a large Indian or Chinese company could develop a CDM project based on its own financial arrangements with no need for Annex I [industrialized countries] investment in the project and sell CERs discretely to one or more CER Purchasers" (UNEP 2004:73). This kind of unilateral models apply also for the World Bank projects where the implementation and brokering is responsibility of the Bank.

Alternatively, an investor (i.e. a transnational corporation, bank, etc.) can be involved providing a part of the project finance in the form of a loan. For example, "a British financial institution could provide finance to a large CDM project and receive CERs as part payment of a fixed proportion of the interest for that loan" (UNEP 2004:74).

The actual implementation is most of the times done by southern corporations, NGOs, UN agencies (UNEP) or World Bank Funds. However, there are various types of investment: from southern corporations and investors, retailers or technology investors to transnational corporations, transnational banks, hedge funds, speculators, traders, brokers, consultants, among others.

Local communities

The CDM cycle allows two moments for civil society and local communities to comment DOE's consultations and thus the project itself. First, during the preparation of the Project Design Document (PDD) the 'inputs' from local stakeholders are *mandatory*. Although the participation requisites are defined by each host country, project developers have to state in the PDD how it was carried on (UNFCCC 2001). In case of a review request on a DOE validation document, the AP assess it and makes a recommendation to the EB, which then takes a final decision: register, request changes or reject the proposed project. The reasons for its decision have to be made public.

Second, at the verification stage the DOEs conduct interviews with local stakeholders. It stays undefined, however, how the interviews should be carried out. At this moment, either a party involved in the project or three members of the EB can request a review after the CERs are certified but before they are formally issued (Green 2007). The EB has 30 days to take a decision. If the DOE is found to have conducted itself fraudulently, it may be asked to reimburse the EB for the cost of the review. The decision of the EB is final (UNEP 2004).

There are many cases of local communities being affected by CDM projects. The Ecuadorian Indigenous Organizations announced in May 2006: "We reject the use of the [CDM] … in projects affecting the communities, such as hydroelectric dams, monoculture tree plantations and others. We reject the signing of further contracts in our communities for the sale of environmental services with national or international NGOs, municipalities or individuals…" (Lohmann 2006:169-170). Similarly, the 'boom' of wind energy in India has brought with it several resistance groups and local communities organized against the proliferation of what they consider illegal land grabbing from the government and corporations.

A case from a forthcoming research (Ghosh and Kill forthcoming) focuses on the Bhambe and Chikhali Villages near the district of Satara, India. The CDM project[16] generates renewable energy under the stewardship of 'Ellora Time Limited' and it claims to "harness the available wind power potential at Satara vis-à-vis development of local economy" (UNFCCC 2008c).

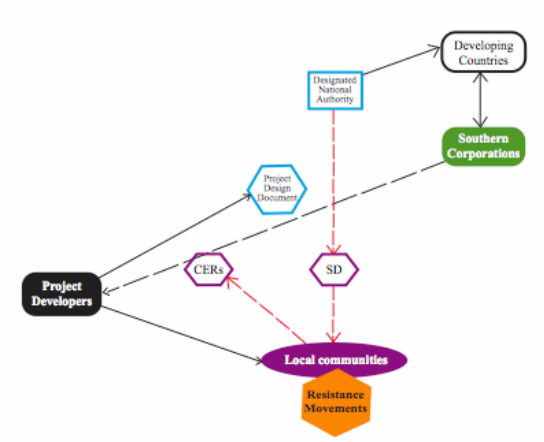
[16] Project BVQI/INDIA/23.49 (UNFCCC 2008c)

On the Bhambe site, the Company acquired about 250 acres of land from villagers and 70 wind turbines were erected within the area. On the Chikhali site, the Company took over 500 acres of villagers' lands and 150 wind turbines came up.

However, as the study demonstrates (Ghosh and Kill forthcoming), on the Bahambe Village the villagers had no knowledge of their lands being handed over to the Company. The people displaced were not compensated nor were they provided with any jobs. There is no electricity supply to local consumers and the project did not so far created any new opportunities for economic activities in the area. On the other side, the villagers of Chalkewadi (2 Kms. from Chikhali) thinking that they would get money for land and employment from the project supported it. The Company promised that the project would employ at least one member from each of the families giving land however, according to the villagers, now only two people has a permanent job. Furthermore, villagers at Bhambe and Chikhali never heard about the CDM and do not seem aware of the carbon credit sales.

Many indigenous and local groups have organized and resisted against the CDM. During the 7th Session of the UN Permanent Forum on Indigenous Issues in May 2008, the Indigenous representative declared that "The Report [doc E/c.19/2008/L.2] does not take into account the proposals and concerns of the Indigenous Peoples regarding the initiative to reduce emissions from deforestation in developing countries known as REDD or the CDM or the Carbon Market… The adopted recommendations … made by the Forum experts are not the position of indigenous organizations… We are also concerned that the initiatives of CDM are considered examples of 'good practice'" (Sommer 2008).

Figure 5. Implementation within the CDM governance



5.4 The market players

Brokers

A whole new industry sector emerged even before consensus was reached on the Kyoto rules with the emissions brokers. "SGS Group [Societe Generale de Surveillance], Trexler and Associates, Winrock International, Evolution Markets LLS and other 'GHG credit brokers' identify projects that are eligible for receiving carbon credits and help buyers and sellers get together" (CEO 2000:9).

According to the Fortune Magazine (Gunther 2008), in 2007 traders bought and sold about $60 billion worth of emissions allowances, mostly in Europe and Japan. If regulation comes to the U.S., this carbon-trading market is expected to value $1 trillion annually by 2020. That is why investment banks, utilities, industrials, speculators and hedge funds - among them GE (GE, Fortune 500), Goldman Sachs (GS, Fortune 500), J.P. Morgan Chase (JPNV.L), and AES - are rushing into the carbon finance.

The World Bank and the 'Prototype Carbon Fund'

From 1992 through 2004, the World Bank (WB) Group approved US$11 billion for financing 128 fossil-fuel extraction projects in 45 countries, which will ultimately lead to more than 43 billion tones of carbon emissions. More than 82 percent of WB financing for oil extraction has gone to projects that export oil back to Northern countries. Some of the biggest beneficiaries of Bank funding include Halliburton, Schell, ChevronTexaco, Total, ExxonMobil, and other fossil fuel companies. Yet in 2005, the Bank was assigned a key role in tackling climate change by the G8 group (Lohmann 2006).

