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Governing Clean Development: A Framework for Analysis

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Abstract

This paper constructs a framework for understanding and explaining the governance of clean development in order to generate insights about who is governing clean development, by what means, for whom and how effectively. Understanding key governance dimensions is critical to appreciating the extent to which and the ways in which flows of public and private investment into the developing world can be harnessed to the goals of clean development, principally in the area of energy. The governance structures and decision-making processes of CD 'providers' and 'recipients' may provide important clues as to why the governance of CD 'from above', produces such diverse and uneven outcomes once mediated and translated by forms of 'governance' from below, principally at the national level in the first instance. Such a framework usefully highlights governance gaps and blind-spots, issues of policy coherence and coordination and the distributional consequences of existing patterns of CD governance. This provides the basis for assessing the social and environmental effectiveness of existing initiatives in this area as well as identifying areas for future reform.

Key words: governance; clean development; energy

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Introduction

This paper constructs a framework for understanding and explaining the governance of clean development in order to generate insights about who is governing clean development (CD), by what means, for whom and how effectively. Understanding key governance dimensions is critical to appreciating the extent to which and the ways in which flows of public and private investment into the developing world can be harnessed to the goals of CD, principally in the area of energy. The governance structures and decision-making processes of CD 'providers' and 'recipients' may provide important clues as to why the governance of CD 'from above', produces such diverse and uneven outcomes once mediated and translated by forms of 'governance' from below, principally at the national level in the first instance. Collective initiatives and common funding streams overseen by a range of international actors look very different at the level of specific projects once refracted through these processes.

Such a framework places the issue of governance centrally, posing questions about:[1]

- *Who governs?* (the range of actors involved in producing CD)
- *How do they govern?* (the forms of governance that are being practiced)
- *What is to be governed and what is not?* (the processes by which decisions are made about which actors and issue areas are to be subject to intervention, which are not and why)
- *On whose behalf?* (the social and environmental consequences of how power is exercised and whose interests are served by it)

Understanding each of these dimensions is key to exploring issues of a) *coordination* and *coherence* among the 'providers' of CD, b) questions of *autonomy* and *power* to steer and direct project and investment flows on the part of CD 'recipients', c) *processual* issues of participation and consultation of other 'stakeholders' in relation to identifying energy needs and delivering projects, d) *managing* the *conflicts* and *trade-offs* between social and environmental costs and benefits associated with projects and investments, and e) *distributional* issues: The circulation of CD finance for energy within and between countries.

In assessing these issues we go beyond looking at flows through registered Clean Development Mechanism (CDM) projects on the basis that the regulated space of CDM governance is just one small part of the much larger challenge of governing financial flows into the energy sector that need to be consistent with the goal of a lower carbon future. As CDM Watch put it (2004:7): 'Any discussion about the future of the CDM must also address the fact that it, and the carbon market itself, exist on the margins of huge financial flows to carbon-intensive energy projects in the South'.

While there is now a large literature on the CDM (Rowlands 2001; Niderberger and Saner 2005; Olsen 2007; Boyd et al 2007; Streck 2004; Wittneben 2007) in general, critical thinking about the governance of CD has been lacking. Individual studies of particular projects and their relationship to existing localised regimes of resource governance (Brown and Corbera 2003; Kim 2003; Boyd et al 2007a, 2007b) have usefully drawn attention to the realities of implementation in areas of conflict over access and ownership, highlighting the need for formalised governance arrangements to engage informal practices of governance at a local level. UN-led overviews of financial flows in the area of climate change meanwhile have also provided a sense of the

[1] These questions are adapted from Newell (2008a).

challenges of financing clean development in general terms (UNFCCC 2007). There have also been critiques of the social and environmental consequences of interventions conducted in the name of CD (Bachram 2004; Bond et al 2007; Lohmann 2005). What we continue to lack is systematic comparative research which connects these actors and the range of scales at which they operate on why CD initiatives, public and private, are effective in some circumstances and not in others in terms of their ability to deliver social and environmental benefits simultaneously. The framework we develop here provides the means of addressing these questions.

Governing Clean Development

After ten years of discussions about the development and implementation of CD projects associated primarily with the CDM, created by the Kyoto Protocol in 1997, and with an increasing number of public and private initiatives in the area of CD, it is an important time to take stock, evaluate progress to date and reflect on lessons learned. Beyond the ongoing discussions within the climate negotiations about the future of the CDM in a post 2012 regime (IISD 2007; Olsen and Fenhann 2008), there is an increasing sense of urgency about the delivery of CD for both environmental and social objectives. The links between climate change and the efforts of the international community to deliver on the Millennium Development Goals and to eliminate poverty are becoming ever clearer. Indeed, a multi-donor report on *Poverty and Climate Change* rightly acknowledges that 'climate change is a serious risk to poverty reduction and threatens to undo decades of development efforts' (World Bank 2003).

At the same time, meeting the energy needs of the poor is pivotal to development. Yet achieving this in a carbon-constrained world presents a global challenge of staggering proportions. Today 1.6 billion people are without electricity. Electricity demand in developing countries is projected to increase three to five times over the next 30 years (Davidson et al 2003) and 57% of future power sector investment will occur in developing countries (UNFCCC 2007). Without a significant change of course, most of this will be fossil-fuel based electricity production that will exacerbate climate change. A recent UN report notes that of the 'substantial shifts in investment patterns' required to mitigate climate change, 'half of these should occur in developing countries which will require incentives and support for policy formulation and implementation' (UNFCCC 2007:26). This explains the growing interest in the potential for CD projects, supported through and beyond the CDM, to reconcile the needs of poorer groups for access to affordable energy sources with the need to tackle climate change. There is now a range of institutions, initiatives and mechanisms whose common aim is to enable the provision of CD, ensuring social and environmental benefits, particularly for poorer countries of the global South.

