

**Low Hanging Fruit Always Rots First:
Observations from South Africa's Crony Carbon Market**

**Graham Erion
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York University
Toronto, ON, Canada

Signature of Student _____

Signature of Supervisor _____

Stepan Wood

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Abstract

In what follows the first in-depth study of the South African carbon market is undertaken. The study begins by laying out the current state of the global carbon market and some related critiques. Turning to the South African context, four Clean Development Mechanism projects are examined in-depth. These include the controversial Bisasar Road Landfill project in Durban, the Sasol fuel-switching project in Sasolburg, plus the South Bellville Landfill gas capture and the Kuyasa low-cost housing energy upgrade projects in Cape Town. In addition to analyzing these projects this study also examines the social and institutional capacity in South Africa to provide oversight of this market. Through this examination it is shown that many of the more dubious trends in the global carbon market are being replicated in South Africa, particularly around the so-called “low-hanging fruit” projects that generate a lot of cheap credits but few other benefits. Just how this situation might get resolved is the focus of the concluding chapter that offers a number of suggested reforms.

Foreword

This study was borne out of equal parts of frustration and opportunity. Beginning with the former, my focus when I came to the Faculty of Environmental Studies at York University was to study carbon taxes as an ideal response to our climate crisis. I first became concerned about climate change during my undergrad studies at the University of Victoria and grew quite impatient with local environmental organizations (ENGOS) who seemed to content to focus on more local issues than this global threat. During an internship with Ontario's Select Commissioner for Alternative Energy, Steve Gilchrist, I became acutely aware of the regulatory field for energy that heavily favoured coal and fossil fuels to the detriment of the renewable energy we need to combat the climate crisis. Thus carbon taxes on the dirtier forms of energy seemed like an ideal way to level the regulatory playing field and attract the necessary green investments. Thus carbon taxes, as part of a larger rubric of environmental fiscal reform, became the central aspect of my Plan of Study and I considered the issue in a number of courses I enrolled in during my first year.

Being in the combined MES/LLB program I began to attend Osgoode Hall Law School full time in September 2004, though my research interest remained in climate change policy and carbon taxes specifically. During my first semester at Osgoode I had the opportunity to do some volunteer work for the Green Budget Coalition who shared my passion for carbon taxes. However our proposals for such a policy fell on deaf ears with the federal government, as well as all of the opposition parties. Even the major ENGOS working on climate issues at the time were reluctant to lobby strongly for carbon taxes, though many of them supported the idea in principle.

By early 2005 my research focus began to shift away from carbon taxes, which no one seemed to be discussing anyway, to carbon trading, which was one many more people's lips. In January 2005 I attended the World Social Forum in Porto Allegre Brazil, where I had the chance to meet with activists who opposed carbon trading as well as community leaders who had first had first-hand experience with some rather dubious projects. While this certainly left me with a critical impression of carbon trading, I also knew I had very little knowledge of this policy and thus would have to conduct much more research before I could provide much by way of critical perspective.

Just after I returned from Brazil the Kyoto Protocol came into force and its Clean Development Mechanism (CDM) ushered in a new global carbon market. On 13 April 2005 the Canadian government released *Project Green*; its plan to meet its Kyoto targets and this included a large emphasis on domestic and international carbon trading (and no mention of carbon taxes.) By this time I had realized it was time to focus on trading as a) it was clearly the preferred response to the threat posed by climate change; and b) any future advocacy of carbon taxes would have to be grounded in a critique of carbon trading. Having already familiarized myself with the economic and policy argument around trading, the knowledge gap remaining to be filled seemed best addressed by visiting actual CDM projects and investigating their climatic benefits on the ground.

The opportunity aspect of this research came out of a class I took with Dr. Patrick Bond who visited York in 2003/2004. I wrote a term paper on climate activism for Dr. Bond and in his praise for my work he urged me to consider visiting South Africa to learn of all the climate change activism happening there, in particular around a CDM project in Durban. At that time I did not consider this invitation all that seriously as I failed to

make a connection between activism in South Africa and Canadian climate change policy. In February 2005 I wrote a brief op-ed letter in *The Toronto Star* urging Canada to focus on reducing its own emissions rather than relying on carbon trading. After emailing the letter to Patrick he reiterated his invitation to come to South Africa. By this time I could make the connection between our climate change policy (relying on CDM credits) and South African activism (against these same projects) and thus I accepted the invitation to be a Visiting Scholar at the Centre for Civil Society at the University of KwaZulu-Natal in Durban.

This major research paper is the culmination of my research on the South African carbon market but it also fits in nicely with my Plan of Study, which I titled “Rethinking Canadian Climate Change Policy.” A major focus of my plan remains carbon taxes and ecological fiscal reform, but after conducting this research I am in a much better position to advocate this policy, both on its own strengths, but also on the weaknesses of the status quo. The time has indeed come for a collective “rethink” of our approach to climate change policy in this country. This rethink should not just be extended to the major political parties who all seem to favour trading in some form or another but also the major ENGOs, business groups, academics, and activists involved in the climate struggle. While the critique of carbon trading in this paper can hopefully make a contribution to such a discussion, perhaps its greatest contribution could be to get people thinking about the international effects of our domestic policy choices and the need to expand the conversation to those effected parties. This paper is but a humble attempt to tell some of these stories but in the future it is my hope that such voices can be heard from directly.

List of Abbreviations

BSWD	Bellville South Waste Disposal
CBLA	Capacity Building, Leadership and Action
CDM	Clean Development Mechanism
CER	Certified Emission Reduction (credits)
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
COP	Conference of the Parties (e.g. COP10)
DNA	Designated National Authority
DOE	Designated Operational Entity
DSW	Durban Solid Waste
EB/CDM	Executive Board of the Clean Development Mechanism
ENGOS	environmental non-government organizations
GHG	greenhouse gases
IISD	International Institute for Sustainable Development
ODA	Official Development Aid
PACE	Promoting Access to Carbon Equity
PDD	Project Design Document
PIN	Project Identification Note
SSN	South South North
UNFCCC	United Nations Framework Convention on Climate Change

Introduction

With climate change posing one of the gravest threats to humanity in the 21st Century, and free market economics potentially being our most powerful ethos, it is little wonder that so much effort has gone into making the latter a solution to the former. The result of these efforts is known as carbon trading: rather than forcing countries or firms to reduce their greenhouse gas (GHG) emissions, participants in a 'carbon market' are given a reduction target that they can meet either through their own reductions or by purchasing "carbon credits" from countries/firms that reduce beyond their target level. Prior to 1997, carbon trading did not exist per se, but there were forms of other emissions trading. These were usually restricted to a single pollutant (e.g. sulphur dioxide) in a single region (e.g. the United States.) However, since the advent of the Kyoto Protocol ("Kyoto") the carbon market now exists on a global level and includes all six greenhouse gases. The vast majority of carbon market activity falls under the auspices of Article 12 of Kyoto, the Clean Development Mechanism (CDM.) The CDM is the mechanism whereby developed countries (Annex 1) receive certified emission reductions (CERs) for investments in projects that reduce or sequester GHG emissions in developing countries.

Since the Kyoto Protocol came into force on 16 February 2005, there has been a massive increase in the activity of the global carbon market. According to the World Bank, there was an estimated \$25 billion worth of transactions in global carbon markets worldwide in 2006.¹ As of 14 March 2007, a total of 158 projects have been verified and registered with the Executive Board of the CDM (EB/CDM) and 138 of these are

¹ Karen Capoor and Phillippe Ambrosi "State and Trends of the Carbon Market 2006" (Washington, DC: Prototype Carbon Fund of the World Bank) 2006 at 7

currently issuing Certified Emissions Reductions (CERs).² According to the UNEP, there are another 1742 projects worldwide in the “pipeline” meaning some stage of development and/or approval of their sustainable development indicators and methodologies by their host country’s Designated National Authority (DNA) and Designated Operational Entity (DOE), respectively.³

In spite of the CDM’s status as the key international policy response to the climate crisis, it is very difficult to find any in-depth analyses of a host country’s carbon market. This paper will begin to fill this void by studying in detail the ways in which the carbon market has developed in South Africa and what opportunities social actors have to engage in this issue and shape climate policy in favourable ways.

There are a number of reasons why South Africa was chosen for this case study. As the only African country with any serious project development, the success or failure of the CDM in South Africa will have enormous implications for the carbon market on the rest of the continent. Secondly, with nearly two dozen projects in various stages of development, South Africa’s variety of methodologies and project developers is relatively representational of the global carbon market even though it has fewer projects than some other countries. This allows a relatively small sample size of South African projects to better represent overall trends in the global carbon market. Finally, South Africa’s rich history of social mobilizations, especially during the Apartheid era, provides a unique context to study the opportunities for social actors to influence carbon trading projects and policy in a host country.

² Fenhann, Jørgen UNEP Risø Centre, “CDM Project Pipeline” updated 14-03-07, online: www.cd4cdm.org

³ *Ibid.*

The methodology employed in this study is strongly influenced by Michael Burawoy's "Extended Case Method," whereby the researcher immerses him or herself in the field to observe personally the interactions of the various parties and to maximize opportunities for uncovering primary sources.⁴ Thus in the course of this research project, eleven weeks were spent in South Africa examining primary source materials, conducting over two dozen interviews with participants in the carbon markets, and doing a number of site visits to CDM projects.

The results of this research will be presented in the next four chapters. Chapter One provides further background and critical perspectives on carbon trading and the CDM more generally. Chapter Two examines how the carbon market has developed in South Africa through four separate project case studies. Chapter Three considers the ability of governance structures to provide oversight of this market. Chapter Four looks at how social actors are organized around this market and what influence they have on its shape. The paper concludes with some ideas for improving the carbon market in South Africa as well as some suggestions for how we can apply the lessons learned from this experience for considering new directions in combating climate change.

Through this analysis, it will be shown that the South African carbon market appears to be mired in a fundamental incompatibility between community-supported projects with real sustainable development benefits and the projects seen as financially viable by investors, in part because they disregard the needs of local communities and often do little to help prevent the impending climate crisis.

⁴ Michael Burawoy, "The Extended Case Method," *Sociological Theory* Vol. 16, No. 1 (March 1998): 8.

Chapter One: The CDM and its Critics

This chapter is primarily intended to provide some background context for audiences with little to no knowledge of carbon trading or international climate policy. This will be done through a brief overview of the history of this idea, a review of some legal terminology and processes, current market trends, and a review of some of the key critiques of this approach to fighting climate change. Those readers with more of a background in this area should feel free to skim this chapter or skip it altogether.

1.1. A Brief History of Carbon Trading

The idea of carbon trading is an application of a larger concept of emissions trading. The simplest definition of emissions trading is the trading of emissions rights in a market with the intention to achieve an overall reduction of pollution at the lowest total cost.

Therefore the term “emissions trading” is something of a misnomer as it actually “emissions rights” that are traded and not emissions themselves. An emissions right is a right to emit a defined quantity of a certain substance during a fixed period of time.⁵ The term carbon trading then can be defined as a form of trading in rights to emit carbon dioxide or greenhouse gases in its equivalent (CO₂e).