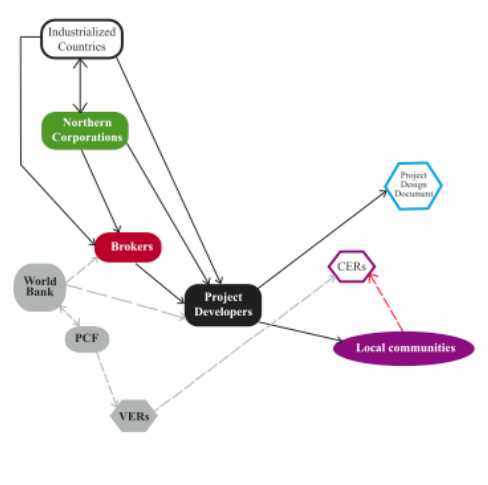
The Prototype Carbon Fund (PCF) began as a learning experiment between the WB and several transnational corporations and served for the set up of several other public and private carbon funds. The PCF was launched in cooperation with four European governments (Finland, Netherlands, Norway and Sweden), Canada and Japan, and with 17 private companies, bringing together 145 million US$ for the purchase of emission reductions via CDM and JI projects. They started issuing what they called the 'Verified Emission Reductions' (VERs)[17], which if approved by the EB could be converted in CERs. Hence, as early movers they could also build up the rules of the game.

The role of the WB in the management of the carbon funds is controversial due to its self-assigned role as a facilitator of the carbon market while making money out of its commissions on projects. Even more fundamentally, through its initial position in the market as well as in the regulatory field, the WB could be prone to influence CDM regulation in its own interest under a face of political neutrality. Critiques, furthermore, see

[17] A unit of GHG emission reductions that has been verified by an independent auditor, but that has not yet undergone the procedures and may not yet have met the requirements for verification, certification and issuance of CERs under the Kyoto Protocol.

irony in the role of the WB while not being willing or able to mainstream climate change considerations into their energy projects or country strategies (Benecke et al. 2008).

Figure 6. Market players within the CDM governance



5.5 Civil Society within the CDM governance

NGOs

The Climate Action Network (CAN), created in 1989, has membership of most international NGOs that are active in climate change[18] and is focused to pressure industrialized countries to reduce their emissions. The CAN has attempted to create a coherent NGO voice and to keep the members informed of the developments in climate policy debates. However, as the researcher Peter Newell asserts, "accommodating the perspectives of so many groups and coordinating effective campaigns amid this diversity is ridden with problems that impinge on the overall influence of the coalition" (Newell 2000:127).

The CAN coordinator is an appointed member of one of the member groups with the resources to perform the function. There are differences of influence among NGOs. It can be argued that international groups such as Greenpeace and WWF exert more influence because of their operating reach, which allows them to lobby various delegations simultaneously. This can be contrasted with national or local based groups, where the effectiveness of lobbying is mainly restricted to their governments. Moreover, there is an insider-outsider distinction according to the access and power within the UN system whereby the insiders are the ones able to be present at the meetings (Newell 2000).

In 2007, during the COP/MOP at Bali, the CAN disseminated a position paper towards the CDM. It does not reject the CDM but on the contrary, it "welcomes the guidance elaborated by the EB for the implementation of

[18] Originally it only included NGOs from the industrialized world, but now it has members from Asia, Africa and Latin America as well.

Programs of Activities [whereby] Programmatic CDM may be an important instrument to mobilize additional emission abatement potential under the current CDM scheme and achieve a more balanced regional distribution of projects" (Climate Action Now 2008). Its major concern is additionality.

Many of the local organizations and movements grievances were omitted within the established 'civil society voice' as well as more radical positions in the climate debate such as the Climate Justice Now coalition, The World Rainforest Movement, FERN, The Corner House, Carbon Trade Watch, The Indigenous Environmental Movement, The Durban Group, CDM Watch, SinksWatch, among many more. Conversely, the established participation spaces for NGOs and civil society are through the EB webpage by submitting written complaints about DOEs activities and/or reports.

Furthermore, as business opened more funding for NGOs they created a way for 'neutralizing' them with corporative strategies while projecting the idea of credibility. Thus, business' interests were now at the heart of the political negotiations (Bachram et al. 2003). The NGO World Resource Institute (partly financed by US government, financial institutions and corporations such as Monsanto, Schell and BP) tirelessly lobbied for carbon trading alongside other corporate groups. The World Wide Fund for Nature (WWF), with an annual budget 3.5 times that of the WTO, helped develop an 'eco-label' for the CDM projects (Lohmann 2006). Moreover, while in the Earth Summit in 1992, Greenpeace and the WBCSD[19] had strong opposite views towards the proposed trading alternatives, at the Johannesburg Summit in 2002, they made a joint declaration on climate change urging governments to move forward (Bachram et al. 2003).

Corporative lobbies

Corporate lobby groups were quick to embrace carbon trading as an ideal tool for preventing government regulation as well as secure their profits and economic dominance. The Corporate Europe Observatory (CEO 2000) argue, "corporations -efficiently organized in a web of national, regional and global groupings- have engaged in proactive lobbying to prevent … binding government regulations to force businesses to reduce GHG emissions". Like any property rights, owners (corporations) are fighting to make sure their emissions allowances are enough to secure their profits. The growth of the carbon market also has strengthened this lobbying power who want long-term targets and more certainty on market instruments.

Governments and international institutions, influenced by corporate groupings like the WBCSD, have embraced the idea that there is no contradiction between corporations pursuing profits and solving environmental problems (Idem 2000). Furthermore, suppliers of energy are protected by governments for security and economic reasons (Newell 2000).

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[19] The World Business Council for Sustainable Development, funded in 1992 at the Earth Summit, has more than 200 Transnational Corporations dealing exclusively with business and sustainable development.