We know little, however, about the governance of CD: *Which features of these actors, institutions, and policy-making processes are resulting in effective outcomes in terms of climate action and developmental benefits, which are not, and why*. This is particularly so when looking beyond the CDM itself at a range of governance actors active in this field and the multiple levels at which they operate. There are (at least) two aspects to this. Firstly, what can broadly be described as 'governance from above': The increasing range of actors, public and private, international, regional and national, involved in the supply of CD projects and initiatives. Secondly, 'governance from below': The governance mechanisms and processes at work in the recipient countries which shape the likelihood that such interventions result in the intended emissions savings and expected social benefits. The interface between the two is critical to understanding why common approaches appear to have such differentiated outcomes at project and local level.

Why governance?

The process of governing a transition to a low carbon economy in which CD has an increasing role to play places the role of actors, institutions and policy processes at the centre of the analysis. Providing the right incentives for governments and in particular private sector actors, whose investments in energy, industry, infrastructure and transport will largely determine the fate of this issue in the years to come, presents a huge policy challenge. The scale of the governance challenge, requiring interventions across levels by a multitude of actors, is quite possibly unprecedented. As a recent UN report on financing notes, 'The entities that make the investment decisions are different in each sector and the policy and/or financial incentives needed will vary accordingly' (UNFCCC 2007:3).

Looking at actors and institutions in each of the areas charged with promoting CD will provide insights into the ways in which potential conflicts between, for example, investors and host communities and the expectations they may have can be reconciled. Ensuring that projects deliver sustainable development benefits to such communities is a critical function for institutions active in this field. This is as true of local institutions as it is of the CDM executive board which approves project methodologies. Existing work suggests that where robust and inclusive institutions are in place, more equitable outcomes for host communities are more likely (Brown and Corbera 2003).

Assessing issues of governance means addressing both the *distributional* and *processual* aspects of the governance of CD and the links between them; particularly how the processes of decision-making around project selection and evaluation impact upon the distribution of social and environmental gains. For critics, the failure of the CDM to date is a direct result of the dominance of one of it's mandates over the other: reducing compliance costs over contributing to sustainable development (CDM Watch 2004). This explains why HFC-23, methane and nitrous oxide 'end-of pipe' projects are more attractive as the up-front costs are less and the volume of credits (certified emissions reductions) earned are many times greater as they reduce gases which have a higher global warming potential. A governance structure such as this sidelines renewable energy by not rewarding the multiple benefits they provide. The project focus of the mechanism means that broader sectoral and national benefits provided by renewable energy[2], for example, are very difficult to quantify at project level. 'While the CDM is *rhetorically* mandated to assist in achieving sustainable development…no part of the CDM's architecture specifically monetises those benefits and as such they play a very limited role' (2004:4). The way the rules are set about eligibility shape the likelihood of spill-over benefits and short and long-term gains for host communities.

At the level of 'governance from below', a framework such as this has to be sensitive to the diversity of forms that governance takes across the world. Many approaches to governance (as opposed to 'good governance') make assumptions about a strong state, a functioning market and an active and free civil society with the democratic space in which to make its voice heard. Many of these characteristics do not pertain to large parts of the world, including those parts of the world targeted for the governance of CD as either 'recipients' or 'providers'. Understanding the governance of CD means trying to capture and explain existing *governance in practice* rather than looking for and failing to find the sorts of institutions we would expect to see in Europe or North America.

[2] Definitions of 'renewable energy' are often ambiguous. According to the World Bank, 'new renewable energy' applies to energy from biomass, solar, wind, geothermal, small hydro (under 10MW). However the term 'renewable energy' can include energy efficiency measures and large hydro-electric projects, which have been criticised for negative environmental and social impacts. For further discussion of definitions see WWF-UK (2008).

Who governs?

A plurality of actors are engaged in the day to day governance of CD even if they would not identify themselves as formal actors in the governance of CD. The following section highlights three types of governance of CD from which distinct challenges arise in terms of participation and representation, accountability and effectiveness. These challenges derive from the diverse constituencies these institutions serve, the extent to which they are largely public or private actors and, therefore, the nature of their mandates. This determines who has a right to call them to account and the nature of expectations about who they serve and who is entitled to participate in their decision-making. It is notable, however, that the distinctions between public and private often break down in practice at the level of individual initiatives and programmes. These issues will be addressed more fully in the following section when we identify ways of understanding *how* they govern.

We discuss, in turn, the *public governance of public finance*, the *public governance of private finance* and the *private governance of private finance*. The first refers to aid money and public expenditure on energy sector activities that impact on climate change. The second refers to public mechanisms for overseeing private flows constructed by governments or regional and multilateral development banks. The third area refers to the forms of private and self-regulation that have been set up in recent years whether it is the CDM Gold Standard, the Carbon Disclosure Project or the Voluntary Carbon Standard which have a bearing on investment flows in CD.

Governance from Above

(i) *The Public Governance of Public Finance*.

Some governments are showing increasing interest in institutional innovation and in supporting other governments in their attempts to promote CD. For example, a consortium of European governments is developing the world's first International Renewable Energy Agency (IRENA). The agency will serve as a global 'cheerleader' for clean energy. It plans to offer technical, financial, and policy advice for governments worldwide, according to a joint announcement from Germany, Spain, and Denmark - the project's leaders. Hermann Scheer, general chairman of the World Council for Renewable Energy said: 'There exist international agencies for fossil and nuclear energies, but none for renewables. IRENA will close this gap' (Block 2008). Alongside this there is REN21 which describes itself as 'a global policy network that provides a forum for international leadership on renewable energy. Its goal is to bolster policy development for the rapid expansion of renewable energies in developing and industrialised economies. Open to a wide variety of dedicated stakeholders, REN21 connects governments, international institutions, non-governmental organisations, industry associations, and other partnerships and initiatives' (REN21 2008).