The intellectual origins of emissions trading can be traced back to a little-known publication from 1968 entitled, “Pollution, Property, and Prices” by Canadian economist

⁵ There has been a very storied debate on the nature of emissions rights both as a practical and theoretical concept. The Marrakech Accords (the rule book for emissions trading in Kyoto) specifically states that the Kyoto Protocol has “not created or bestowed any right, title or entitlement to emissions of any kind on Parties included in Annex I” (Preamble 2/cmp.1 and preamble decision 15/cp7) However, some legal theorists dispute this fact (see: Cole, Daniel H. “Clearing the air: four propositions about property rights and environmental protection” 10 *Duke Environmental Law & Policy Forum*, 103 (Fall 1999) and Stewart, Richard. “Privprop, Regprop, and Beyond”, 13 *Harvard Journal of Law and Public Policy* 93 (1990))

John Dales.⁶ This was also the same year that Garrett Hardin penned the much more famous essay, “The Tragedy of the Commons.” Like Hardin, Dales believed that natural resources in their unrestricted common property form would face tragic overexploitation by people acting in their rational self-interest.⁷ Yet Dales went much further than Hardin in his solution to this problem. Dales proposed to control water pollution by setting a total quota of allowable waste for each waterway and then set up a “market” in equivalent “pollution rights” to firms to discharge pollutants up to this level.⁸ These rights, referred to as “transferable property rights...for the disposal of wastes” would be sold to firms and then they could trade them amongst themselves.⁹ The more efficient firms would make the larger pollution reductions and then sell their excess credits to less efficient firms, thereby guaranteeing a reduction of overall pollution at the lowest social cost.

Though Dales’ proposal took a backseat to the command and control approach to environmental policy during the 1970s, his idea was applied in an ad hoc basis through a series of proposal and pilot projects by the Environmental Protection Agency in the United States. Over the years proponents of pollution trading – notably the emerging self-described “free-market environmentalists” – found a growing audience for Dales’ logic about the greater efficiency in trading, and added claims of lower administrative costs and greater incentives for innovation. In 1990 the United States Congress amended the *Clean Air Act* in 1990 to create the world’s first national emissions-trading scheme in sulphur dioxide, the main pollutant behind acid rain. The new *Clean Air Act* also allowed the formation of regional emissions trading markets, which helped create the RECLAIM

⁶ John Dales *Pollution, Property and Prices: An Essay in Policy-Making and Economics* (Toronto: University of Toronto Press, 1968)

⁷ Hardin, Garrett. “The Tragedy of the Commons” 162 *Science* 1243 (1968)

⁸ Dales, *Supra* note 6 at 81

⁹ *Ibid* at 85

(REgional CLean Air Incentives Market) scheme around the Los Angeles basin.¹⁰

America's experience with emissions trading played a significant role in the inclusion of trading in the Kyoto Protocol, which was done so in large part at America's insistence.

1.2. Carbon Trading and the Kyoto Protocol

The inclusion of emissions trading in the Kyoto Protocol was one of the most contentious issues during the negotiations. According to Michael Grubb, "International emissions trading was seen as the most efficient and direct route to the international flexibility sought by the United States and other JUSSCANNZ¹¹ countries – and was viewed with suspicion by most of the rest of the world. It was to become the crux on which, from some perspectives, Kyoto stood – and nearly fell."¹² Leading the opposition to trading were many environmental NGOs (ENGOS) and the EU, both of whom favoured absolute emission reduction targets and feared that allowing trading would avoid necessary domestic action and potentially have much less climatic benefits. In the end, proponents of trading prevailed and the final text of the Protocol included three "flexibility mechanisms" around trading. Yet the opposition of the ENGOS and the EU also ensured the text also included provisions that the use of flexibility mechanisms be "supplemental" to domestic action and, in some instances, contribute to a host country's sustainable development.

To understand the emissions trading provisions of the Kyoto Protocol it is first necessary to recognize the different forms of emissions trading that exist. There are

¹⁰ For more on RECLAIM please visit: www.aqmd.gov/reclaim/reclaim.html For those looking for a more critical analysis please see: Drury, Richard *et al.* "Pollution Trading and Environmental Injustice: Los Angeles' Failed Experiment in Air Quality Policy" 9 *Duke Env L & Pol'y F* 231 (Spring, 1999)

¹¹ JUSSCANNZ is a group coalition of the non-EU developed countries including Japan, the US, Switzerland, Canada, Australia, Norway and New Zealand.

¹² Grubb, M. with Vrolijk, C. and Brack, D. The Kyoto Protocol: A Guide and Assessment (The Royal Institute of International Affairs: London, 1999) at 90

principally two such forms: the more popular cap-and-trade system and a baseline-and-credit system. In the former, the total amount of emissions that may be emitted during a certain period of time is capped by a competent authority. Companies that are subject to the cap are then allocated a certain amount of pollution rights they can emit. In some cases this is done through an auction of the rights, but more commonly they are provided freely based on historical levels of emissions, known as grandfathering. Under a baseline-and-credit system, companies do not receive allocations. Instead a baseline for the level of emissions is established. Entities that reduce their emissions with respect to the baseline are given credits for the difference between their actual emissions and the baseline and then can retain these credits for future compliance periods or trade them. In both cases, companies that exceed their limits must purchase credits from those who don't or pay a fine, ideally equivalent to the cost of compliance if economically efficient.

The Kyoto Protocol is a hybrid of these two systems: industrialized countries (listed in Annex I of the Protocol and referred to as such) participate in emissions trading through a cap-and-trade system. Each country has been assigned a Quantified Emission Limitation and Reduction Commitment (QELRC), which can be found in Annex B of the Protocol. A Party's QELRC is the percentage of its 1990 baseline that it is *allowed* to emit per year; the total or cap a Party is permitted to emit is five times the QELRC which corresponds to the length of the first commitment period: 2008 to 2012.¹³ Parties that exceed their cap may trade their excess Assigned Amount Units (AAUs) with other Annex I countries under Article 17 of the Protocol. Developing countries (not listed in Annex 1) may also participate in emissions trading using Kyoto's second trading system, The baseline in this case is a business-as-usual scenario, as developing countries do not

¹³ *The Kyoto Protocol* at Article 3.7 online: unfccc.int/Kyoto_protocol

have emissions reductions targets under the Protocol. Thus countries, or entities they authorize, can earn emissions credits for emissions reductions generation through project-based activities. These credits are called certified emission reductions (CERs), and are traded through Kyoto's Clean Development Mechanism (CDM.) Third, countries with economies in transition (EIT) may participate in both forms of trading. These Parties have assigned amounts under the Protocol and so can trade AAUs. In addition, they may participate in project-based activities with other Annex I countries to earn emissions credits, known as Joint Implementation (JI) under Article 6 of Kyoto.

Like Emissions Trading in Article 17, Joint Implementation has thus far not played a significant role in the international carbon market. This is due to a number of factors, both political and economic. Suffice it to say that political concerns over "hot air" and greater capacity and returns in countries like China and India over countries in the former Soviet bloc are the major barriers. With these other flexibility mechanisms playing minimal roles, the global carbon market is thus almost entirely made up of transactions under Article 12 of Kyoto, the Clean Development Mechanism. Prior to analyzing the four CDM projects in this paper it is first necessary to further review the CDM's project cycle and governance institutions, the various requirements projects must meet, and the current CDM market trends.

1.3. The CDM Project Cycle

The CDM project cycle can be broken up into five stages: Design, Validation & Registration, Monitoring, Verification & Certification, and Issuance. The first step for all project participants, who may be government or private sector entities, is to develop a

project proposal. Specifically, they must complete the Project Design Document (PDD),¹⁴ the basis upon which approval for the project will be granted. In the second stage, the PDD is submitted to a Designated Operational Entity (DOE) for validation and registration. A DOE is a private sector entity charged with helping validated projects and has been accredited by the EB/CDM. At this stage, the DOE will review the PDD to consider whether the project's methodology is in line with approved methodologies or seek approval from the EB for a new methodology. The DOE will also ensure that the potential emissions reductions are additional, the baseline scenarios are accurate, and that the participation requirements are met. The DOE must make the PDD available for public comment for 30 days. Based on those comments and the other information available, the DOE will decide whether the project is valid and make its report publicly available before submitting it to the EB.

Prior to submitting its report, the DOE must have received a letter of approval from the host country's Designated National Authority (DNA). Unlike the DOEs, DNAs are public sector bodies (usually housed in an environment, energy, or foreign affairs department) that play an oversight role to ensure projects developed in their country have voluntary participants and contribute to the country's sustainable development. How countries choose to access sustainable development is left to their prerogative (see discussion on sustainable development criteria below.) Most DNAs conduct their assessment using a project's PDD, yet some require additional documentation. Some DNAs also offer an initial screening of projects based on an early version of the PDD

¹⁴ For further information on what must be included in a PDD, please see: http://cdm.unfccc.int/Reference/PDDs_Forms/PDDs/

known as a Project Identification Note (PIN).¹⁵ The purpose of the initial screening is to flag any issues at an early stage that may prevent the final project from being approved. Project developers may receive a letter of no objection from the DNA upon successful completion of the screening, which can be of assistance in securing project funding.

Once a project has the full approval of the DNA and DOE, it will be submitted to the EB/CDM for registration of the project. Registration is automatic 8 weeks after receipt by the EB/CDM provided that a Party involved with the project or at least three members have not requested a review.¹⁶ There have been very few instances of review requests by the EB/CDM, due in part to their limited capacity with only twelve full-time board members and previous funding shortfalls.

Following registration, the final stage is for project participants to monitor the project through its implementation phase and collect data for measuring the project baseline and the GHG reductions that were achieved. The monitoring report will be used by the DOE to help it verify the amount of GHG reductions actually produced by the project. Once the DOE has determined this amount, it will request that the EB/CDM issue CERs for the emissions reductions. The EB/CDM then has 15 days to do so unless a Party involved with the project or at least three members of the EB/CDM have requested a review.

1.4. Sustainable Development Criterion

To ensure the CDM would help put developing countries on a cleaner path to development, the parties included a requirement in Kyoto that all projects must contribute

¹⁵ A PIN provides an overview of the project, but does not contain the level of detail of a PDD. The PIN concept was developed by the World Bank and is part of its project cycle for providing financing to CDM projects. A PIN, unlike the PDD, is not an official document of the UNFCCC.

¹⁶ The Marrakech Accords (3/cmp1) at para 41

to a host country's sustainable development. However, a precise definition of sustainable development is not included in the Protocol nor in the subsequent modalities and procedures developed for the CDM. During UN negotiations, many attempts were made by ENGOS and some parties in the EU to adopt international criteria for sustainable development but these efforts ultimately failed as most countries favoured leaving the definition to each individual host country.¹⁷

This decision to avoid universal indicators of sustainable development in CDM projects has been criticized by a number of stakeholders for numerous reasons.¹⁸ At the most basic level the problem is that developing countries are competing for a share of the CDM market so there is an incentive for them to adopt more lenient standards to attract more investors. This is the "race to the bottom" thesis and is by no means unique to the CDM. However, what makes it especially applicable to the carbon market is the acknowledgment by actors on various sides of this debate that there is a fundamental trade-off between achieving the most cost-effective GHG reductions in a project and making a meaningful contribution to the host country's sustainable development. The market failure in this case is the inability of the market to place any value or premium on good projects over poorer projects in terms of their sustainable development contribution.