International Emissions Trading Association

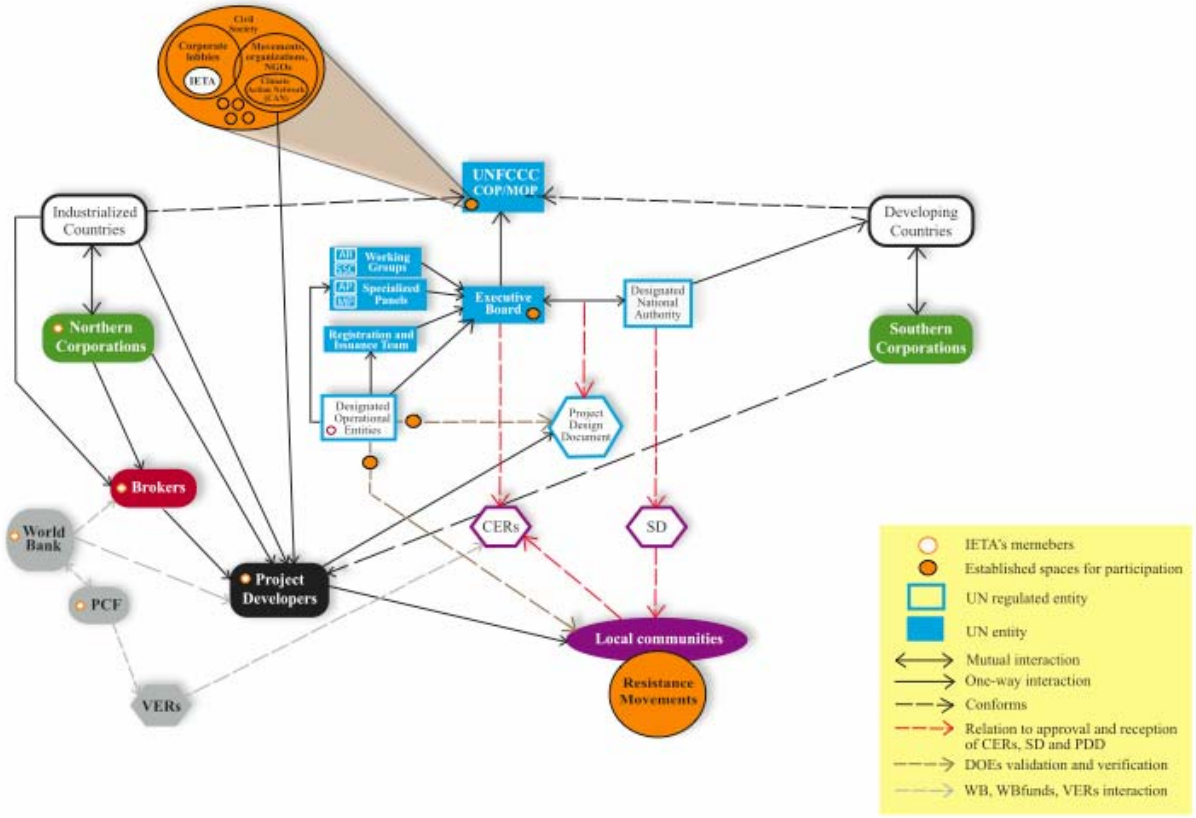
IETA is a non-profit organization and corporate lobby group created in 1999 with the help of UNCTAD and the WBCSD to establish a functional framework for trading emission reductions. Under the slogan 'Market Solutions for Global Environmental Problems' more than 150 international members including leading multinational companies from across the carbon trading cycle (emitters, solution providers, brokers, insurers, verifiers and legal compliance) work together for the development of an active global greenhouse gas market, involving all flexible mechanisms (IETA 2008).

David Hunter, a representative of IETA, argued in a TV interview, "if you want to reduce emissions and get the best environmental target for the least cost… emissions trading is the clear answer" (Aljazeera 2008). Hence, in line with the private legitimacy concerns, is easier for corporate groups to reach media and public attention under the IETA label instead of BP or Schell for instance, since it gives the impression that is representing public interests.

In 2007 at the COP/MOP in Bali, IETA was present with 336 representatives including lawyers, financiers, emissions traders, consultants, certifiers and emissions trading experts. This group made up for 7.5% of the 4483 NGO delegates at the UN climate talks. While this is an indicative for the expansive growth of this industry, it also diminished even the largest environmental groups like WWF (2%) and Greenpeace (1.6%) (WDM 2008).

Figure 7. Civil Society and the CDM governance

Figure 8. Power map of the CDM governance



Chapter 6
Engineering Private Governance

This chapter analyzes the various actors identified at the Power Map through the visible, hidden and invisible power framework (Gaventa 2005). These types of power are intertwined with different levels and spaces and are helpful to recognize the importance of the various forms of power that coexist within the climate governance. This analysis also relates to the actors' relational and structural power, taking into account that, as Susan Strange (1988:234) argues, "it is never possible entirely to untangle structural power from relational power". Hence, the line between the various forms of power is sometimes diffused since they are interrelated and dependent on each other.

These types of power can also be identified at the negotiation processes which reflect how the structures tend to benefit some players (for further analysis refer to Annex II). It is not the aim of this research to identify all the powers that are involved since they could be unlimited and entirely diffused within bigger structures that go beyond the scope of this paper.

With the acknowledgement of key power uses and abuses played within the CDM, a comprehensive assess of potential transformative action can be enlarged for claiming real democratic spaces of governance in future research and activist work.

6.1 Visible Power: Covered in Green

As explained in the second chapter, visible power is considered as the definable aspects of political power: the formal rules, structures, authorities, institutions and procedures of decision-making (Gaventa 2005). Within this level, the formal players and rules are traced out so that the observable decision-making can be recognized by establishing 'who, what and how'.

The mapped players and their roles indicate that power has shifted within the climate governance, where formerly secondary actors have became more powerful. Currently, any organization can assume the role of the intergovernmental organizations in designing and implementing mitigation projects (Wittneben 2007). Though, due to transaction and administrative costs as well as the specialized know-how required, corporations and financial investors are leading those activities while being supervised by another set of private actors. Hence, the institutionalized power is decreasing for states and intergovernmental organizations, impling a fundamental change from the conventional analysis of political power and the role of states.

Industrialized governments have a stronger dual role. They are buyers of CERs on the market while simultaneously deciding upon the rules of the market as Parties of the COP/MOP. Moreover, they channel important donations to the UNFCCC secretariat for its operation, as well as to the World Bank, UNEP and UNDP, which are the institutions allowed to implement CDM projects (Wittneben 2007). On the other side, developing governments host the CDM projects as well as negotiate the market rules at the COP/MOP.

However, they have hardly any influence since there is no need for direct involvement of neither the host nor the local governments in the projects as the DOEs fulfil the third-party evaluation criteria.

In this regard, as Corporate Europe Observatory affirms, "northern governments aggressively identify with the commercial interests of 'their' corporations in the climate talks... for instance, the US government's Climate Change Action Plan explicitly mentions how its climate strategies aim at 'positioning our country to compete and win in the global market"' (CEO 2000:18). 'Outsourcing' expertise for supervising the compliance with CDM rules places a heavy reliance on private actors for transparency and accurate reports, leading to a lack of public accountability.

DOEs have little incentives to disapprove the effectiveness of the projects they work on since that could jeopardize their future work on other CDM projects, as well as their relations with other clients. For example, DNV consultancy (one of the registered DOE) was contracted by the WB PCF although it also has consultancy contracts with two of the PCF's investors: Statoil and Norsk Hydro (Lohmann 2006), and validated the CDM 'Plantar Project' in Minas Gerais, Brazil. After several local protests with support of many international organizations, this project is recognized to be controversial even though it was approved[20]. Hence, it is likely that conflict of interests could overcome the transparency of the regulation process.

Moreover, there are few DOEs involved in the validation and verification processes (see Annex V), making the system subject to a possible monopoly. They are able to set prices for their services, and they could collude among them to ensure that projects are approved, receiving all of the proposed CERs. Clearly, where only one company is accredited to validate and verify, there may not even be a need for collusion (Green 2007). Polluting corporations on the other side, especially the oil industry, have heavy interests to legitimize their actions. Their role is instrumental for creating 'partnerships' with actors in developing countries (i.e. southern corporations and NGOs) for the implementation phase.