Another increasingly important source of public governance of public finance in the area of CD is provided by regional development banks such as the Asian Development Bank (ADB) which plays a major role in financing development projects in the Asian energy sector. The majority of the Bank's funding comes from industrialized countries such as Japan, the US and the EU (ClimateIMC 2007), which also have most voting power. An ADB report claims that it invested $2,383 million in the clean energy development sector between 2003 and 2005 including a $115 million Renewable Energy Development Sector Investment Project in Pakistan, a $35 million Gansu Clean Energy Development Project in China, and equity investments in several funds targeting clean energy projects (ADB 2008). The 2008-2010 pipe line indicates that investments will

exceed the Energy Efficiency Initiative target of $1 billion a year with an estimated total of $1.9 billion. However, the ADB is, at the same time, increasing its support for coal-fired thermal power plants (WRI 2008:11) and has received heavy criticism for its continued promotion of grid energy which, according to the NGO Forum on ADB (Withanage and Nemenzo 2007), will make it impossible for the bank to comply with commitments in its Draft Energy Strategy Paper of May 2007, to provide rural households with greater access to energy (ADB 2007).

As the world's largest development actor, it is unsurprising that the World Bank has sought to carve out for itself a leading role in the promotion of clean energy, most recently through the launch of the World Bank-administered Climate Investment Funds and the Bank's increasing portfolio of carbon finance funds (World Bank 2008). In 2005 the World Bank launched its *Investment framework for clean energy and development* to address developing country energy needs, control greenhouse gas emissions and support climate change adaptation. In October 2008 the Bank also approved its *Strategic Framework on Development and Climate Change* (World Bank 2008a), whose objective is to enable the World Bank Group to 'effectively support sustainable development and poverty reduction in the new realm of changing climate'. As part of the Strategic Framework, two Climate Investment Funds (CIFs) were approved in July 2008: The Clean Technology Fund (CTF) and the Strategic Climate Fund (SCF). Donors from ten countries have pledged $6.1 billion for these funds, with the largest commitments made by the US ($2 billion), the UK ($1.5 billion) and Japan (up to $1.2 billion). The CTF's objective is to provide finance for low carbon energy projects or energy technologies in developing countries that reduce emissions. However, it is not expected to limit the types of technologies eligible for financing to 'new renewables' and keeps the door open to support coal and large hydroelectric projects; a fact which has attracted criticism for maintaining a 'business-as-usual' approach (Halifax Initiative 2008; WWF-UK 2008).

In October 2008 seven donor countries (Australia, France, Germany, Japan, Sweden, the UK, and the US) and seven *potential* recipient countries (Brazil, China, Egypt, India, Mexico, South Africa, and Turkey) were selected as members of the CTF's Trust Fund Committee. The committee will be responsible for approving financing for programs and projects, deciding on the strategic use of the funds and `programming priorities'. Though there is a Partnership Forum to the CIFs, which will 'discuss the strategic direction' of the funds and includes representatives from civil society, recipient countries and the UN, it has no formal decision-making power. Decisions about which projects will receive support via the CIFs are expected early in 2009.

A serious sticking point with regards to the World Bank's recently up-scaled involvement in the governance of CD, however, is the highly inequitable governance and decision-making structure of the institution, with long-held calls for reform coming from both within the institution and without (South Centre 2007). When the CIFs were first proposed in March of this year, governance issues featured highly among the concerns of civil society groups and southern governments including limited consultation of developing countries, lack of clarity over whether money going into the funds would be additional to previously agreed overseas development aid and whether it would be in the form of grants or loans, the extent to which undermine already existing processes under the UNFCCC (BOND 2008), and an apparent disregard for the Paris Declaration on Aid Effectiveness (Müller and Winkler 2008).

In overall terms, however, only a tiny fraction of trade, aid, production and finance is governed by public bodies charged with tackling climate change. Official Development Assistance (ODA) funds for climate change mitigation are currently less than 1% of investment globally (UNFCCC 2007). The reality is that while we fight over public flows

and resources in climate negotiations, the global economy continues on a business as usual trajectory and the CDM has a small role to play even in comparison with other flows of public sector money. There is a clear need, therefore, to extend the governance for CD to a much broader range of areas. This means going beyond *public governance of public finance*, to the *public governance of private finance* as well as *private governance of private finance*.

(ii) The Public Governance of Private Finance

A key role for the World Bank and other donors could be to create incentives for the private sector to be involved in the provision of clean energy. Despite being expected to lead the way, the problem is that many private investors have little experience with sustainable energy, which they view as high risk. Piloting and demonstrating sustainable energy projects is a key function that Banks and development agencies can perform to minimise some of the risks that deter private actors from investing in clean energy.

The Renewable Energy and Energy Efficiency Partnership (REEEP) is an international public-private partnership funded by governments, businesses and development banks aimed at addressing this issue. REEEP is focussed on the development of market conditions that foster sustainable energy and energy efficiency and works to structure policy and regulatory initiatives for clean energy. Established in 2002 at the World Summit on Sustainable Development, REEEP is today recognised by international processes, such as the G8, the Gleneagles Dialogue and the Asia Pacific Economic Corporation Working Group, as a key delivery vehicle for accelerating the global uptake of renewables and energy efficient technologies. REEEP partners are from 71 countries although 22% originate in Asia. The partnership currently has more than a hundred projects in its portfolio and, in October 2008, issued a new project call of more than €4.3 million, particularly for projects in priority countries – Brazil, China, India and South Africa.