One attempt at addressing this problem has been the formation of the "CDM Gold Standard"; an NGO-driven initiative to adopt universal criteria for economic, social, and environmental sustainability that projects can apply for and be certified as such.¹⁹ While

¹⁷ Kelly and Helme (2000). *Ensuring CDM Project Compatibility with Sustainable Development Goals*, Center for Clean Air Policy.

¹⁸ See Holm Oslén, K., undated, *The Clean Development Mechanism's Contribution to Sustainable Development: A review of the literature*, Capacity Development for the CDM (CD4CDM), UNEP Risø Centre. Available at http://www.cd4cdm.org/Publications/CDM&SustainDevelop_literature.pdf

¹⁹ For additional information on the CDM Gold Standard please see: www.cdmgoldstandard.org

evidence on what sort of a premium investors will pay for Gold Standard projects over regular projects in the CDM market is unclear, some of these projects have done rather well in the voluntary offset market, whose participants tend to be much more concerned about sustainable development. To investigate how much difference the “Gold Standard” label makes to these projects two of them were investigated in South Africa and will be discussed in much great detail later in this paper.

A final issue regarding sustainable development and the CDM is the lack of any formal requirement to monitor the sustainable development benefits claimed in the latter stages of the project cycle, as opposed to requirements for baselines and additionality.²⁰ This point has been raised in the international arena before and a number of host countries have advocated including sustainable development in the monitoring plan.²¹

1.5. Additionality Considerations

One of the most contentious issues within the carbon market and least understood outside it is the additionality requirement. For a project to achieve a net reduction in emissions it must occur absent the status quo. For example, if a Factory A shuts down for economic reasons unrelated to a desire to mitigate climate change, it should not be able to sell the emissions it would have produced in the future had it stayed open to Factory B. If this were allowed to happen, the climate would not benefit as the Factory B would be allowed to continue to pollute, or potentially even increase its emissions. The additionality requirement attempts to prevent this scenario, though its precise definition in the international rules on CDM is somewhat ambiguous: “A CDM project activity is

²⁰ 3/cmp1, *supra* note 16 at para. 53

²¹ For example, see Cambodia’s project approval requirements in Institute for Global Environmental Strategies (eds) *CDM Country Guide for Cambodia* (2005), 2nd edition, IGES: Japan. Available at http://www.cd4cdm.org/Publications/CDM&SustainDevelop_literature.pdf at 48.

additional if anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the registered CDM project activity.”²²

In trying to interpret this language, a dispute has arisen around the difference between environmental and project additionality. All agree that emissions must be lower than the baseline to qualify (environmental additionality), but some argue that the project itself must be additional (project additionality).²³ If the project would have occurred regardless of the CDM credits then the ‘reductions’ are actually part of the business-as-usual baseline and not additional. (Much like the first example of the factory closing and selling the emissions that would have happened had it stayed open.) On the other hand, if it is carbon finance that makes a project viable than the ongoing pollution of the party purchasing the credits is truly being offset by reductions elsewhere. The Executive Board of the CDM, has adopted the stricter definition of project and environmental additionality, much to the consternation of business groups who see it as a major barrier to carbon investment.²⁴ This approach has also been criticized for its potential to create perverse policy incentives, namely that developing countries will not impose regulations on GHG emission reductions for fear that this would hinder CDM project activity in their countries.²⁵ The EB/CDM has clarified that government policies to promote low-GHG emitting practices need not be considered as part of a project’s baseline, however it is

²² 3/cmp1, *supra* note 16 at para. 43

²³ Sutter, C. (2003) *Sustainability Check-Up for CDM Projects: How to assess the sustainability of international projects under the Kyoto Protocol*. (Wissenschaftlicher Verlag: Berlin) at 58-63

²⁴ *Ibid.* at 59.

²⁵ Figueres, C. (2006) “Sectoral CDM: Opening the CDM to the Yet Unrealized Goal of Sustainable Development” *McGill International Journal of Sustainable Development Law and Policy* 2:1, 5-25 at 12-13.

unclear as to their view of legislation requiring such activities.²⁶ As of November 2006 this issue has yet to be resolved to the satisfaction of the parties involved.

1.6. Supplemental Interpretations

In addition to additionality and sustainable development requirements on the host countries, there is a third important requirement in the carbon market that applies to the purchasers of carbon credits. This is the requirement that the acquisition of CERs (or credits for Joint Implementation and Emissions Trading) must be “supplemental” to domestic action. According to the language of Article 17 of the Kyoto Protocol: “Any such [carbon] trading shall be *supplemental* to domestic actions for the purpose of meeting quantified emission limitation and reduction commitments under that Article.”²⁷

There have been a number of attempts to define what “supplemental” means in the context of trading of emissions. Unfortunately no agreement on this has been reached to date.²⁸ In international law, the Marrakech Accords define supplemental to domestic action to mean that “domestic action shall thus constitute a significant element of the effort made by each Party included in Annex I...” A better attempt to quantify this is found in the European Union’s Linking Directive, which dictates that credits obtained from CDM or JI activities should be capped as a percentage of the allocation of allowances to each country participating in the scheme.²⁹ Yet much like the ambiguity in

²⁶ Sales, R. and Kerlakian Sabbag, B. (2006) Environmental Requirements and Additionality Under the Clean Development Mechanism: A Legal Review Under the UNFCCC, the Kyoto Protocol, and the Brazilian Legal Framework on Climate Change. [forthcoming]

²⁷ Kyoto Protocol, *supra* note 13 at Art. 17, emphasis added.

²⁸ For more on the efforts to define “supplemental” please see Grubb, M. with Vrolijk, C. and Brack, D. The Kyoto Protocol: A Guide and Assessment (The Royal Institute of International Affairs: London, 1999) at 217-224.

²⁹ Article 10 of DIRECTIVE 2004/101/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 October 2004 amending Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Community, in respect of the Kyoto Protocol’s project mechanisms

the Kyoto Protocol, the Linking Directive allows Member States to determine the level of the cap. This freedom has been liberally interpreted in some countries, such as the Netherlands who has been one of the most active in emissions trading markets.

According to the Prototype Carbon Fund, the Dutch government decided in 2000 to make available a budget to buy 50 percent of its Kyoto target as credits from JI and CDM.³⁰

This target equals 100 million tons of carbon dioxide equivalent.³¹ Although the Conservative government under Stephen Harper has ruled out purchasing any sort of international carbon credits, in 2005 the Liberal government in Canada released *Project Green*, a plan to meet their Kyoto targets, nearly half of which (115 MT of CO₂e) was allocated in a Climate Fund that could be used to purchase CDM/JI credits.

Thus countries seem content to interpret “supplemental” as only using carbon credits, CDM or otherwise, to met up to 50% of their reduction target and achieve the rest through domestic action. With a number of countries, including Canada, being far off their Kyoto target there seems to be little appetite among ENGOs and climate activists to argue whether supplemental action should be interpreted so generously. However, with the post-2012 carbon trading regime yet to be negotiated, this issue could resurface in the coming years.

1.7. Carbon Market Trends

With the process of validation now established and some of the relevant institutions explained, let us turn our attention to how the global carbon market has developed since Kyoto. The first thing to note is the large role played by Northern firms and consultants who are able to provide a certain level of capacity and expertise that might not be as

³⁰ Prototype Carbon Fund. “PCF Annual Report 2004” (Washington, DC: World Bank Group, 2006) at 16

³¹ Grub, *supra* note 28 at 9

readily accessible in Southern countries. Another example of this has been the prominence of the World Bank's Prototype Carbon Fund (PCF.) In partnership with 6 governments and 17 companies plus a budget of US \$180 million, the PCF describes itself as "a leader in the creation of a carbon market to help deal with the threat posed by climate change."³² As the single largest purchaser of CERs, as of September 2006 the PCF had 32 projects in development with a total CER value potential of US\$165 million.³³

A second noteworthy trend is that the market is heavily concentrated in large middle income countries led by India, China, and Brazil. The PCF admits "this concentration of CDM flows towards large middle-income countries is consistent with the current direction of Foreign Direct Investment."³⁴ By contrast poorer countries, especially in Africa, have almost entirely been left behind. As of September 2006, South Africa and Morocco were the only countries on the continent to have validated a CDM project. According to the PCF, "This under-representation of Africa raises deep concerns about the overall equity of the distribution of the CDM market, as the vast majority of African countries have not, for the moment, been able to pick up even one first deal."³⁵ With the 12th Conference of the Parties (COP12) held in Nairobi, Kenya in November 2006 – the first time a COP has been held in sub-Saharan Africa – the distribution of the CDM was a key topic of discussion. While there have been commitments of some parties to help develop on the ground capacity, including regional DNAs rather than national

³² PCF, *supra* note 30 at 7

³³ Prototype Carbon Fund website: www.carbonfinance.org

³⁴ Prototype Carbon Fund. "Carbon Market Trends 2005" (Washington, DC: World Bank Group, 2005) at 25

³⁵ PCF, *supra* note 34 at 25

ones, the under-representation of African countries in the CDM may continue to be an issue for years to come.

The other major trend in the carbon market has been the enormous profitability of non-carbon related projects. While renewable energy projects (which offset CO₂ emissions) make up nearly 58% of the total number of projects, they account for only 15% of the total number of CERs that have been issued.³⁶ By contrast, projects abating nitrogen (N₂O) and hydrofluorocarbons (HFC23) are less than 2% of the overall *number* of projects, yet make up 74% of the CERs issued to date by project sector.³⁷ These projects are known as “low-hanging fruit” since their high returns mean they are the first to be picked by investors. The reason is that HFC23 has up to 14,000 times the potency of CO₂ and since credits are in CO₂ equivalent (CO₂e) a relatively small capture of HFC23 can bring an enormous windfall of credits. According to the PCF, the large amount of non-CO₂ projects in the carbon market has meant that “traditional energy efficiency or fuel switching projects, which were initially expected to represent the bulk of the CDM, account for less than 5% [of it now.]”³⁸

1.8. The CDM and Climate Justice

In concert with the growth of carbon market has been a growing body of literature critical of carbon trading. Activists and academics have taken issue with a number of aspects of carbon trading: legal minds take issue with the property regime it creates in the air,³⁹

³⁶ Fenhann, *supra* note 2

³⁷ PCF, *supra* note 34 at 27

³⁸ *Ibid.* at 5

³⁹ See: Torres, Gerald “Seventh Annual Lloyd K. Garrison Lecture on Environmental Law: Who Owns the Sky?” *19 Pace Envtl. L. Rev.* 515

biologists note the dubious science around carbon sinks⁴⁰, and economists debunk myths of greater innovation and costs savings.⁴¹ Respecting these approaches, I will just briefly focus on a different critique, that of climate justice. The basic idea of climate justice is that the richest persons and countries have caused this problem through their profligate use of fossil fuels while poorer countries and persons are most vulnerable to its effects. To add empirical evidence to the basic contention of the climate justice approach, in 1990 – the base year for the Kyoto Protocol – industrialized countries were responsible for 75% of all CO₂ emissions that year and 88% of the emissions that had previously caused global warming.⁴² More recently, in 2003 the US and the EU were alone responsible for 45% of all global CO₂ emissions, even though they only had 10% of the world's population.⁴³ As to the effect of these emissions, a September 2005 study by the research group System for Research Analysis and Training revealed "Poor developing countries are least developed to adapt to climate change, although most of them play and certainly will continue to play an insignificant role in causing it."⁴⁴ The hardest hit region, according to the study will be Africa where extreme weather patterns will trigger droughts and deepening food shortages since most people rely on rain-fed crops to survive. "Climate change will exacerbate hunger, which now affects about 50 percent of our population," the study's lead author was quoted, "Above all, climate change will worsen poverty on the continent."⁴⁵ Even within wealthier countries, it is often the poorest people who are

⁴⁰ See: Cathleen Fogel "Biotic Carbon Sequestration and the Kyoto Protocol: the Construction of Global Knowledge by the Intergovernmental Panel on Climate Change" (forthcoming)

⁴¹ See: Ian Parry. "Fiscal Interactions and the Case for Carbon Taxes over Grandfathered Carbon Permits" (Washington, DC: Resources for the Future) October 2003

⁴² Tom Athanaisou. "EcoEquity Observer" Downloaded from http://ecoequity.org/ceo/ceo_6_2.htm

⁴³ Heidi Bachram *et al* "A new form of colonialism: emissions trading" unpublished document. 2004.