In addition, the formation of the carbon market, where many of the CERs are to be traded, strengthened the financial sphere which is represented in the Power Map as 'brokers'. New markets need traders to facilitate the exchange and create new opportunities for arbitrage, hedging and derivatives. Consequently, "by converting GHG into financial contracts, the emissions trading markets provide a way to re-distribute pollution, in much the same way that the financial system generalizes the distribution of surplus value" (Davis 2006:14). Once contracts are digitalized and ready to be traded electronically, speculative instruments begin to enable the material expansion through new financial markets.

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[20] For more information on the Plantar Project: Sinks Watch Organization (http://www.sinkswatch.org/projects/plantarmore.html), FERN (http://www.fern.org/pubs/ngostats/Plantport.htm), the World Rainforest Movement Organization (http://www.wrm.org.uy/countries/Brazil/fsc.html) and Carbon Trade Watch (http://www.carbontradewatch.org/index.php?option=com_content&task=view&id=25&Itemid=41#factsheets1)

The structure analysis also stresses the dissimilar focus between the two objectives within the CDM. While the issuance of CERs is surrounded with private and public institutions, the sustainable development goal has been entirely left to the approval of the Designated National Authority at the Project Document Validation stage. Consequently, all the responsibility and costs for monitoring each project's sustainability is on the developing countries and at the same time, neither the global governance institutions nor the private players could be held accountable directly for any claims at the local level.

Moreover, the technocratic approach of the scheme managed by an elite leaves the local communities at the periphery of the Power Map. As Fogel (2004:111) mentions, global discourses stress that "'standardized' carbon units can be produced through standardized sequestration projects in standardized developing countries" in order to be efficient and hence, "to economically benefit from global institutions, the 'local' must accept its construction as compliant, homogenous and safe, which is to say, as absent".

Nonetheless, various local resistance movements, with the support of international advocacy organizations, are making their grievances more visible. Although the decision-making tables are still inaccessible for them, their struggles are having more media coverage as well as academic and political discussion, and therefore some considerations at the governance level. An example is the recently launched UN-REDD program (Reducing Emissions from Deforestation and Degradation), where the inclusion of forests in the carbon market is recognized to possibly cause human rights violations. It could "marginalize the landless and those with communal use-rights" as well as "deprive communities of their legitimate land-development aspirations, that hard-fought gains in forest management practices might be wasted, that it could cause the lock-up of forests by decoupling conservation from development" (FAO et al. 2008:4-5). Yet, the inclusion of REDD in the CDM is one of the highest priorities at the negotiation tables for the next COP/MOP and is currently at its pilot phase.

6.2 Hidden Power: Who received an Invitation?

The hidden power focus is on the exercise of power by controlling "who gets to the decision-making table and what gets on the agenda" (Gaventa 2005:15) through an hegemonic "'mobilization of bias' or rules of the game" (Idem 2005:14). This deals on one side with issues of participation, accountability and democracy within the institutions, agents and structures, intertwined with political and economic interests. And on the other side, the part of civil society aware that engaging in these invited spaces for participation will legitimate the status quo and hence, creates new independent spaces for a potential transformative power.

As noted by Scholte (2004), when the spaces of governance are diverse and power is diffused among various actors it is unfeasible to hold governors accountable if their governance is hidden to constituents. If regulations are to be subject to effective public scrutiny, then they must be open for everyone. Displaying the information however is not the same as making it understandable and thus democratically meaningful.

In this regard, as explained in chapter 5, the spaces for participation within any CDM project are found at the validation and verification stage where the Parties, stakeholders and accredited NGOs[21], following the release of the validated PDD and verification report, have 30 days to provide comments on the documents (Lovbrand et al. 2007). This paves the way for establishing a hidden power within the structure by "putting boundaries on participation, and to exclude certain actors or views from entering the arenas for participation in the first place" (Gaventa 2005:15) and hence, obstructing the access of distinct alternatives, specially from the local level, to the global level.

It is doubtful that neither landless peasants nor communities directly affected by CDM projects are represented in international negotiations (Bromley and Paavola 2002). As Galisa Cardani (2007), researcher of the Indonesian Peasants Union in Yakarta, commented during the COP/MOP in Bali, "the UNFCCC meeting and all the negotiations inside never heard the people's voices. All they talk is trade, trade, trade… we believe that the agent of this problem is neoliberalism… we believe that the real solutions is to uphold the people's sovereignty". It is likely that the claims of the affected stakeholders become marginalized in favour of other more powerful players.

This consultative space also has other constrains embedded in the politics of participation. The language used in most of the documents is English and their translation into local languages is not required. Moreover, as Lovbrand et al. (2007) argues, most information is communicated over the Internet, which may not be the most appropriate way to reach local stakeholders. The question of when participation takes place is another concern, since making available only certain spaces is an act of power, whether directly or indirectly (Cornwall 2004). Hence, it is appropriate to conclude that the CDM structure accepts only a nominal participation by which the main purpose from the top is its own legitimation and from the involved bottom, the interests of inclusion for keeping their names and actions 'inside' (White 1996).

The financial sector and the corporations, on the other side, are more likely to capture the opportunities of the CDM. Their structural power lies on having the knowledge and skills to deal with complex markets, investments and transactions. Most NGOs don't have enough resources to push an idea through the UN bureaucracy and thus, the CDM negotiations are practically hegemonized within the private sector. Corporate groups exercise power with little or no accountability while being considered part of the NGO community.

Accountability is essentially about power. Rights and responsibilities between state, market and civil society actors and the means for realizing these (Newell 2008). However, the technocratic discourse of accountability within the climate governance as 'efficient performance' brings the question of "who is served by particular global governance arrangements: on whose behalf is power exercised?" (Idem 2008:126).

Hence, the long-term consequences at the local and therefore national levels have to be questioned: how are developing countries going to engage with the SD objective, understood in economic growth terms, when the energy supply changes are mostly not in line with an strategic national plan but with a

[21] Most of the accredited NGOs have united in the CAN.

global plan that is not accountable for the sustainability goal? And more importantly yet hardly discussed, what kind of development the CDM stands for and for whom?

In this regard, these transferred 'clean' technologies could also be determining a 'developmental path' for the intervened localities to serve global interests as well as undermining the traditional ways for sustaining their lives. It is crucial to explicitly define at the global levels how the terms 'clean', 'sustainable' and 'development' are being understand and used. The distinction could be found between a structural change and systemic alternative, and an interventionist, reformist, liberal approach (Mitlin et al. 2007).