With a different regional focus, the Asia Pacific Partnership on Clean Development and Climate (APP) is a public-private partnership that brings together the governments and private sectors of Australia, China, India, Japan, Korea, the United States and, since October 2007, Canada – countries that collectively account for more than half the world's economy, population and energy use (APP 2008). Though the APP is voluntary and non-legally binding, it is intended to be 'politically binding'. The Partnership does not contain any emission reduction targets for which it has received heavy criticism from NGOs that viewed it as a threat to the Kyoto Protocol process. Rather, it aims to produce forms of cooperation to reduce 'greenhouse gas intensities' of economic activities thus allowing overall emissions to grow as long as energy is being used more efficiently. The APP aims to facilitate investment in clean technologies, goods and services, accelerate the sharing of energy-efficient best practices, and identify policy barriers to the diffusion of clean energy technologies. To achieve these goals the APP created eight public-private Task Forces for specific sectors[3]. The US based Policy and Implementation Committee (PIC), comprising representatives from the partners, governs the overall framework, policies and procedures of the Partnership, guides the Task Forces and periodically reviews progress of the Partnership. As of July 2008, 123 projects had been endorsed by the PIC, though it is too early to comment on delivery of tangible benefits. The Partnership is based on a highly decentralised structure whereby a project or activity involving any two or more Partners that contributes to the objectives of the Partnership is eligible for inclusion in the Partnership.

[3] These are aluminium, buildings and appliances, cement, Cleaner Fossil Energy, coal mining, Power Generation and Transmission, Renewable Energy and Distributed Generation, and Steel.

(iii) *The Private Governance of Private Finance*

The final area is what we are calling *Private Governance of Private Finance.* This includes specific initiatives such as the CDM Gold Standard, the Voluntary Carbon Standard and the Carbon Disclosure Project which have a bearing on the governance of CD, albeit often an indirect one. They are worth mentioning, briefly nevertheless, because of the steering roles they perform and the informal forms of regulation and standard-setting they generate. A number of these standards claim to have at least as stringent criteria for measuring additionality as the CDM.

The Gold Standard, initiated by WWF International in 2003, includes among its objectives helping to boost investment in sustainable energy projects and increasing public support for renewable energy and energy efficiency (CDM Gold Standard 2008). The Gold Standard essentially applies an extra set of screens to CDM or voluntary projects using strict additionality criteria and certifying with Gold Standard credits only those projects in the areas of renewable and energy efficiency and methane to energy. To ensure sustainable development, it also places emphasis on local stakeholder consultation prior to implementation. The boutique credits that result from these extra transaction costs are generally sold at about 25% above the market value for normal CERs.

The Voluntary Carbon Standard, developed by The Climate Group, the International Emissions Trading Association and the World Business Council for Sustainable Development in 2006 as a pilot standard for use in the market, seeks to provide a 'robust global standard, program framework and institutional structure for validation and verification of voluntary GHG emission reductions' (VCS 2008). What is relevant from the point of view of the governance of CD are its aims to 'experiment and stimulate innovation in GHG mitigation technologies, verification and registration processes that can be built into other programs and regulations'. Part of this involves performing key governance functions such as guarding against double-counting of the same emission reduction and providing transparency for the public.

Other initiatives that fall under this heading are about transparency and accountability of investors but in so far as they generate new forms of scrutiny of firm's investments, they may also create pressures for firms to reduce their emissions through their investments. The Carbon Disclosure Project (CDP), for example, creates the means to pressure firms to invest in renewable rather than fossil fuel energy solutions. The CDP now covers US$57 trillion worth of assets from over 3,000 companies. The scope of private regulation is, therefore, impressive and reaches key actors not subject to other forms of CD governance. It claims:

The CDP provides a secretariat for the world's largest institutional investor collaboration on the business implications of climate change. CDP represents an efficient process whereby many institutional investors collectively sign a single global request for disclosure of information on Greenhouse Gas Emissions. More than 1,000 large corporations report on their emissions through this web site. On 1st February 2007 this request was sent to over 2400 companies (CDP 2007).

The Greenhouse Gas Protocol (GHG Protocol), meanwhile, was jointly convened by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD) in 1998. Emphasising the links between formal and informal regulation, in 2006 the International Organization for Standardization (ISO) adopted the Corporate Standard as the basis for its *ISO 14064-I: Specification with Guidance at the*

Organization Level for Quantification and Reporting of Greenhouse Gas Emissions and Removals. On December 3rd 2007 ISO, WBCSD and WRI signed a Memorandum of Understanding to jointly promote both global standards (WRI 2007). Organisations such as the Carbon Fund meanwhile aim at: 'increasing awareness of products and companies that are compensating for their carbon footprint while helping to hasten a market transformation' (Carbon Fund 2008). Indeed, tools such as the Carbon Fund's 'Carbon Footprint Protocol' draw on guidelines and standards that govern the compliance market such as rules for CDM and LULUCF, since essentially they are wrestling with the same issues of proving additionality, using valid baselines.

Less focussed around business reporting and more concerned with risk management in carbon markets is the Carbon Ratings Agency (CRA) which launched the 'world's first independent carbon credit ratings service' on 25 June 2008. CRA have already produced market-based initiative ratings for a representative sample of 25 CDM projects across a range of technologies and geographies. By providing clarity and transparency in the market, CRA hope to be able to attract further investment into the sector (CRA 2008). The CRA is essentially about protecting investors' exposure to risk. But by exercising quality control in carbon markets it creates pressures on all actors to ensure GHG emissions reductions are real. It is market facilitating by helping project developers to position their projects and get access to finance. The CRA ratings service is designed to enable market participants to manage their risk by differentiating between projects that are more or less likely to deliver the number of credits projected by the project developer, thereby reducing regulatory uncertainty, reducing risk and improving levels of transparency.