⁴⁴ Reuters News Service. "Climate change hurts Africa most, scientists say" (22 September 2005) Downloaded from: <http://abcnews.go.com/US/print?id=1148885>

⁴⁵ Reuters News Service, *Ibid*.

most effected by this problem, as evidenced by the struggles of the Canadian Inuit to preserve their traditional lifestyle in the face of severe climatic changes in the Artic.

Accepting these basic premises around climate change and inequality, climate justice activists often reject carbon trading as a solution to the climate crisis because it is more likely to further exacerbate inequalities than address them. On the global level, by allowing Annex 1 countries to purchase emissions credits rather than force them to reduce their own emissions, carbon trading does little to address the over-exploitation of the atmosphere as a carbon dump by the rich at the expense of the poor. On the ground level, as this paper will now show, is often the case that the CDM projects themselves can exacerbate local inequalities as fence-line communities are marginalized from the process and receive little benefit from the projects, or worse further detriment.

2. Chapter Two: South African CDM Project Case Studies

Prior to discussing the four specific CDM projects that this chapter will focus on, it is first necessary to provide greater context as to the development of the carbon market throughout South Africa. This context will be governed by three general questions: what types of projects are being developed, who is developing them, and how the four projects were chosen for this study.

As of September 2005, only one South African CDM project has been approved by the CDM Executive Board; the Kuyasa low-cost urban housing energy upgrade project in Khayelitsha, outside of Cape Town (see section 2.4 for a discussion of this project.) Furthermore, another two projects are currently at the validation stage of the EB; the Durban landfill gas projects at the Mariannhill and La Mercy sites (the project developers have held back on the Bisasar Road site, which is discussed in the next section) as well as a small scale hydro project at Bethlehem Falls in the Free State. As to the earlier stages of the project cycle, there are another eight or so projects that have submitted either a Project Design Document or a Project Identification Note to the Designated National Authority. Among these projects are a variety of methodologies being used to reduce emissions: four are fuel switching, three are methane capture, three are small-scale renewables (two hydro projects and one solar energy project), and two biogas projects. In addition to the projects that have submitted documentation, there are a number of other CDM projects “in the pipeline” (read: various stages of development

prior to the official validation cycle.) These future projects being discussed generally fall into just two categories: industrial fuel switching and municipal landfill gas capture.⁴⁶

In terms of who is developing these projects, the private sector is out front with the majority of them, but there continues to be very visible project development at the municipal level and this is projected to continue, especially in the area of landfill gas capture. What unites both the private and public sector developers is their almost universal reliance on outside consultants. The need for these consultants is rooted in the expertise required for the complex validation process that is rarely found in the private firms doing the projects and never found in the municipalities. These consultants fall into a number of categories: first there are the foreign private experts such as EcoSecurities or the World Bank's PCF that charge high commissions for taking projects from identification and feasibility studies straight through the approval process. Secondly, there are domestic private consultants, such as the Palma Development Group in Johannesburg. Finally, there are non-profit, foreign-funded consultants such as South South North (SSN) and PACE (Promoting Access to Carbon Equity) in Cape Town and the CBLA (Capacity Building, Leadership, and Action) in Johannesburg.

The involvement of these non-profit groups in the CDM market poses some interesting questions about the use of official development aid and carbon credits. According to the Marrakech Accord on the CDM, "public funding for clean development mechanism projects from Parties in Annex I is not to result in the diversion of official development assistance."⁴⁷ This requirement was promoted by developing countries to ensure the CDM did not create a zero-sum trade-off with aid in areas such as health and

⁴⁶ Ingrid Salgado "Companies target millions from Kyoto" *Cape Times, Business Section* (20 July 2005)

⁴⁷ UNFCCC "Modalities and Procedures for the Clean Development Mechanism" (Marrakech, Morocco: 2003) at paragraph 44

education dropping off as more foreign investments came into the energy sector. However, it has become somewhat controversial as it has been interpreted in a variety of ways by Annex I countries. For example, the Canadian government has given strict instructions to CBLA that it is not to spend any of its budget writing PDDs or any other activities tied to actively bringing projects to market.⁴⁸ This leaves CBLA with helping its clients identify opportunities to reduce emissions through feasibility studies and advise them on the potential of the CDM to help cover some or all of the costs of such efforts. This is largely the position the United Kingdom takes with PACE as well, preventing them from doing PDDs and any verification.⁴⁹ However, the Dutch government has taken a very different position with their funding of SSN. This organization has been around longer than any other non-profit consultants having formed in 1999 to promote indicators for the sustainable development criteria of the CDM. Since that time however, their mandate has morphed to now include, “Design, implementation and transaction of CDM pilot projects.”⁵⁰ In practice this means that they are basically in the driver’s seat throughout the project development planning the projects, writing the PDDs, and maintaining active involvement post-verification. This has fostered a widely-held perception throughout actors in the CDM market that SSN is “more a private company than an NGO” and that the Dutch government is violating the Marrakech Accord.⁵¹ As an aside, the Dutch government’s aggressive use of official development aid (ODA) with SSN in nothing new: they also funded the entire start-up costs for the DNA, are the largest investor in the PCF, and are the largest single buyer of CERs with 16% of the total

⁴⁸ Geoff Stiles, CBLA personal interview 29 June 2005

⁴⁹ Anton Cartwright, PACE, personal interview 1 July 2005

⁵⁰ South South North homepage: <<http://southsouthnorth.org/>>

⁵¹ Stiles, *supra* note 26

market.⁵² It is safe to say that the global carbon market, and in South Africa especially, would look very different without such active involvement by the Netherlands.

A final point of context necessary before discussing the project case studies is to explain why they were chosen as representative of the South African carbon market. Briefly, the projects are Durban Solid Waste's landfill gas capture, Sasol's fuel switching, Bellville's landfill gas capture, and Kuyasa's low-income housing energy upgrade. Collectively these projects represent the three most popular methodologies, are located in three entirely separate areas of South Africa, are all in different stages of development and verification, and are a good mix of the diversity of project developers. Having said this, these projects are not intended to give a complete picture of all the trends in South Africa's carbon market. With a dozen projects in the validation cycle and more on the way, such an undertaking is outside the scope of this paper. Yet through these projects some general observations can safely be made about South Africa's carbon market and its ability to further the global struggle against climate change.

2.1. Landfill Gas Capture in Durban

Any serious discussion of the CDM in Africa should begin with the landfill gas capture project in Durban. This was the first CDM project on the continent, being initially proposed in 2002 when the country hosted the World Summit on Sustainable Development. It also received US\$15 million from the World Bank's Prototype Carbon Fund in start-up capital, one of the first projects the PCF ever supported. Finally, with the possible exception of the Plantar sinks project in Brazil, this is the most controversial

⁵² PCF, *supra* note 30 at 20-21

CDM project to date and has easily garnered the most attention of international activists and media.⁵³

On the face of it, the Durban Solid Waste (DSW) project seems simple enough: at three landfill sites across the city – Bisasar Road, La Mercy, and Mariannahill – wells are drilled to capture methane gas that would otherwise be released into the atmosphere as a greenhouse gas twenty-one times more potent than CO₂. Currently landfill gas is captured and flared at the Bisasar Road and Marianhill landfill, but this is only about 7.4% of the potential gas that could be captured.⁵⁴ The proposed project plans to substantially increase the efficiency of the gas capture up to a high of 83% in 2012, and dropping to about 45% collection efficiency over the twenty-one year life of the project.⁵⁵ Once the gas has been captured it will be put into electricity generators for use by industrial consumers, thus offsetting coal emissions from the electricity these industries would have used normally. Had this project got underway in 2004 it was claimed that it would offset a total of nearly 2 million tones of CO₂ equivalent (CO₂e) by 2010.⁵⁶

This project is claimed to be additional since it is capturing methane gas well beyond levels proposed by the regulations and the capacity of local officials, plus local industries would not want the electricity from this absent the carbon credits subsidy since it would be cheaper to get power from coal. The Department of Water and Forestry (DWAF) has regulations for landfills that require the concentration of flammable gas

⁵³ See: Carbon Trade Watch. "The Sky is Not the Limit" *TNI BRIEFING SERIES No 2003/1* (Amsterdam: Transnational Institute) 2003; Trusha Reddy "Durban's perfume rods, plastic covers and sweet-smelling toxic dump" (Durban, South Africa: Centre for Civil Society Research Reports) 2005; Shankar Vedantam "Kyoto Credits System Aids the Rich, Some Say" *The Washington Post* (12 March 2005) A12

⁵⁴ Prototype Carbon Fund "Durban Gas to Electricity Project – Project Design Document" (July 2004) Online: Prototype Carbon Fund

<http://carbonfinance.org/pcf/Router.cfm?Page=Projects&ProjectID=3132#DocsList> at 3

⁵⁵ *Ibid.* at 4

⁵⁶ *Ibid.* at 26

outside the waste disposal area not to exceed 1% by volume in air and the concentration of CO₂ not to exceed 0.5% by volume in air. Lindsey Strachan, head of Durban Solid Waste (DSW) and one of the main project proponents admits, “Even if this wasn’t a CDM, we’d still have to take out the gas, but not all of the gas, just what’s required by the regulations.”⁵⁷ With the injection of carbon finance, DSW is presumably able to afford to capture greater portions of the gas than they would under the regulations and then sell it to nearby industry at a subsidized price that is competitive with coal.