This decentralized web of actors under the climate change discourses makes it difficult for the general public to understand who is doing what, who is paying whom and for what, who is benefiting, who is not, what are the implications, etc. The political agenda to deregulate the environment is slowly creating a deeper form of abstraction, whereby the mitigation actions are separated from their realities. The idea, even for environmentally concerned people, is that in order to reach the Protocol targets there is no need to change their life-styles, not significantly at least, since they and any polluter can pay to offset the emitted emissions. In this way, the public is abandoning their involvement and concern in discussing possible alternatives.

6.3 Invisible Power: Hegemonizing the Debate

The invisible power is the most difficult to have a grasp on. It determines not only how certain issues are kept away from the decision-making tables but also from the minds and consciousness of the different players involved. It expresses the "internalization of powerlessness… dominating ideologies, values and forms of behaviour" (Gaventa 2005:14). This relates with the Gramscian concept of 'hegemony' whereby a dominant group, due to its position and role in the production world, can enforce a general direction on social life that receives a 'spontaneous' consent by the great masses generated by the dominants' prestige and associated confidence (Gramsci 1971).

Since the beginning of the negotiations there was an ideological battle over the knowledge and solutions that should be considered as the climate solution intertwined with the material interests of the actors involved. When the Protocol was ratified and implemented, a line of reasoning was globalized and considered 'the only possible' alternative, rejecting and even ignoring other options. As Tim Wirth expressed on behalf of the US delegation: "The US will seek for *market-based solutions* that are *flexible* and *cost-effective* (…)" (Grubb et al. 1999:54). Therefore, since 2005, the discussions (at least inside the negotiation spheres) have been limited to the market. Much of the mainstream media and most of the international NGOs have surrendered to this, justifying it as a necessary first step.

The CDM EB Secretary, Yvo de Boer, stated during the COP/MOP in Bali last year, "market-based mechanisms need to be at the heart of things. It's the only way of achieving the goal" (Cundy 2007:8). This dominant idea of 'no other option is possible' strengthens the ideological hegemonic stance. As knowledge is profoundly associated with power, development thinking highlighted certain social actors (i.e. UN bodies) and certain social

transformation (i.e. technology transfer), while marginalizing other social actors and trivializing other alternatives for change (Sachs 1999). Hence, 'legitimized' knowledge influence ideas and images for an ideological orientation that can be argued are seen as socially constructed to achieve specific purposes (Soderbaum 1999).

In this regard, the lobbying pressures for the COP/MOP at Copenhagen in 2009, where the negotiations for the post-Kyoto agreement will start, are already trying to rely more on the flexible mechanisms. The industrial lobby groups have been holding seminars, distributing leaflets during conferences as well as consulting delegates on the negotiation process upon request (Wittneben 2007). There is a strong request, that the EB should be composed of more economists and less environmentalists since the recognized problems have been framed as bad management or 'bad governance' (Streck 2007) which could deepen the technocratic approach towards the environment.

The financial players have a strong structural power that is almost imperceptible to the constituency and the affected ones. As Susan Strange highlights, the structural power is less 'visible', whereby "the range of options open to the others will be extended by giving them opportunities they would not otherwise have had. And it may be restricted by imposing costs or risks upon them larger than they would otherwise have faced, thus making it less easy to make some choices while making it more easy to make others" (Strange 1988:31).

In this regard, there are strategic spaces for the concentration of power by including and excluding particular issues in the politics of global warming. Peter Newell (2000) suggests that there is a link between the construction of the global warming problem by the mass media and the nature of policy responses at the international level. The framing of the debate in the mainstream media generally legitimates conventional understandings of market efficiencies and scientific knowledge. "Frameworks, ideologies, narratives and symbols are all contained in news coverage and can be argued to have a significant impact, on the basis of their relative invisibility to audiences" (Idem 2000:77). Hence, to be part of hegemonic forms of interventions is attractive or even all that is possible.

Powerful actors can also take advantage of having more media coverage exercising influence over the negotiations and ideologies, and may have special interest groups in tow that supports their economic interests. For instance, industrialized countries can send larger delegations to the negotiations for the different workshops that often run simultaneously and thus need more than one national delegate. Many developing countries on the other side, can often not afford to send anyone or have small delegations.

Public opinion formed the key link between civil society and the state, as Gramsci agues, and it is through influencing it that dominant groups are able to forge hegemony and legitimize political projects (Mitlin et al. 2007). Hence, ignorance and inactivity have straight connections with the political and economic global dominance whereby people are being kept in a situation in which is improbable to achieve a critical awareness (Freire 1970).

While legitimizing the structures of capitalism, financial markets make inconspicuous the inequalities concerning access, participation and

distribution. Furthermore, the strong link between economic growth and increasing energy consumption based on fossil fuels has not been broken. Enhanced with a profitable carbon market, the realm of the ideas is instrumental for material and capitalistic reproduction of structures, where the economic structures play a very crucial role for resisting change.

Therefore, there is a need for contesting the hegemony of 'experts' to build counter-knowledge that recognizes local communities own realities and experiences. By doing these, movements have to acknowledge the "radical potential of even the most mainstreamed of participatory methodologies" (Cornwall 2004: 86) as well as open their own spaces while extending alliances within the various social grievances. Reclaim the notions of 'development' and 'sustainability' in terms of politics and political economy of social change is the urgency needed to have a real transformation in the climate mitigation actions.

Chapter 7
Conclusions: A Mechanism for Dispossession

> "Capital circulation…has made the environment what it is…Prevailing practices dictate profit-driven transformation of environmental conditions and an approach to nature which treats of it as a passive set of assets to be scientifically assessed, used and valued in commercial (money) terms" (Harvey 1996 in Braun 2006:212)

Throughout the climate negotiations, ideological and material struggles suggested that is the leaders of the largest capitalist economies who decide how to solve this 'global challenge'. The discussions have ignored nearly any antagonism created at a more local or movement level by framing the crisis as one substantial problem that could be solved with one substantial global market. As the Gramscian notion of hegemony implies, capitalist societies are governed through legitimating practices, and as a result, the climate policy space has been constrained to neoliberal policies which could legitimately be developed (Paterson 1996).

This research paper argues that the CDM is indeed deepening the idea of 'green capitalism'. Its 'green'[22] face enables it to have legitimacy in front of strong claims for environmental action while delaying sound changes in the production and consumption patterns. This legitimization is crucial for maintaining the complex governance structure that has been created in the name of 'mitigating a global problem' while transferring clean technology to the developing world in the name of 'sustainable development'. The challenge for this paper was posed to demonstrate this by analyzing the politics and power dimensions behind this mechanism, how it operates, and which actors are benefiting and losing. Hence, with the belief that capitalism can only be painted green, this research paper shows how the CDM became the perfect instrument for the neoliberal agenda to expand capitalism and globalization forces whereby the winners accumulate by dispossessing the losers.