Governance from below

As CD 'recipients' national governments are key governance actors in a number of ways. In the world of clean energy more broadly, the nature of their relations with key institutions such as the World Bank, or with governments acting as the principal sponsors and underwriters of clean energy initiatives, will be decisive in determining what levels of finance they are able to secure and on what terms. In relation to the CDM process, they have to approve projects, authorize private sector entities of their countries to participate in CDM projects and give them all necessary assistance to meet the requirements of the CDM executive board (Streck 2004). Although all countries follow rules stipulated by the Marrakech Accords, which set out the basic rules and modalities of the CDM, and by the subsequent decisions by the CDM Executive Board, each host country must define for themselves the ways in which projects contribute to sustainable development in their country and, therefore, what they mean by this. National level differences will reflect how these rules have been translated and interpreted. Among the key governance factors at national level, the following appear to be key:

National strategies and priorities

Existing policies and priorities in relation to energy and climate change will have a strong bearing on the role of CD within policy frameworks. For example, Brazil currently has a robust energy policy with an ambitious and successful renewable energy policy (RECIPES 2007). As a leading member of the UNFCCC and key proponent of the CDM, the Brazilian CDM regulator has a strong focus on maintaining the environmental integrity of the system, with far less emphasis on actively promoting the development of a flourishing carbon market. In contrast, the Chinese government's primary objectives are to (1) tap the large business opportunities of greenhouse gas emission reductions establishing China as one of the leading CDM markets in the world, and (2) align the CDM with its own priorities, namely the improvement of energy efficiency and the

improvement of its energy infrastructure in remote areas. To achieve this the Chinese government has imposed taxes on CER revenues which differ according to project type: The so called 'royalty fee' is 2% for projects in the priority areas of energy efficiency, renewable energies and methane capture and utilisation, 30% for N_2O projects and as much as 65% for HFC and PFC projects (Schroeder 2008).

These differences in national priorities are further embodied in the way each host country addresses the sustainable benefits component of CDM projects. The Brazilian DNA, for example, uses five key sustainable development criteria, developed by the Centro Clima research institution at COPPE, Federal University of Rio de Janeiro, to evaluate all projects: (1) Income distribution, (2) local environmental sustainability, (3) development of work conditions and net employment generation, (4) capacity building and technological development, and (5) regional integration and interaction with other sectors. In contrast, in China there are no criteria for assessing the sustainable development benefits of CDM projects on the assumption that projects will have positive impacts if they are implemented in the three Chinese priority areas stated above. India has adopted a broad and all encompassing sustainable development criteria such that the majority of projects gain host country approval quickly.

Capacity

State capacity is a hugely important aspect of governance. This can be capacity to receive and process requests and to meet the demands of the CDM Executive Board in ensuring projects are conducted in a satisfactory way and are aligned with national priorities. The lack of capacity within the CDM Executive Board at the international level is, however, in many ways matched by a lack of capacity at the national level among Designated National Authorities within government and among Designated Operational Entities (DoEs) that are tasked with registering and monitoring CDM projects (Boyd et al 2007). For example, among Brazilian project developers there is a clear sense that some DOEs do a more thorough evaluation than others (Friberg 2008), whilst in China, lack of staff, insufficient training and overloaded DOEs have resulted in a validation bottleneck (Schroeder 2008). In India, the increasing number of project design documents (PDDs) stuck in the pipeline or rejected by the CDM Executive Board is blamed on DOEs having overworked, badly paid staff and poor standards of work (Benecke 2008).

Firstly, the processing period of a project varies considerably from four to six months in Brazil, to a month in China and only a week in India (Friberg 2008). Whilst the Brazilian DNA has been accused of adopting an overly rigorous approach, it is generally perceived by market actors to be thorough but fair in its handling of applications, whereas 50% of CDM projects rejected worldwide originate from India raising questions over the quality of applications and the control procedures in place for validating proposals. The rate of staff turnover in key areas of CDM governing bodies also varies and consequently, so too does their familiarity with and knowledge of the CDM. While India, Argentina and China have experienced high staff turn-over, in Brazil the climate change scene is dominated by a small, well educated elite of scientists, businesses, NGOs and policy makers which form a close network with many individuals having worked together for many years.

Secondly, there is varied ability to guarantee that adequate attention is given to consultation with affected stakeholders. This is potentially critical in ensuring that the social dimensions of projects and their potential beneficiaries are adequately considered. To enhance stakeholder engagement, the Brazilian DNA has a formalised minimum procedure for how a project shall inform institutions and representatives of civil society about the project, seeking their consent by means of written information

describing major aspects of the implementation and operation of the project (Friberg 2008). However, less than 5% of proposed projects receive any written comments despite the elaborate procedure on which institutions the project developer has to contact and what sustainable development criteria it has to show it is meeting. India has also experienced a decrease in local stakeholder feedback on CDM projects, which may be explained by the decreasing time and interest of stakeholders due to the increasing number of projects (Benecke 2008). In China, although stake holder consultations have to be conducted at the project level, their quality and scope varies considerably (Schroeder 2008). Lack of understanding by local stakeholders of what is proposed is not always deemed to provide sufficient grounds for delaying or rejecting a project. As a PDD for a methane capture project in Buenos Aires Argentina concedes, most people who attended the invite only stakeholder dialogue about the project did not feel they had enough information to form an opinion about the project one way or another. This was not considered valid grounds for delay (interview material).

Power

States are clearly unevenly placed with regard to their ability to set terms for investors and to exercise their policy autonomy. China is able to attract foreign direct investments on its own terms. This places the government in a position to implement tough restrictions on foreign ownership and control of CDM projects, which favours Chinese project owners (the 51% Chinese ownership rule), and to impose high levies on CER revenues (Schroeder 2008).