One need not look far to find reasons why opposition to this project has been so fierce. For starters there is the location of the landfill sites: the La Mercy site might be well away from residential areas but both the Mariannahill and Bisasar Road sites are in residential areas. This is less of a problem in Mariannahill as there are large buffer zones on all sides of the landfill. In contrast, there are no large buffer zones at the Bisasar Road site where the landfill is literally within a few meters of residential houses on two sides and across the street from a school on a third. Worse still, Bisasar Road is the largest landfill site in Africa and one of the largest in the Southern Hemisphere. Thus the root of this controversial project is entirely the Bisasar Road landfill as it dwarfs the other two in terms of size, potential emissions reductions, and of course local opposition.

2.1.1. A Short History of Bisasar Road

To tell the story of Bisasar Road one must begin not with the landfill, but with the *Group Areas Act* of 1961 whereby the Apartheid government relocated the Indian population across Durban to the area known as Clare Estates, where Bisasar Road is situated. As was typical of Apartheid, no compensation for this act was or has ever been paid and

⁵⁷ Lindsey Strachan. personal interview 13 June 2005.

many Indians were forced into greatly inferior housing settlements. At the time of the resettlement there was an enormous quarry on Bisasar Road that was lined with trees and green space. In 1980 when the local government was running out of landfill space, they converted the quarry into the Bisasar Road Dump. The fact that this was almost an entirely Indian neighborhood during the time of Apartheid is not coincidental.⁵⁸

From the very beginning Bisasar was a controversial and contested. Many of the Indians in Clare Estate were relatively middle class and thus had the resources to quickly become very organized against the dump. The response of the City was to announce that the dump would close in 1987. Seven years later they reneged on this promise, but assured the community that the dump would close in 1996 and then be converted into a recreational and sporting site.⁵⁹ When 1996 came around the city began a public consultation process intended to get the permit to close the dump (South Africa requires permits not just to open a landfill site but to close it as well.) It was at these meetings that local resident Sajida Khan – who lives directly across the street from the landfill, found out that the permit process was actually intended to extend the life of the dump rather than close it. When Khan discovered this, “I just went nuts! I wouldn’t let anyone else talk. I was just so angry.”⁶⁰ Khan quickly channeled her anger into an organized campaign. With ten public schools within one square kilometer of the landfill, Khan chose to target children in her campaign and through this “the parents and other people would get roped in.” Khan’s campaign tactics included placard demonstrations, blockades of the dump (this was the only activity little children were not involved in for

⁵⁸ For more on the history of Claire Estates and the Bisasar Road Landfill, please consult Trusha Reddy, “Durban’s perfume rods, plastic covers and sweet-smelling toxic dump” *Centre for Civil Society Research Bulletin* (Centre for Civil Society, University of KwaZulu-Natal: 2005) online: www.ukzn.co.za/ccs

⁵⁹ *Ibid* at 3

⁶⁰ Sajida Khan, personal interview 24 May 2005

fear of injury), a community-wide petition with 6000 signatures, and a media blitz. Yet despite Khan's best efforts, the permit to extend the life of the dump was granted. Worse still, in a wealthy white-dominated suburb to the north of Durban the Umhlanga landfill site was quickly closing its doors as it was 'earmarked for up-market property development.'⁶¹ The rubbish from this site was rerouted to Bisasar Road.

2.1.2. Health Effects of the Dump and CDM

In addition to being the year that the Bisasar was extended and took on more rubbish from Umhlanga, 1996 was also the year that Sajida Khan first developed cancer. In her informal surveys of the neighbourhood, Khan claims that seven out of ten residents in the area of Clare Estates closest to the landfill have reported at least one person in their household developing cancer. Among these victims is Khan's own nephew who died of leukemia. For Khan and other residents in Clare Estates there is only one place to lay the finger for their poor health: the dump. Prior to the 1990s there were very few government regulations on waste management and thus Bisasar was able to have a medical waste incinerator on its site and accept other forms of hazardous waste.⁶² Even when stricter regulations were put in place and the landfill ceased incinerating hazardous waste, Khan still cites unsubstantiated studies where the limits of waste emissions considered potentially hazardous were exceeded in hydrogen chloride by 50%, cadmium by 200%, and lead by more than 1000%. Limits for suspended particulate matter were also exceeded.⁶³

⁶¹ Reddy, *supra* note 58 at 3

⁶² *Ibid.* at 3

⁶³ *Ibid.* at 5

It is not surprising that Sajida Khan's assessment of the health impacts of Bisasar Road would be disputed by officials at Durban Solid Waste. According to Lindsay Strachan, "We've brought in experts to assess the health risks. Their main concern was formaldehyde, but the health experts couldn't discern if it was burning from Kennedy Road or if it was landfill."⁶⁴ Strachan believes that any health threats in the area would indeed come from the informal housing community on Kennedy Road who regularly burn wood and other materials for heating and cooking as they do not have electricity. As to Khan's survey of ten households in Clare Estates with high rates of cancer, Strachan questions her methodology and research qualifications thus concluding that her research is "absolutely codswallop!"⁶⁵ Furthermore, Strachan points out that there is a one in four cancer incidence rate in Durban and therefore "how do we know [these people's cancer] is from the dump? With those odds, it could be from anything?"⁶⁶

Whether cancer rates can be attributed to the landfill or not, a growing concern in Clare Estates is that the CDM project will create more air pollution and potentially adverse health effects rather than alleviate them. Khan calculates that each year, the methane electricity generators will pump out 95 tons of nitrogen oxides, 319 tons of carbon monoxide, 323 tons of hydro-carbons and 43 256 tons of carbon dioxide. Nitrogen oxides are a respiratory irritant and exacerbated asthma, carbon monoxide reduces the oxygen-carrying capacity of the blood, and carcinogens such as benzene and butadiene could be found in hydrocarbons.⁶⁷ These figures should not be interpreted literally however as the scientific validity of Khan's own calculations has not been confirmed.

⁶⁴ Strachan, *supra* note 57

⁶⁵ *Ibid.*

⁶⁶ *Ibid.*

⁶⁷ Reddy, *supra* note 58 at 8

2.1.3. The Issue of Closure

Though the Clare Estate community remains concerned over potential health impacts from the CDM project, their main point of contention with this project is the widely held perception that it will further prolong the life of the landfill site. Lindsay Strachan adamantly rejects this perception and argues that the landfill gas must be captured either way so it doesn't matter if the landfill is still accepting waste or not. In addition, Strachan is just as insistent that "the dump is closing...the city is saying we'll close it."⁶⁸ The way the city is going about this is through the creation of a waste transfer station near the south end of the landfill so that when the site closes waste can be transferred to a new landfill further away. According to Strachan, the environmental impact assessment for the transfer station is costing the city about R1 million, which could then be expanded to include closure for the landfill, "The transfer station is the start of the closure process."⁶⁹ Ironically, Strachan blames the resident's opposition to the transfer station – which they see as just further development and pollution in their neighbourhood – as an impediment to closure, "If you walk into a room and you're just heckled, you can't talk to people. So the dump continues."⁷⁰ At the end of the day, Strachan wants to sympathize with the local residents and claims to be much more concerned about the viability of the CDM project than the continued operations of Bisasar Road. He states, "I haven't received a closure demand in 2 years; they're now driving the anti-CDM train; they should keep driving the site closure train and make it quite clear that if you close the landfill we want this gas project as long as the landfill is closed."⁷¹

⁶⁸ Strachan, *supra* note 57

⁶⁹ *Ibid.*

⁷⁰ *Ibid.*

⁷¹ *Ibid.*

There is substantial evidence to contradict Strachan's view that the CDM and continued operation of the landfill are not related. For example, in the 2004 project design document that Strachan helped to prepare the baseline methodology for this project states:

All three landfills have remaining capacity and, with the exception of La Mercy, can continue to operate throughout the crediting period. Considering the high costs of developing new landfill sites, it is not reasonable to expect that the municipality would close these landfills before they are full, nor are there any plans for the construction of replacement sites.⁷²

The crediting period referred to in the PDD was seven years with two optional renewals of the same amount. When Strachan claims "the dump is closing" he fails to mention that this would be in twenty-one years. In addition, a senior engineer at DSW who has worked at the landfill for four years, admitted he did not know anything about an impending closure while giving a tour of the landfill: "What closure? There's room here for at least another decade of landfill."⁷³

While there is still no irrefutable evidence that CDM project is what is keeping the Bisasar Road Landfill open, there does appear to be a casual link between the two. This link is carbon credits, or to be more precise, an estimated \$20,000 Rand per day of potential carbon finance that could be coming into Durban, according to Strachan's calculations. Yet when he was asked whether these calculations involve the landfill site being open or closed, Strachan told a local newspaper reporter, "The site has the potential to produce 8000 cubic metres of methane an hour and closure would bring that down to 7000 cubic metres, so the difference is somewhat negligible."⁷⁴ Whether a difference of 12.5% of production is "negligible" in a US\$15 million deal with the World Bank's PCF

⁷² PCF *supra* note 54 at 8

⁷³ Senior engineer at Durban Solid Waste, Personal interview. 13 June 2005.

⁷⁴ Tom Robbins "Durban Signs SA's First Carbon Finance Deal" *Business Day* 13 November 2002

should be treated as more than a rhetorical question. When asked, Strachan refused to indicate whether he used the higher or lower number in his discussions with them and in the PDD.

One final issue to mention around closure, though it often gets glossed over in any representation of the Bisasar Road landfill controversy, is the informal housing settlement on Kennedy Road, directly adjacent to the landfill. As some of the Apartheid laws began to relax in the late 1980s, in particular the *Group Areas Act*, a sizable group of Zulus moved into the area around Kennedy Road that runs along the western border of the Bisasar Road landfill. This settlement also illustrates the unique tendency for groups of people to gravitate *towards* waste management facilities where “waste picking” and other scavenging offer an alternative means of survival when government resources are limited and unemployment rates are astronomical.⁷⁵ This intentional settlement of now nearly 1000 people next to the landfill creates obvious conflicts with the rest of Clare Estates who had the landfill involuntarily imposed on them. An employee of DSW describes the divergence between Clare Estate and Kennedy Road as “one community built up *because* of the landfill, while the other wants the landfill closed.”⁷⁶

In the struggle around landfill closure and the CDM, the strategic support of the Kennedy Road community by DSW is considered a very high priority. To this end, the World Bank commissioned a formal recognition of the Kennedy Road community, which local activist and scholar Raj Patel observes, “seems central to the community’s support of the project...in contrast with richer activists [who ignore Kennedy Road.]”⁷⁷

⁷⁵ Lindsay Horton “Environmental Justice and the CDM in Durban” Undergraduate Honors thesis, (Dartmouth College, New Hampshire)109-110

⁷⁶ *Ibid.*, at 99

⁷⁷ Raj Patel. Personal Interview. 18 May 2005

Moreover, in eliciting the support of the community for the CDM project, Lindsay Strachan offered forty-five jobs and three bursaries to children from “affected communities to study engineering, possibly in Uganda,” though it should be noted that within the Kennedy Road settlement, this figure is believed to be fifty scholarships.⁷⁸ Whatever the figure, community leaders in Kennedy Road are convinced that the continued operation of the landfill offers them the best opportunities for economic advancement while remaining in relative proximity to the city centre. This results in active opposition of the campaigns of Sajida Khan and others in the Clare Estate to close the dump and a general breakdown of community relations. For her part, Sajida Khan points the finger at Lindsay Strachan for using this divide and conquer strategy and claims “I have nothing against these people...I am fighting for all of us, no one wants to live next to a smelly dump.”⁷⁹

2.1.4. The Present Status of the Project

In June 2002, just after the PCF signed an Emissions Reductions Purchase Agreement with DSW for the CDM project, Sajida Khan filed a lawsuit against the Ethekeeni municipality and the federal Department of Environmental Affairs and Tourism for negligence in permitting the continued operation of the Bisasar Road Landfill. After three years of delays, the case was due to be heard in Fall of 2005 but Khan’s cancer had rapidly deteriorated and the case will remain in the docket until she is declared fit enough to participate in the legal action. In addition to the legal action, an appeal to the Minister of the Department of Water and Forestry at the provincial level has been delaying the

⁷⁸ Patel, *supra* note 77.