The structural and actor analysis used demonstrates three main points. First, the private sector is strategically positioned within the CDM, influencing the market and policy at the same time. The reliance on operational and regulatory 'partnerships' between the private sector and the UN is key to understanding the high level of policy influence that the former has and hence, the consequent 'privatization of the CDM governance'. Second, this structure creates constrains for local communities which are marginalized to participate in no influential manner, even though they are also considered 'partners' inside the CDM governance. This reinforces the undemocratic logic and lack of downward accountability of the scheme. Finally, as illustrated in the Power

[22] The term 'green' is used for political parties, movements, corporations, etc., becoming an ambiguous concept. Within a more sound definition, the 'green package' would include a critique of the mainstream conception of growth, environmental concern, scientific ecology, philosophical holism and actively live by political, economic and cultural ecological principles (Wall 1993).

Map, while the sustainable development objective is only regulated and monitored by the DNAs within developing countries, the carbon credits or CERs are under the issuance of a UN body and thus, only one of the objectives, the one that has a price on the market, could actually be claimed as direct responsibility of the UN.

Moreover, the use of the three-dimensional power framework in the CDM governance brings an innovative understanding of its implications, exploring the interests and influences that are in play beyond what is visible and relational. The established participation spaces stresses the lack of inclusion and representation, diminishing the voices of those whose lives are being intervened with the CDM. Nonetheless, as Cornwall (2004) argues, spaces created by hegemonic authorities can be filled with those with alternative visions, remaining always the potentiality for using them to create alternative counter-narratives. In this sense, local communities and movements' voices depend on more than having a seat on the table but on "reframing what counts as knowledge and articulating alternatives, especially in the face of apparently incommensurable knowledge systems" (Idem 2004:84).

The governance plurality hides behind a market neutrality image but "if climate protection becomes everyone's responsibility, does it end up being no one's?" (Bulkeley and Moser 2007:8). The managerial approach is constantly detaching regular citizens from their responsibilities. Citizens, even those environmentally aware, continue their life-styles and stopped demanding sound changes while helping companies to profit by offsetting their emissions somewhere far enough not to think about it. The CDM does not involve social transformation or economic restructuring and therefore, the logic of a system based on unlimited growth has been left unchallenged (Beder 1996). These hegemonic ideologies underpinning the contemporary capitalistic societies are difficult challenges that prevent to looking outside this understanding of domination and management of humans over nature.

Global policies that intensify inequalities, social injustice and accumulation by dispossession are false solutions under a green capitalism label. The incorporation of 'environmentalism' into the heart of neoliberalism central institutions (McCarthy and Prudham 2004), such as the WB and the UNFCCC, enables the institutionalization of green capitalism which is able to legitimize its intrinsic need for accumulation by dispossession. This research paper concludes that the CDM expands dispossession practices in capitalistic societies by the inevitable process of unequal distribution of property rights in three different ways:

- A global perspective. The creation of property rights within a system embedded in fossil fuels use has resulted in the accumulation of carbon credits among the most powerful corporations and governments. The dispossession thus can be perceived in two forms. First, within industrialized countries, the more economic-constrained ones have less access to the 'permits to pollute' thus establishing new limitations for their economic development. Second, developing countries will have to bear the consequences of being the industrialized countries' carbon dump and 'pay the bill' with more intrinsic restrictions for industrialization and thus growth, in the Western conception of it.

Moreover, since there is no global emissions reduction, countries with the more to lose from climate change are being more dispossessed, intensifying long-standing exploitative relations.

- A social perspective. Local communities intervened with CDM projects in many cases are being dispossessed from their lands, forests, means of production and traditional ways of living. Under the logo of sustainable development, an imposed 'development' is determining their path by hegemonic and capitalistic values, fading the space available for their own local development. This "can be thought of as the privatization of the atmosphere through an act of enclosure similar to the way non-owned land has been turned into private property around the world" (Liverman 2008:217). It is important to question what type of development this mechanism is trying to achieve.
- A sustainability perspective. A problem of valuing the environment according to present preferences is that future generations are not seriously taken into account. When no real emission reductions are done, the climate governance could be "compromising the ability of future generations to meet their own needs" (WCED 1987) by exceeding the capacity of the atmosphere and hence dispossessing future generations. This version of 'sustainability' has an inherent dispossession of the global poor and future generations. Hence, the CDM is intensifying a trade-off between present economic interests and future environmental, and therefore, economic sustainability.

Climate change is presented as an a-political, scientific instrument based on green capitalism discourses. However, while the created property rights and market interactions confront societies with issues of dispossession, "the *future* of nature –or more correctly, the future of *socio-nature*- is an ongoing ethical and political project" (Braun 2006:219 emphasis in original). By taking the easy road today, the global actions are failing to lead a substantial change within the economic structures

Can there be a human form of capitalism or a green capitalism with a sound respect to the environment? This paper concludes that the world needs a more radical change in its fundamental economic pillars: the global production and consumption structure. Technological solutions are limited and do not address the historical and structural problem of the ideological and material foundations of capitalism. The conviction of possible alternatives to capitalism's inexorable accumulation forces is necessary for achieving low-carbon economies within a social justice framework. At the very least, this paper hopes that by demonstrating the power and politics embedded in the CDM there could be further reflection on where the alternatives should not be focusing on.

In this regard, there is a need for further research on how localities are embedded in their own and in the global power relations. A perspective from the field on how this power structures and dominant actors constrain or enable affected localities in their involvement with this 'global' problem. At the same time, further analysis of the political implications of what the governance considers as 'clean', 'sustainable' and 'development', intertwined with the current green capitalism path has to be carried out.

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Annexes

Annex I: Article 12 of the Kyoto Protocol

Kyoto Protocol to the United Nations Framework Convention on Climate Change - Article 12:

1. A clean development mechanism is hereby defined.
2. The purpose of the clean development mechanism shall be to assist Parties not included in Annex I in achieving sustainable development and in contributing to the ultimate objective of the Convention, and to assist Parties included in Annex I in achieving compliance with their quantified emission limitation and reduction commitments under Article 3.
3. Under the clean development mechanism:
   (a) Parties not included in Annex I will benefit from project activities resulting in certified emission reductions; and
   (b) Parties included in Annex I may use the certified emission reductions accruing from such project activities to contribute to compliance with part of their quantified emission limitation and reduction commitments under Article 3, as determined by the Conference of the Parties serving as the meeting of the Parties to this Protocol.
4. The clean development mechanism shall be subject to the authority and guidance of the Conference of the Parties serving as the meeting of the Parties to this Protocol and be supervised by an executive board of the clean development mechanism.
5. Emission reductions resulting from each project activity shall be certified by operational entities to be designated by the Conference of the Parties serving as the meeting of the Parties to this Protocol, on the basis of:
   (a) Voluntary participation approved by each Party involved;
   (b) Real, measurable, and long-term benefits related to the mitigation of climate change; and
   (c) Reductions in emissions that are additional to any that would occur in the absence of the certified project activity.
6. The clean development mechanism shall assist in arranging funding of certified project activities as necessary.
7. The Conference of the Parties serving as the meeting of the Parties to this Protocol shall, at its first session, elaborate modalities and procedures with the objective of ensuring transparency, efficiency and accountability through independent auditing and verification of project activities.
8. The Conference of the Parties serving as the meeting of the Parties to this Protocol shall ensure that a share of the proceeds from certified project activities is used to cover administrative expenses as well as to assist developing country Parties that are particularly vulnerable to the adverse effects of climate change to meet the costs of adaptation.
9. Participation under the clean development mechanism, including in activities mentioned in paragraph 3 (a) above and in the acquisition of

certified emission reductions, may involve private and/or public entities, and is to be subject to whatever guidance may be provided by the executive board of the clean development mechanism.