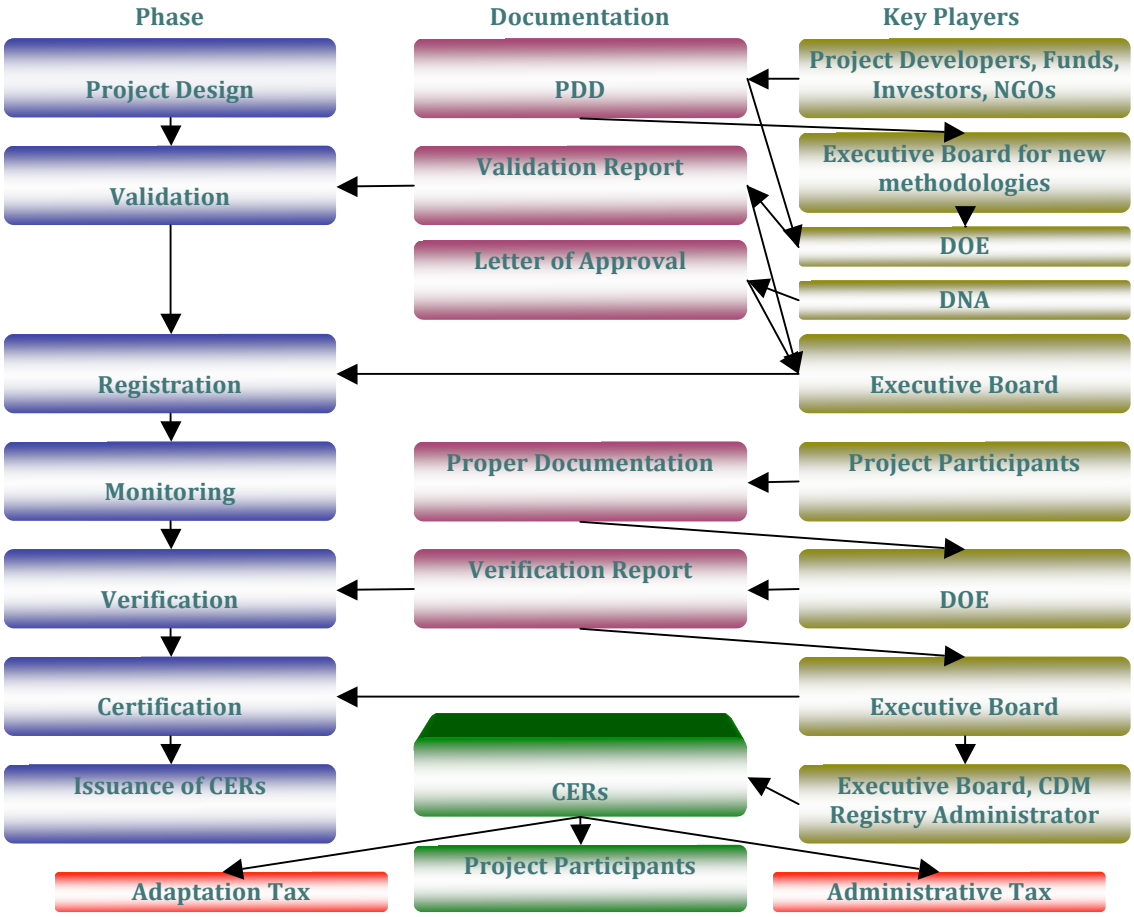
Power in this sense derives from the attractiveness of the domestic market for investors as well as location within the global economy. Perceptions both of a general investment climate and histories of working in particular markets, or the attractiveness of doing so in the future, shape investment flows. Aid and private sector flows into the CDM from Japan tend to be directed towards lucrative markets in China. These are often viewed as 'no regrets' investments where investments in the CD sector may act as a lever for other business opportunities. By contrast, investors are more wary of countries such as Argentina affected by financial crises, or where heavy subsidies are used in the energy sector reducing the likely returns for energy providers (interview material).

The predictability of the regulatory system has been cited as a key factor in encouraging CER buyers to invest in the Chinese market (WB 2008a: 32). In comparison, Brazil's energy legislation has been reformed and counter reformed three times since the 1990s under different administrations. Therefore, despite Brazil's currently robust energy policy, investments in developing energy capacity may be deemed risky by investors (Friberg 2008). Factors specific to the flow of clean energy investment include the lack of a level playing field in the energy market (i.e. hidden subsidies for conventional energy), and the lack of fiscal and market incentives. In general, infrastructure, legal uncertainties (e.g. contract law, lack of international investment treaties and intellectual property concerns), financial security, political stability and transparency further act as critical incentives or obstacles to investment flows into host countries (Dayo 2008; Ellis et al 2007; Point Carbon 2008). In Nigeria, for example, the cost of doing business is generally high as a result of poor quality and unreliable supply of power, poor transportation infrastructure and ineffective communication facilities, all of which lead to erosion of profit margins (Dayo 2008).

How do they govern?

Looking at governance in practice, this question explores the opportunities and constraints that actors face in making decisions about which projects to support, how

and according to what criteria. The diagram below from Boyd et al (2007) usefully highlights many of the key stages and moments in decision-making around CD.



We can see from this the range of actors that are enrolled in the governance of CD and in this instance just one part of it: those activities related to the CDM. The CDM Executive Board oversees and supervises the day to day activities of the CDM. The board consists of 10 members representing different UN regions. Members are nominated by their constituencies and elected by the COP/MOP (Conference/Meeting of the Parties). The board issues CERs and accredits the DOEs that assess projects for validation and verify that emissions reductions have occurred. The board has faced criticisms about lack of capacity to manage the scale of requests it faces as well as concerns about the lack of transparency in relation to decisions about specific projects (as opposed to methodologies) (Flues et al 2008) and for an unwieldy and time-consuming approval process for new methodologies.