⁷⁹ Khan, *supra* note 60

project approval. Strachan estimates the cost of these delays for the municipality will be upwards of R 40,000.⁸⁰

In light of these delays at Bisasar there was an unsubstantiated rumour circulating around Durban in the spring of 2005 that the World Bank had told DSW that it had until October to sort out the “outstanding issues” relating to Bisasar Road or it would pull out of the project.⁸¹ Though Lindsey Strachan flatly denied this, it may not be coincidental that in late August 2005, DSW submitted a PDD to the CDM Executive Board for the two projects at La Mercy and Mariannahill but did not mention anything about Bisasar Road. This is a significant admission as these two smaller project total a mere 3 MW of power between them and only 50,000 tonnes of CO₂e emissions reductions, compared to 10 MW at Bisasar Road and 3.1 million tones of CO₂e. Thus it appears for at least the time being that Sajida Khan’s many years of tireless campaigning have won her a temporary victory in delaying this CDM project. There have been no recent decisions or announcements relating to the eventual closure of the Bisasar Road Landfill site.

2.2. Sasol’s Pipeline

As one of South Africa’s largest companies – nearly US \$12 billion in assets in 2004 and a total profit of US\$1.4bn – Sasol describes its business interests as “Chemicals, mining, and synthetic liquid fuel synthesis.”⁸² Sasol had its headquarters and a large production facility in Sasolburg (the city is named after the company, not vice verse) and another plant in Secunda, which has the dubious distinction of being the largest point source

⁸⁰ Strachan, *supra* note 57

⁸¹ Khan, *supra* note 60

⁸² Sasol homepage: <www.sasol.co.za>

emitter of carbon dioxide on the African continent.⁸³ Sasol's entry into the carbon market was initiated following its decision to build a 865 kilometre pipeline to carry natural gas from the Temane and Pande fields in Mozambique to its facilities in Sasolburg and Secunda. The pipeline is being used to supplement coal as the feedstock in Sasol's liquid fuel synthesis processes at the Secunda plant and replace it entirely in Sasolburg.

This particular CDM project is unique for a number of reasons. For starters, with an estimated annual reduction of 6.5 million tonnes of CO₂e, it represents one of the largest CDM projects in Africa to date (by comparison Bisasar Road is about half this size and that is with a gas eleven times more potent than CO₂, here we just have CO₂.) Secondly, this is the only project this author is aware of that was developed entirely without any input from foreign or domestic CDM consultants. Sasol appears to be doing this all by itself, which is quite rare considering the level of expertise required to navigate the complex processes and nomenclature of the CDM. Third, and perhaps most importantly, this project highlights some of the most critical questions about the additionality requirement.

The root of Sasol's additionality issue is their upfront admission in their Project Identification Note that their coal mine in Sasolburg "reached the end of its economic life in 2001."⁸⁴ This was a well-known fact at the time, since the drop of production at the mine from 70 million tones/year to 2 million had forced enormous layoffs and attracted media attention. Following this, Sasol began trucking ~12,500 tonnes of coal per day into Sasolburg from Secunda, a procedure they admitted "was not an economically

⁸³ Caroline Ntaopane, Sasolburg Air Quality Monitoring Committee, personal interview. 27 June 2005.

⁸⁴ Sasol. "Project Identification Note: Sasol Natural Gas Conversion Project" Submitted to the DNA: 31 January 2005 at 4

sustainable mode of operation.”⁸⁵ Therefore, the company devised two potential options forward; build a new mine further outside Sasolburg or build a natural gas pipeline to Mozambique.

In their PIN, Sasol argues that their baseline scenario would indeed be to build the coalmine, despite “public concern over the strip mine proposed by Sasol...which would have been situated on the banks of the Vaal river.”⁸⁶ Even though there was “a desire from Sasol and the South African government to reduce local air pollution...there was no incentive or legal obligation to do so at the time” and thus continued coal emissions were a suitable baseline scenario.⁸⁷ This was contrasted by the “numerous and difficult to manage barriers” of building the pipeline including capital costs, political instability, and fluctuating natural gas prices. Taking these barriers into consideration, Sasol’s most likely baseline scenario was to build another mine, and thus absent carbon finance they would not have built the pipeline.

If one were only to read Sasol’s PIN it would be difficult to offer sufficient evidence to properly counter their baseline scenario. But I was able to find out the real story about Sasol when I attended a meeting of the South African National Energy Association at the Siemens Headquarters in Sandton, outside of Johannesburg. At this meeting of energy representatives and lobbyist, Sasol’s Natural Gas Supply Manager, Peter Geef, gave a very informative PowerPoint presentation on the pipeline and the reasons that Sasol built it. While Mr. Geef went through his presentation including slides such as “What was this project about?” and “What made the project possible?” any mention of carbon finance was curiously absent. Even when discussing specifics of

⁸⁵ Sasol, *supra* note 84 at 5

⁸⁶ *Ibid.* at 5

⁸⁷ *Ibid.* at 7

project finance, there was no mention of CERs, just that the project's US\$1.2 billion sticker price has been "completely paid for."⁸⁸ Finally when it was time for questions, Mr. Geef was directly asked whether there were any outstanding financial inputs for this project, to which he responded in the negative. At this point I asked him if Sasol was indeed pursuing carbon credits for their pipeline, whereupon he admitted:

Yes we are indeed trying to get some carbon finance for this pipeline...(But) we have this problem of additionality; we think there's a case to be made for that, we're in discussion with the South African government now and we're trying to make the case for it...*The Biggest issue is additionality; we would have done this project anyway.* (Emphasis added.)⁸⁹

Having publicly admitted that their project does not meet the additionality requirement of the CDM, the question then became why they are pursuing carbon finance. To this, Mr. Geef answered, "mainly financial reasons; you get a lot of pay-back in terms of dollars per tonne."⁹⁰

Not wanting to entirely trust the unassuming musings of a mid-level manager, I contacted Sasol's "Greenhouse Gas Abatement Officer" Gerrit Kornelius. Though Kornelius never admitted the project wasn't additional, his defense of the project was not particularly convincing. In response to questions about finance, Mr. Kornelius forwarded an article from the June 2004 edition of *Global Energy Review* on the project. Though this article goes into great detail about the project's "financing strategy" and includes a "summary of financing package," it never once mentions anything to do with carbon finance.⁹¹ Following up on this point, Kornelius justified Sasol's pursuit of carbon finance on the basis that "a recent review has indicated that the IRR (internal rate of

⁸⁸ Peter Geef. Presentation to South Africa National Energy Association, Sandton, South Africa. 21 June 2005.

⁸⁹ *Ibid.*

⁹⁰ *Ibid.*

⁹¹ Greg Fyfe. "Gas – The African Way" *Global Energy Review* June, 2004. 46

return) is [at this stage] somewhat lower than envisaged in the original board submission for project approval, and that did not meet the normal hurdle rates for projects - this is one of the arguments for the additionality claim.”⁹² Thus Sasol’s apparent interpretation of additionality is not in comparison with *what you would have done* anyway, but rather an additional bonus for something *you already did yet wished were more profitable*. For Richard Worthington of the South African Climate Action Network, an organization not known to be hostile to the CDM, “We will consistently criticize Sasol for this; the local coal mine is tapping out, you’re a (very) rich company, and this pipeline entrenches their monopoly. To look for CER capital is just baseless greed.”⁹³ On the face of it, it is very hard to disagree with this interpretation.

2.3. Landfill Gas Capture in Bellville

It was the original intention of this research project to give a broader overview of the South African carbon market, in particular, to provide a better context to the disproportionate attention that the Bissasar Road landfill has received in academic and mainstream media. Therefore, although reviewing a second landfill gas (LFG) capture project might not serve the purpose of providing the widest possible representation of the South African carbon market, it does greatly assist in the objective of providing much better context to what is happening in Durban.

⁹² Gerrit Kornelius. Private correspondence. 22 July 2005

⁹³ Richard Worthington. Personal interview. 20 June 2005

2.3.1. Project Background and Durban Comparisons

South Africa's second LFG CDM is located at the Bellville South Waste Disposal (BSWD), which used to be in the city of Bellville – north of Cape Town – until it became incorporated into the larger Cape Town municipality in 1997. The LFG project itself is quite similar to Durban; drilling wells to capture LFG through active extraction, aimed at optimising gas production that would result in a “conservative” 70% of the gas being captured and utilised instead of the 30% which is presently just flared.⁹⁴ Since BSWD is smaller than Bisasar Road, the expected annual emissions reductions from the LFG capture and offset coal emissions are one third of Durban's with 1.2 million tonnes CO₂e. This figure is somewhat controversial, at least to Lindsay Strachen, who believes “they're over-estimating their LFG potential.”⁹⁵

In terms of the present status of this project, the baseline methodology, initial technical and financial feasibility studies have been completed. A PDD has also been prepared, though it hasn't been submitted to the DNA. Outstanding milestones include a conclusive technical and financial feasibility study, the establishment of a management structure, ability to deal with the extraction and sale of the gas, as well as undertaking the required EIA and public participation processes.⁹⁶

Taking a step back and comparing the two LFG projects, there are some notable similarities and differences between them. It has already been mentioned that BSWD is smaller and at an earlier stage of development. The Bellville project is also being developed under the close supervision of SSN, a non-profit consultancy that has a much

⁹⁴ SSN “Project Design Document: Belville South Landfill Gas Recovery and Use Project” Downloaded from: www.southsouthnorth.org

⁹⁵ Strachen, *supra* note 57

⁹⁶ SSN. “Bellville Landfill Gas Recovery and Use Project” online at: http://southsouthnorth.org/country_project_details.asp?country_id=5&project_id=72&project_type=1

more legitimate claim to be concerned about developing sustainable projects than other consultancies like EcoSecurities, or in the case of Durban, the PCF.⁹⁷ Finally, there are some notable differences in terms of the host municipality. In Durban, the environmental planning department is eleven people and CDM projects are almost entirely handled by Deborah Roberts, who admits “climate change is something we get to between half past two in the morning and three.”⁹⁸ In Cape Town, 106 people work in environmental planning, and climate change gets its own office, headed by the very capable Craig Haskins. Cape Town is also very active in the Cities for Climate Protection program and boasts an unparalleled expertise of the issue compared with almost any other level of government in the country. It is perhaps the more progressive nature of the municipality and non-profit consultancy that led to BSDW being on track to be a “Gold Standard” CDM project. The legitimacy of the Gold Standard in relation to this particular project is an issue we shall return to shortly.