10. Certified emission reductions obtained during the period from the year 2000 up to the beginning of the first commitment period can be used to assist in achieving compliance in the first commitment period.

Annex II: Negotiation Politics

Gupta (1997) suggests that during the Kyoto negotiations there were conflicting definitions of the problem between industrialized countries and developing countries, with common and converging interests even within those two blocks. The aim here is to show a better understanding of the complex interplay of politics and power at the climate negotiations.

The fundamental ideological differences between the blocks led to non-decisions. The CDM rests on a free-market ideology which was perceived as Western rationality. However, since many developing countries could not cope with the demands of the international system they did not formulate an adequate response and by default, lost their position within the negotiations. Moreover, some developing countries were strongly supporting the mechanism and thus making it 'voluntary' was a way to ensure the possible participation from those in favour of it. A common belief within the G77/China block was that climate change has being caused by industrialized countries and it should not be defined as a 'global' problem.

Besides the ideological differences, developing countries perspectives were dominated by the main arguments within the industrialized block due to the *structural imbalance of knowledge*, the *handicapped use of power* by developing countries, and the *processes of exclusion and pacification* used by industrialized countries (Gupta 1997).

What Gupta refers as the Handicapped use of power by developing countries is referred to the lack of negotiation power that led to some non-decisions. Developing countries were not able to ensure that the implementation mechanisms give to their concerns equal emphasis as within the normative policies of the UNFCCC. This issue matches the Pacification strategy of the industrialized countries to accommodating some developing countries interests.

This analysis can be applied to several of the non-decision analyzed throughout the paper. For instance, the 'supplementary' requisite, since there are no clear targets on how much should be domestically reduced. Moreover, the vague concepts of 'clean technologies', 'sustainable development' and 'development' lead to a weak implementation of the CDM and convenient interpretations for powerful interests.

Furthermore, the analysis of these characteristics within the negotiations also contain visible, hidden and invisible power forces which materialize on how the CDM is in fact being 'managed' and perceived by the different players. The imbalance of knowledge also applies for local communities that are affected by the CDM and in most cases do not have a clear understanding of the global structure and the policies behind.

Common, Converging, Diverging and conflicting interests (Gupta 1997: 185)

Interests	Industrialized countries	Developing countries
Common	Concern for the climate change problem	
Converging but different	Cost-effective reduction of emissions and the creation of markets for technologies *and offset reductions*	Transfer of new technologies, *funds* and accelerated development
Induced converging	Support of GEF *for transferring funds in developing countries,* since the WB is efficient	Support of GEF, because lack of alternatives *(would prefer a body regulated by the UNFCCC directly)*
	Support for JI as a cost-effective means of reducing emissions	Support of AIJ, as a voluntary pilot phase without credits
Diverging	Focus on global problems, priorities and global benefits. *Try to make developing countries to have targets at some point*	Focus on local problems, priorities and benefits. *Do not accept to have targets in emissions*
Conflicting	Focus on the climate problem and confidence that the problem can be solved without reference to the international economic order	Focus on the international economic order, because of the belief that the climate change problem cannot be addressed without taking into account that
	Prefer to avoid discussions on the distribution of responsibilities on the basis of past emissions	Focus on the issues of past emissions and responsibility of industrialized countries
	Prefer to avoid discussions on how future emissions will be shared among developing and industrialized countries	Defensive about their future right to emit/grow vis-a-vis the emission budget; demand equitable principles for sharing the ecospace; afraid that industrialized countries will prevent their own development
	Although recognizes that they are more 'capable' of dealing with the issue, capability is interpreted in the narrow sense in terms of limited domestic action and financial mechanisms for cooperation with developing countries	Annoyed about the way that developed countries interpret their responsibilities under the UNFCCC (Believe that adaptation, the result of a global problem, is a global problem)

The *italics* are text added to the original table

Annex III: Interests in Climate Change Mitigation within the Main Actors in the CDM Scheme

General interests towards the CDM among the different actors

Actors	**Interests in Climate Change Mitigation Policy Arena**
Industrialized countries	- Satisfy public pressure (electorate) / legitimize their policies and governments - Shift costs across actors and long-term polices - Accommodate economic interests. No specific targets for the CDM use - Avoid normative pressure regarding development and environment
Developing countries	- Receive foreign transfer of funds and clean technology - Accommodate economic interests - Meet national development and sustainability goals - Specific targets for industrialized countries in the use of CDM
Governance organizations (UNFCCC bodies, WB, UNEP)	- Encourage caring for the environment to fulfill mandate - Pressure to implement legislation - Help accommodate economic interests for countries and investors (WB)
Designated Operational Entities (DOEs)	- Increase level of involvement in procedures for more privatize governance within the CDM - Expand markets - Continue to receive contracts
NGOs	- Fulfill organizational mandate - Satisfy donor groups - Receive press coverage
Corporations and corporative lobbies	- Gain and sustain 'green' image/ Legitimize actions - Increase level of involvement in procedures - Expand markets - Lower costs for carbon credits - Could be instrumental in continue business as usual in the production
Financial market players (trading firms, brokers, consultants, hedge funds, etc)	- Increase level of involvement in procedures - Expand financial markets / accumulation of capital