There are an important set of politics, therefore, about how the boundaries are drawn around what is to be governed (and what, by implication is not). This is partly a question of governing what can be managed and rendered legible in institutional terms. This explains the focus on quantification which creates incentives to invest in some sectors and projects and not others and as a result, produces uneven outcomes. The difficulty of measuring sustainable development benefits in clear and quantifiable ways often means they are neglected in CDM projects. CDM Watch (2004) also point to the dynamic whereby quantifying and commodifying the additional benefits that a renewables

project provides outside of a project boundary is difficult and prohibitively expensive, while projects whose emissions reductions can more easily be captured but which produce negative impacts outside the project boundary can thrive. Revenues attained from capturing methane released from coal and oil production sites, for example, end up directly subsidising further coal and oil extraction by providing them with a further revenue stream and contributing further to climate change.

In terms of describing the modes of governance at work here, for Streck describes the CDM as a public-private partnership, one that constitutes 'an innovative model of cooperation between the private and public sectors' (2004:295). This relates to a growing strand of work which looks at public-private and transnational climate partnerships (Pattberg 2007; Pattberg and Stripple 2008; Bäckstrand 2008). She draws on ideas about 'global public policy networks' to make the case that the CDM is underpinned by a collaborative network structure in which state and nonstate actors collaborate in a partnership arrangement. This confers on non-state actors, such as the DOEs referred to above, 'a variety of voluntary, self-formal and formal roles in formulating policy responses and implementing international agreements' (2004: 297).

NGOs in this schema are characterised not as formal participants, unless they help develop a PDD, but as 'watchdogs' exposing projects of weak environmental credibility, poor additionality as well as the negative social consequences (Newell 2005, 2008). They also enrolled as enablers of projects by mobilising stakeholder participation which enhances 'benefits flowing to local communities by enabling project developers to better recognise community needs' (Streck 2004:312). The value to the investor is the reduced financial risk of a project that enjoys local support and avoids costly political opposition, legal action and local unrest. To this list Streck adds information-gathering functions, raising awareness, lobbying for particular CDM mitigation options and capacity-building activities (2004:311-312).

If the CDM is described as a public-private partnership, the World Bank's Protype Carbon Fund (PCF) is described by Streck as an 'implementation network', bringing together interested parties from North and South under the rules set out by the CDM. Set up as a trust fund in 1999, by a resolution of the executive directors of the World Bank and with the IBRD acting as trustee of the fund, it runs until 2012. In many ways it is an example of both *public governance of public finance* and *public-private governance of private finance*. Initially public sector participants contributed $10 million and private sector participants $5 million to the fund. This was later increased to $180 million in total (Streck 2004:314). In some ways it functioned as a learning network providing participants with an opportunity to learn about CDM and Joint Implementation before the Protocol has entered into force and before the guidelines on how to implement such projects had been agreed on. It was also intended to have demonstration effects that project-based investments under the Kyoto Protocol could earn revenue for developing countries and increase the profitability of cleaner energy options.

The PCF is governed through a Fund Management Unit headed by the fund manager and the Fund Management Committee which consists of members of the World Bank's management. PCF participants meet annually at the participants' meeting where they review and approve the annual budget of the fund and elect members of the participants' committee. The committee, which consists of 7 members, provides general advice on issues regarding the operations of the fund, advises the trustees on the extent to which the project agreements are in accordance with the project selection criteria and reviews each project. There are also host country committees which provide advice to the PCF management unit from the perspective of the hosts of PCF projects. Though NGOs are not formally represented in the management structure, there is scope for

consultation with external non-governmental experts through the PCF Technical Advisory Group. Members are selected by the PCF manager from a list of candidates put forward by the Climate Action Network representing NGOs from North and South. Streck argues that this layered, multi-actor approach is key to its apparent success (2004:317):

'The broad range of actors that cooperate and play an active role in the success of the operations of the fund, ranging from public and private participants to country officials, private entities in non-Annex 1 as well as Annex 1 countries, private verifiers and NGOs, are crucial for the PCF's success. Only because all these actors play an integral role in making the PCF work, in applying and revising its rules and broadening its impact, can the PCF design and implement successful projects'.

Despite the proliferation of initiatives such as these, each constructing distinct forms of governance, critical governance gaps remain. Instead of coordinated strategies across levels of governance *vertically* (between global bodies working in relevant areas) and *horizontally* (across levels of governance from local government up to the global), we find high levels of incoherence. The activities of one body systematically undermine those of others. Multilateral development bank lending supports projects that commit vast amounts of greenhouse gases to the atmosphere as well as focussing on centralised grid systems that fail to reach the poor. For instance the World Bank supported $4.14 billion coal powered 'Ultra Mega' 4,000 mega watt power plant in Gujarat, India will emit more carbon dioxide annually than the nation of Tunisia according to the US Department of Energy (Swan 2008). The failure to integrate CD objectives into mainstream policy results in contradictory policy, even within the same organisation. With regard to energy market de-regulation, for example, the Bank concedes 'unregulated electricity markets are likely to put renewable energy technologies at a disadvantage in the short-run because they favour the cheapest energy as determined purely by price, but do not capture environmental and social externalities' (Tellam 2000:33). One report found that during the past three years, less than 30% of the World Bank's lending to the energy sector has integrated climate considerations into project decision-making. As late as 2007, more than 50% of the World Bank's $1.8 billion energy-sector portfolio did not include climate change considerations at all (WRI 2008). While in 2006 the World Bank raised its energy sector commitments from $2.8 to $4.4 billion, the oil and gas sector received a 93% increase in funding, while the power sector (largely transmission, generation and distribution) increased by 130%. In comparison, investment into 'new renewables' increased by only 1.4%. While oil, gas and power sector commitments account for 77% of the total energy sector programme, 'new renewables' account for only 5% (Practical Action 2007).