Yet in light of these contextual differences, there are some very key similarities between the two landfills, mainly their location in urban areas and the ongoing struggles over closure. Though these two issues should be recognized as co-related, they will be dealt with separately for the purposes of this analysis.

The BSDW site was used in the early 1930’s for sewage disposal and has been in operation as a waste disposal site since the 1960’s. This landfill site was initially built remote from any human settlements but is now surrounded by the Belhar community as close as just 10 metres from the western boundary due to rapid urban development

⁹⁷ According to Lester Malgas of SSN, “Durban’s perfume rods (used to offset the rotting stench of garbage) leave a bad taste in everyone’s mouth.” (personal interview, 30 June 2005)

⁹⁸ Deborah Roberts, personal interview 28 July 2005

dramatic urban sprawl that has taken place over the past two decades.⁹⁹ As is typical of South Africa, the Belhar community is composed largely of coloured and Indian inhabitants as white people rarely live within any close propinquity to landfill sites. The site was closed prematurely for a period of time due to the “close proximity to residential areas and the risk of contamination to the underlying Cape Flats aquifer.”¹⁰⁰ Following reconstruction of local government in 1997, the Cape Town Municipal Corporation took over the responsibility for operating the site from the former Bellville Municipality and extended the catchment area to try to protect the aquifer. The decision to re-open the landfill enraged local residents, who formed two separate organizations; the poorer and blacker Landfill Monitoring Group, and the richer and more Indian-based Belhar Development Forum to fight the landfill. The residents from both groups were somewhat placated by the city’s pledge to close the site in 2006. However, the city is presently trying to extend the dump until 2009. With this process taking place at the same time as discussions around the CDM project, many residents are beginning to connect the two.

As was the case in Durban, the project developer, Walter Loots, head of Cape Town Solid Waste, adamantly denies even the slightest causal connection between keeping the dump open and the CDM project. For Loots, the simple fact of the matter is that Cape Town “is running out of landfill space...the only alternative is a regional landfill 60 kilometers out of town. This will have significant costs attached to it.”¹⁰¹ Moreover, the project developers at South South North believe, “For CDM project to happen, landfill has to be capped. Even with an extension to 2009, the portion that stays

⁹⁹SSN *supra* note 94

¹⁰⁰ City of Cape Town. “*Cape Town Integrated Waste Management Plan*” at 5-1 downloaded from: www.capetown.gov.za

¹⁰¹ Walter Loots. Personal interview. 14 July 2005

open will be capped soon and the portion for 2006 will be capped now.”¹⁰² How it can be that the landfill must be capped for Cape Town to extract the gas, yet Durban can keep a dump open for twenty-one years and get 3 millions tonnes of CO₂e per year remains a mystery. It was also never revealed whether there is a difference in available gas to be captured if the landfill stays open or not and whether this was included in the PDD’s calculations, as was so clearly the case in Durban. Therefore, it is difficult to conclude with any degree of certainty the role the CDM project may play in the continued operations of the Bellville South facility. What is known though is that local residents oppose this continued operation, and the CDM’s even proximate association to that raises some questions about how much LFG capture projects contribute to the well-being of the local communities in Cape Town, Durban, or anywhere else. The fact that this particular project appears to be certified as a “Gold Standard” for the highest level of environmental and social sustainability makes these questions all the more pressing.

2.3.2. The Gold Standard

As has previously been mentioned, the ability for host countries to set their own sustainable development criteria has been condemned by social actors as impeding the accountability of the DNA and the development of quality projects. In trying to prevent this situation, SSN with the support of the Climate Action Network established a set of universal sustainable development benchmarks in 1999. These efforts culminated in the “SSN Matrix” yet were to be ignored during the following Marrakech negotiations that set the rules for the CDM, where each country was allowed to judge projects by their own criterion. As the market began to develop in ways that these ENGOs feared it would;

¹⁰² Sheriene Rosenberg (SSN), personal interview. 30 June 2005

including widespread “failure to demonstrate ‘additionality’ and deliver added environmental and social benefits,”¹⁰³ the World Wildlife Fund once again undertook efforts to establish universal benchmarks. In May 2003 the WWF released the ‘Gold Standard’: a code of best practices and criteria “necessary to deliver real contributions to sustainable development in host countries plus long term benefits to the climate.”¹⁰⁴

The Gold Standard, which admittedly shares strong similarities with SSN Matrix, differs from the regular benchmarks of a CDM project in three important ways. First, there are fewer methodologies that qualify for a Gold Standard rating as compared to a normal CDM, and they must fall into the two broad categories of renewable energy and energy efficiency. Second, the additionality requirements are claimed to be stricter than the CDM since project developers must show that carbon credits enable the project activity to overcome at least one barrier from a list of five categories: financial, political, institutional, technological and economic. Most importantly, the Gold Standard seeks to ensure that the sustainable development aspects of CDM project activities are “maximized” through the obligatory use of “sustainability matrix Environmental Impact Assessment (EIA) procedures.” These enhanced EIA procedures stress public consultation and evidence that the project contributes to sustainability in three main areas: a) local/regional/global environment: impacts on air/water/soil quality and biodiversity; b) social sustainability: impacts on poverty alleviation, access to energy services, and human capacity (i.e. empowerment, education, gender); and c) economic development: employment, balance of payments, technological self-reliance.¹⁰⁵

¹⁰³ BASE “*Gold Standard backgrounder*” Downloaded from: www.cdmgoldstandard.org at 1

¹⁰⁴ *Ibid* at 3

¹⁰⁵ *Ibid.* at 6

The Gold Standard is currently being overseen by BASE in Switzerland. They have already certified the Bellville South project to be “in compliance to the Gold Standard Label.” More specifically BSWD was seen to have “a positive scoring for all the pillars, with significant contribution in term of the local, regional and global environment and has scored lesser, but by no means insignificant contribution toward social sustainability and economic and technological development.”¹⁰⁶ The certification of this CDM project to be in compliance with the Gold Standard raises a number of critical questions about the validity of this measure and the CDM market in general.

To begin with the issue of economic development, SSN, the project developer, admits that the economic development impacts of this project “would be less significant, this is however counter balanced by the cost effectiveness of the project due to the potential income from carbon finance and the sale of gas.”¹⁰⁷ Thus the impression is that as long as the project is capable of making a lot of money, it can in theory contribute to economic development depending on how that money is spent. Yet within the city of Cape Town there is no consensus for how carbon finance from BSDW would be used. The people at SSN hope to apply the carbon profits from Bellville to other CDM projects in the area that are much less economically viable, such as the Kuyasa energy upgrade (discussed in the next section.) Craig Haskins at the City of Cape Town confirmed that discussion on how the revenue will be spent have taken place, but no decision was made in his department as they did not have the institutional mandate to do so. Should SSN’s proposal be adopted by the City council, it is still unclear how taking carbon finance out of the local community in Bellville would further economic development there.

¹⁰⁶ SSN *supra* note 94

¹⁰⁷ Rosenberg, *supra* note 102

As to social indicators it seems ironic that a project that is widely opposed by the local community could register a “by no means insignificant contribution towards local sustainability.” Does this imply that persons living in the vicinity of the Bellville South landfill do not understand the meaning of sustainability and know what is good for them? Or rather does it reflect the supposed confusion between the continued operations of the landfill and the CDM project, as is the case in Durban? Taking this as the case, it is still curious how a CDM project that operates on a landfill site that has remained open far beyond the desires of local residents can somehow lead to improved livelihoods among local residents. This might be possible if the electricity generated from the project was to be distributed freely to the surrounding community, yet such a proposal that has not been given any consideration in Bellville nor Durban.

Finally turning to environmental sustainability it seems to be commonsense that a project that reduces harmful GHG emissions would by its very nature deserve recognition as furthering local and global sustainability. The only way this may not be the case is if the project were to result in such damage to either the air, water, or soil in the surrounding area to cause a net negative impact on the environment. Although there are some questions about the impact of the landfill on the local aquifer and the releases of particulate matter from the methane generators, these do not appear to subsume the ecological benefits of preventing methane release. Yet one can still make a very strong case that this project should not be considered sustainable by any definition of the word.

According to the Gold Standard, Bellville South is a “renewable energy” project under the category of “ecologically sound biogas.”¹⁰⁸ Yet for this to really be considered “ecologically sound” a number of important questions about waste management deserve

¹⁰⁸ BASE *supra* note 103 at 1

to be answered. In December 2000, the City of Cape Town released an “Integrated Waste Management Plan” (IWMP) that recognized the need to find alternatives to the present status quo around waste management in the city. In particular, the IWMP focused on the need to develop strategies for waste reduction as a top sustainable development priority, a discussion completely absent in this CDM project.¹⁰⁹

In addition, Walter Loots, head of Solid Waste for municipality and the lead author of the IWMP, admits that the present landfill practices are not sustainable, especially in light of lack of available space for landfills: “land is at an absolute premium.”¹¹⁰ For Loots, the “real solution to the problem is in sorting and treating waste.”¹¹¹ According to the IWMP, approximately 50% of the waste in Cape Town landfills comprises of biodegradable organic material. If this was separated out from the non-organic material, the City of Cape Town would be able to vastly decrease its need for landfill space as well as capture a much higher amount of methane. Methane is generated from rotting organic material, yet when this is mixed in with non-organic material as is typical practice in landfills, the amount that can be captured is reduced. For example, the best capture rate proposed in the Bellville project is still only 70% (it’s 83% in Durban) but with separated organic material this amount gets much closer to 100%. Thus to try to capture methane from a regular landfill, as is the aim of this CDM project, is “an inefficient solution to an avoidable problem,” according to Loots.¹¹²

It is curious that a project deemed an “inefficient solution to an avoidable problem” by the very expert in waste management who designed the project should also

¹⁰⁹ City of Cape Town, *supra* note 100 at 6-25

¹¹⁰ Loots, *supra* note 101

¹¹¹ *Ibid.*

¹¹² Loots, *supra* note 101

be considered to make a “significant contribution in term of the local, regional and global environment,” by the Gold Standard. The reason for this apparent contradiction is two-fold. First, as Loots is only too ready to admit, the City of Cape Town simply does not have the resources to institute a large-scale recycling and waste separation scheme. For Loots, “our first priority is equitable service delivery. We are getting lots of pressure to have a better recycling program and I would love to have a wet/dry program. But it is simply politically unacceptable for recycling to happen in richer neighbourhoods while there is still no roadside collection of waste in poorer ones.”¹¹³ To support this position, Loots cites the 155,000 families in informal settlements across the municipality, especially the township of Khayelitsha, who lack access to basic services including waste pickup. Deborah Roberts, the director of environmental management at eThekweni, echoes her Cape Town colleague’s sentiment:

We are a couple of decades away from that ideal in terms of solid waste management. South African society simply isn’t ready for that type of policy. We consider it bloody marvellous that we can even get waste into the landfill. People here believe that if you throw something down the street it creates jobs.¹¹⁴

Thus the argument for the CDM in South African landfills even as a Gold Standard is not that it is the most sustainable solution but rather that it is the only one they can afford in light of present political considerations.