Annex IV: The CDM Cycle

		Step	Definition	Actors involved	Dates
Pre project implementation (one time)	1	Project Design Document- PDD	Defines the project activities; the baseline methodology; GHG boundaries of the project; the baseline emissions amounts and the reductions incurred due to the project; states the crediting period; and adjusts for leakages.	Project developers and Parties involved	-
	2	Validation	Process of PDD 'independant' evaluation against the CDM requirements. The DOE needs confirmation from the DNA that the project assists in achieving sustainable development and that participation is voluntary. The confirmation will be made public and open for comment. The Validation report is delivered to the Parties, the EB and the public.	Operational entity - DOE Designated national Authority - DNA	-
	3	Registration	Formal acceptance of a validated project by the EB based on the DOE's validation report. If the EB requires a review, it will consider the validation requirements and communicate the decision to the participants, the DOE and the public. A rejected project can be reconsidered.	Executive Board - EB	Becomes final 8 weeks after the report is received by the EB
Post project implementation (periodic)	4	Monitoring	Collection and archiving of all relevant data necessary for establishing GHG emissions by sources occurring within the project boundary. The Marrakech Accords require that the monitoring methodology be in the PDD. The project participants shall provide to the DOE a monitoring report for verification.	Parties involved or third party	During the whole crediting period
	5	Verification	Periodic 'independent' review and determination that GHG reductions have occured from the CDM activity during the crediting period	Operational entity - DOE (in general not the same as step 2)	During the crediting period
		Certification	Written assurance that a project achieved the GHG reductions stated during the specified time period based on the verifications report. The certification is delivered to the Parties, the EB and the public.		Becomes final 15 days after being received by the EB
	6	Issuance	A RIT memeber is appointed to do an appraisal of the issuance request. The Certified Emission Reductions (CERs) are issued by the EB to the Parties' account. If there is reason to believe that the DOE engaged in fraud, malfeasance, or is incompetent, the EB makes its review 30 days following the decision to review the DOE´s certification to the EB. These decisions are also made public.	Executive Board - EB	Is final 15 days after received the request for issuance, unless a review is requested

Based on information of (UNCTAD, 2003), (UNFCCC, 1998), (IETA, 2007)

Annex V: Designated Operational Entities

Table 1: Sectoral scopes related to registered DOEs for validation and verification

Scope number	Sectoral Scope	DOEs accredited for validation	DOEs accredited for verification
1	Energy industries (renewable / non-renewable sources)	JQA DNV SGS TÜV-SÜD TÜV Rheinland JACO JCI AENOR BVC Holding SAS KPMG TÜV NORD KEMCO KFQ Deloitte-TECO BSI PwC LRQA	DNV SGS TÜV-SÜD JACO AENOR BVC Holding SAS TÜV NORD ICONTEC
2	Energy distribution	JQA DNV SGS TÜV-SÜD TÜV Rheinland JACO JCI AENOR BVC Holding SAS KPMG TÜV NORD KFQ Deloitte-TECO BSI PwC LRQA	DNV SGS TÜV-SÜD JACO AENOR BVC Holding SAS TÜV NORD ICONTEC
3	Energy demand	JQA DNV SGS TÜV-SÜD TÜV Rheinland JACO AENOR BVC Holding SAS KPMG TÜV NORD KFQ Deloitte-TECO BSI PwC LRQA	DNV SGS TÜV-SÜD JACO AENOR BVC Holding SAS TÜV NORD ICONTEC

4	Manufacturing industries	JQA DNV SGS TÜV-SÜD JCI BVC Holding SAS TÜV NORD LRQA	DNV SGS TÜV-SÜD
5	Chemical industries	JQADNVSGSTÜV-SÜDJCIBVC Holding SASTÜV NORDLRQA	DNVSGSTÜV-SÜD
6	Construction	JQA DNV SGS TÜV-SÜD BVC Holding SAS TÜV NORD LRQA	DNV SGS TÜV-SÜD
7	Transport	JQA DNV SGS TÜV-SÜD BVC Holding SAS TÜV NORD LRQA	DNV SGS TÜV-SÜD
8	Mining/mineral production	DNV TÜV-SÜD	DNV TÜV-SÜD
9	Metal production	DNV TÜV-SÜD	DNV TÜV-SÜD
10	Fugitive emissions from fuels (solid, oil, gas)	JQA DNV SGS TÜV-SÜD JCI BVC Holding SAS TÜV NORD LRQA	DNV SGS TÜV-SÜD
11	Fugitive emissions from fproduction and consumption of halocarbons and sulphur hexafluoride	JQA DNV SGS TÜV-SÜD BVC Holding SAS TÜV NORD LRQA	DNV SGS TÜV-SÜD
12	Solvent use	JQA DNV SGS TÜV-SÜD BVC Holding SAS TÜV NORD LRQA	DNV SGS TÜV-SÜD

13	Waste handling and disposal	JQA DNV SGS TÜV-SÜD TÜV Rheinland JCI AENOR KPMG TÜV NORD LRQA	DNV SGS TÜV-SÜD
14	Afforestation and reforestation	SGSTÜV-SÜDJACOBVC Holding SAS	SGS
15	Agriculture	JQA DNV SGS TÜV-SÜD	DNV SGS TÜV-SÜD

Table 2: Registered DOEs for validation and verification related to the CDM sectoral scopes

Ref. number	Entity Name	Sectoral scopes for validation	Sectoral scopes for verification and certification
E-0001	Japan Quality Assurance Organization (JQA)	1,2,3,4,5,6,7,10,11,12,13, 15	
E-0002	JACO CDM., LTD (JACO)	1,2,3,14	1,2,3
E-003	Det Norske Veritas Certification AS (DNV)	1,2,3,4,5,6,7,8,9,10,11,12 13,15	1,2,3,4,5,6,7,8,9,10,11,12,13,15
E-0005	TUV SUD Industrie Service GmbH (TUV SUD)	1,2,3,4,5,6,7,8,9,10,11,12 13,14,15	1,2,3,4,5,6,7,8,9,10,11,12,13,15
E-0006	Deloitte Tohmatsu Evaluation and Certification Organization (Deloitte-TECO)	1,2,3	
E-0007	Japan Consulting Institute	1,2,4,5,10,13	
E-0009	Bureau Veritas Certification Holding SAS (BVC Holding SAS)	1,2,3,4,5,6,7,10,11,12,14	1,2,3
E-0010	SGS United Kingdom Ltd. (SGS)	1,2,3,4,5,6,7,10,11,12,13, 14,15	1,2,3,4,5,6,7,10,11,12,13,14,15
E-0011	The Korea Energy Management Corporation (KEMCO)	1	
E-0013	TUV Rheinland Japan Ltd. (TUV Rheinland)	1,2,3,13	
E-0014	KPMG Sustainability B.V. (KPMG)	1,2,3,13	
E-0018	British Standards Institution (BSI)	1,2,3	

E-0021	Spanish Association for Standarization and Certification (AENOR)	1,2,3,13	1,2,3
E-0022	TUV NORD CERT GmbH (TUV NORD)	1,2,3,4,5,6,7,10,11,12,13	1,2,3
E-0023	Lloyd's Register Quality Assurance Ltd (LRQA)	1,2,3,4,5,6,7,10,11,12,13	
E-0024	Colombian Institute for Technical Standards and Certification (ICONTEC)		1,2,3
E-0025	Korean Foundation Quality (KFQ)	1,2,3	
E-0029	PricewaterhouseCoopers - South Africa (PwC)	1,2,3	