On whose behalf?

Critical accounts of governance have to ask who is served by the prevailing organisation of power; who benefits and who loses? Highlighting the process dimensions, as we have done here, usefully highlights issues of participation and representation that shape who gets a say and who gets to gain from the new sources of finance available in the area of CD.

The ways priorities are determined and decisions taken tends to reflect existing national priorities as we saw in the previous section. Opportunities to use funds to enable energy transitions that are pro-poor and low-carbon may be missed if policy continues to be defined by established priorities and the policy elites that benefit from them. The political challenge derives from the fact that those actors and institutions with most political influence and oversight over the greatest financial resources are often the least

responsive to the energy needs of the poor. There are few mechanisms for soliciting the views and preferences, or identifying the needs, of the energy poor. The danger in such a setting is that CD is reduced to an agenda of creating new market opportunities; reducing barriers to trade in goods and services. This in itself may be fully compatible with delivering lower carbon energy futures and providing access to technologies and services that benefit the poor. But it is not necessarily so. There is inevitably a balance to strike between rewarding Northern investors that move into lower carbon (and other GHG emitting) markets and seeking to build the capacity of poorer communities and governments to develop their forms of clean energy generation - whether it be developing a renewables industry or going for off-grid micro-generation of energy for rural areas.

Conclusions

We have attempted in this paper to construct a broad framework for understanding the forms of governance of CD that we currently observe. We suggested that by breaking down the different elements of governance we get a sense of the diverse ways in which the governance of CD takes place across different scales in ways which enrol a broad range of actors, public and political in a variety of arenas.

In overall terms we found that existing patterns of CD governance have the following features:

- *Uncoordinated:* We have found a large degree of overlap and duplication between institutions pursuing the new sources of carbon finance available to them and seeking to define for themselves an institutional mandate in this key policy area.
- *Incoherent:* We have found evidence that the effect of some interventions in the energy sector is to outweigh, offset or reduce to irrelevance the gains made by other initiatives in the area of clean energy. In the case of the World Bank we saw how this is the case even within the same organisation.
- *Uneven:* In terms of the net regional and sectoral coverage achieved by the multiplicity of initiatives in this area. Many are focussed on middle-income countries, there is preference towards Asian rather than African countries - a bias which strongly affects their ability to meet the energy needs of the very poorest even if they are successful at engaging some of the largest users and producers of energy.
- Characterised by *blind-spots*: Areas of deliberate un-governance. We noted that many of the largest and most significant flows of finance in the energy sector are currently not governed by the imperatives of delivering CD and clean energy.
- *Network-oriented*: From the APP to the PCF and REEEP, we have noted many multi-actor, multi-scale initiatives which combine public and private actors in a diversity of ways.
- *Weak on process* in terms of gaps in participation, accountability and responsiveness. This was found to be true at the national level as well as in terms of civil society and broader public engagement with priority-setting and decision-making in many of the key initiatives in this area.

A key challenge is deciphering which actors, institutions and networks are best placed to govern and deliver which forms of CD. They have different respective strengths and limitations. What this means in practice is identifying a series of policies, strategies and interventions which are able to steer financial flows, public and private, to where they are most needed but in ways that are consistent with the goal of reducing greenhouse gas emissions. For example, the World Bank and regional development banks could play

an important role in screening public and private flows going into countries that are already attractive investment locations as well as provide inducements that reduce the risk of investors entering new markets in parts of Asia, Africa and Latin America that have not received such flows to date. For others, such as countries in sub-Saharan Africa, less well integrated into the global economy and more aid dependent, important support can be provided by donors to enable clean energy transitions.

We return to the issue of coordination and coherence. We clearly need a range of actors to be engaged in the governance of CD. What is relevant for one region of the world will not necessarily be relevant elsewhere. Clean energy needs differ and capacity varies widely. The challenge is to construct forms of governance which are mutually reinforcing rather than outright contradictory, to avoid duplication so that some actors and agencies focus their efforts in some sectors, regions, technologies and not others and that incentives are provided to address the energy needs of the very poorest who may otherwise miss out altogether on new forms of financing for CD. We have seen already with the CDM that projects are concentrated in those areas of the world that already attract significant levels of investment. For obvious reasons, donors tend to align their support for CD with projects and regions in which they are already working and the private sector tends to favour projects and investments in markets that are attractive for reasons other than CD alone. All of this is understandable, but it does leave gaps and blind-spots in the governance of CD that critically need to be addressed.

While casting the analytical net widely, this sort of approach does give us a sense of the gaps and blinds-spots in CD governance - its governance and un-governance and their consequences. The actors and institutions which ascribe themselves the label CD actors are rarely those which yield most power over CD. Addressing the role of the big public actors in development and their role in tackling climate change is just part of the story. If we seek to address the problem of climate change through public international law without addressing the blind-spots and governance deficits that exist with regard to flows of private investment and finance, then we will construct 'islands' of formal climate governance in a sea of unregulated, ungoverned financial activity unguided by the imperative of addressing climate change.

We have parallel worlds of CD; on the one hand, the self-identified, deliberate, intentional and interventionist forms of CD and, on the other, the every day practices of project and development and investment which can be characterised as '(clean) development as usual', but which is either largely not responsive to the social and environmental imperatives of CD, or responsive to one or other aspect but not both. This remains the greatest challenge: How to move CD from being the irregular and the additional to being the normal and the mainstream.

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