Yet this conclusion only reinforces the failure of imagination in the carbon market to produce forward-thinking projects that have long-lasting social and environmental benefits for the community. A CDM project that provided the capital for a municipality to put in a widespread recycling and waste separation system would have undeniable

¹¹³ *Ibid.*

¹¹⁴ Roberts, *supra* note 98

environmental and social benefits. The space required for landfills would be vastly reduced and without the organic material rotting they would cause much less nuisance to surrounding areas. In addition to improving productive methane capture from the sorted organic material, the better solution for avoiding climate change, the very act of sorting this would create thousands of employment opportunities, the importance of which cannot be denied in a country like South Africa with an estimated unemployment rate of 44%. Surely this is the type of project that a “Gold Standard” for the CDM should be certifying. Instead they have chosen to certify a project that provides no employment gains or other social benefits and only further entrenches an unsustainable form of waste management. As such, the Gold Standard seems to have become the victim of the very scourge it was set up to avoid: the propensity of Northern governments to only invest in projects that offer maximum return on investment with little added environmental and social benefits. Worse, it has now given these projects greater legitimacy and demand.

Yet as we shall now see, even if this Gold Standard project was able to provide all of the social and environmental benefits as listed above, the global carbon market has developed in such a perverse way that it would be unable to make it financially viable.

2.4. The Kuyasa Low-cost Housing Energy Upgrade Project

On 27 August 2005, the CDM Executive Board officially certified the Kuyasa low-cost housing energy upgrade project as both the first African project and the first Gold Standard project to receive certified emissions reductions credits. It was a great day for the project developers; the City of Cape Town and SSN, as well as the ten beneficiaries of the project living in Kuyasa, a neighbourhood in the township of Khayelitsha outside of Cape Town. In addition to being a groundbreaking CDM project for Africa and the

Gold Standard, the Kuyasa CDM is the only African project this author is aware of where the local residents actively *supported* the project, rather than opposed it (as is the case with the LFG capture) or at best were indifferent. As such, Kuyasa has been held up as an example of the enormous potential of carbon trading to both fight climate change and improve living conditions in local communities. Unfortunately the reality of the situation is just the opposite; rather than being an example of what the CDM can deliver, Kuyasa is a testament to what it cannot.

2.4.1. Project Background

On the face of it, there is very little not to like about the Kuyasa CDM project. The first phase of the project got underway in July 2002. It involves retrofitting ten RDP (Reconstruction and Development Programme) homes with insulated ceilings (where there would normally just be a corrugated steel roof), replacing regular lighting with low-watt compact florescent bulbs, and installing solar water heaters on the roofs. In the absence of the water heaters, residents would use electric geysers to heat their water and thus the project creates a hypothetical suppressed demand for coal-fired electricity. In total, 2.85 tonnes of CO₂ per household per year would be avoided as a result of the project.¹¹⁵ Ensuring the accuracy of this figure was one of the aims of the first phase of the project where much emphasis is on monitoring the ‘baseline methodologies.’ The second phase of the project hopes to replicate the baseline study on 2299 RDP homes throughout Kuyasa.

One of the most likable aspects of this project is that from the very beginning there have been extensive consultations with the community. The City of Cape Town

¹¹⁵ SSN, “Kuyasa Project Background” online: www.southsouthnorth.org

and SSN have worked closely with the ward development forum (WDF) in Kuyasa, who put together a broad-based steering committee of community members who were able to take ownership of the project through key decisions. These decisions included assisting the design of the project, deciding which ten households would participate, and how to move forward into phase two of the project. The steering committee also played an active facilitation role between the project developers and broader community so there were ongoing opportunities for public input over the project.

In terms of the Gold Standard, this project “attains positive scores in all of the pillars. It has a particularly high rating in terms of social sustainability and local development and has a minimal impact, apart from the reduction of GHG on the natural environment.”¹¹⁶ As to the social/economic development, the project creates employment opportunities through the instillation and maintenance of the solar water heaters, which are locally manufactured. Furthermore, the R625 average annual savings on electricity bills can go back into the local economy and create further economic spin-offs.¹¹⁷

During a site visit in Kuyasa, I had the opportunity to interview one of the project participants named Muzelli, an unemployed man in his thirties confined to a wheelchair. Through a translator (Muzelli only speaks Xhosa, as is common in Khayelitsha) Muzelli told of how he now saves over 600 Rand per year on his electricity bills, which he is able to send back home to support his children still living in the Eastern Cape. When the weather gets cold at night (it can get below ten degrees Celsius during winter evenings) all of Muzelli’s neighbours come over to visit as his ceiling keeps the house much warmer than anywhere else in the neighbourhood. Though he admitted that he did not

¹¹⁶ *Ibid.*

¹¹⁷ SSN, *supra* note 115

know much about climate change, Muzelli made it clear that people support the project for many other reasons, namely the money they save and having warmer houses. As he stated, “this is a good project. People are very impatient to get their homes upgraded, they really want this project.”¹¹⁸ During our interview word got around the neighbourhood of my arrival and by the time I went to leave a small crowd had gathered outside of the house eager to shake my hand and ask when their water heaters would arrive. One need not require much more evidence than that to support a project like this.

2.4.2. The Financial Imperative

As wonderful as this project appears to be, when one begins to look into the financial aspects of it, the unfortunate reality of the carbon market is revealed. Of the total budget for the first phase of this project, carbon finance will cover around 15% of the upfront costs assuming current carbon prices. To quote Lester Malengis from SSN who has worked on this project for the past two years, “this is first a project that uplifts Kuyasa, not a carbon project...that funding is not sustainable.”¹¹⁹ With carbon credits making up only a fraction of the budget, this project has been able to go ahead due to the generous funding it has received from other sources: R12.4 million from the Department of Environmental Affairs and Tourism in Pretoria, another R4 million from the province of the Western Cape, and R450,000 from Electricity de France as part of their Corporate Social Responsibility campaign.¹²⁰ In addition to this funding, SSN and CCT also donated hundreds of hours of labour not compensated through project finance. For Richard Worthington of SACAN, though Kuyasa seems to be an example of the project

¹¹⁸ Muzelli (Kuyasa project beneficiary) personal interview 6 July 2005

¹¹⁹ Malgas, *supra* note 97

¹²⁰ Rosenberg, *supra* note 102

people had in mind when the CDM was conceived, “its clearly got to where it got to because it’s been treated as a charity case. It’s been damn expensive and not at all an example of how to put a project together.”¹²¹

In the early Autumn of 2005, South South North secured additional funding of approximately R 25 million from the Provincial Administration of the Western Cape and the national Department of Environmental Affairs and Tourism. It is anticipated that this funding will be sufficient to retrofit all 2299 remaining houses within the project boundary. Much like the first phase, the carbon revenue stream comprises around 15% of the upfront costs of the project at current carbon prices.¹²² To this end, the first 10,000 CERs from this project have been sold at a price of €15 to the UK government to offset the G8 summit at Gleneagles.¹²³ While one need not question the UK government’s motives, it is worth noting that using the offset market for this deal is somewhat problematic. The offset market is entirely voluntary-initiatives and lacks any of the regulatory oversights of the CDM market. The possibilities for fraud in this market are thus enormous, though the Kuyasa project’s reductions appear to be quite legitimate.

With the vast majority of funding for this project now secured through the government, SSN is now officially referring to the project as “a public sector project, relying on government grant funding for its implementation.”¹²⁴ Though the government’s support of the Kuyasa project is not doubt laudable, it is still susceptible to criticism based on other pressing priorities. To give one example of another priority, housing activist Peter van Hausen notes that there is currently a backlog of 260,000

¹²¹ Worthington *supra note 93*

¹²² South South North, “Kuyasa Low-Cost Urban Housing Energy Upgrade Project” at 6. online: www.southsouthnorth.org

¹²³ *Ibid.* at 6

¹²⁴ *Ibid.* at 6

houses that need to be built in the City of Cape Town, which is growing at a rate of 20,000 per year; 9,000 from old/derelict homes, 11,000 from new arrivals.¹²⁵ This backlog has almost doubled since 1994, which is due in part to the influx of people into the area post-Apartheid, but mainly state's unwilling/inability to tackle the problem. For example, the City of Cape Town under-spent its housing budget in 2004, where only 4000 new housing opportunities were developed. In 2005 their aim is 8000, though this will not even cover the new demand for homes, let alone address the backlog. In light of this dire situation it is difficult to justify public expenditures on energy upgrades for people who already own their homes when millions of people don't.

2.5. Conclusion

Looking back on the various projects in South Africa, the contradictions embedded in the carbon market become quickly apparent. The best project in the country is the least profitable from a carbon finance perspective, due in no small part to the types of projects found elsewhere in the country. Durban and South Bellville are still very profitable at a lower carbon price because the potency of methane still means they get twenty-one times more carbon credits than a project like Kuyasa that only involves CO2 reduction. Sasol's project has already been entirely paid for so anything they receive in terms of carbon finance will be pure profit. Kuyasa doesn't have either of these luxuries, which helps explain why renewable energy projects are only 5% of the global carbon market. When you are not low-hanging fruit, you're simply not that appetizing to carbon capital.

¹²⁵ Peter van Hausen, personal interview 19 July 2005

3. Chapter Three: Institutional Oversight

As we have just seen, there are some major flaws in the South African carbon market that translate into questionable projects being developed and potentially verified, while better projects are unable to find sufficient carbon finance. The question now becomes what capacity exists to oversee this market and filter out the dubious projects so they cannot impede some of the more progressive projects. To answer this question, this chapter will consider institutional capacity at all levels of government within South Africa as well as the international governance structures.

3.1. The Designated National Authority

As was mentioned in Chapter One, it is the role of the DNA to set up sustainable development criteria for the host country and then judge projects on this basis. The DNA can also comment on methodologies and baseline scenarios, but that responsibility is largely left to the Designated Operation Entity (see section 3.2 below for that discussion.) In South Africa there appears to be three main challenges to the DNA's ability to play its oversight role as laid out in the Marrakech Accord. These include its compromised placement within the Department of Minerals and Energy, its limited resources, and its broadly defined sustainable development characteristics.

One of the first real struggles around the CDM in South Africa was over the decision about which department the DNA should be located in. Environmental groups, led by the SACAN, wanted the DNA either in the Department of Environmental Affairs and Tourism (DEAT) or the Department of Trade and Industry (DTI). Yet it was the Department of Minerals and Energy (DME) who were able to convince cabinet that since

most CDM projects are energy related they should be in the place where there is the most energy expertise. As to the alternatives, the DNA claims that DEAT didn't want them in their department; "they were scared of this; they said 'it's going to be huge.'"¹²⁶

Nonetheless many activists, such as Richard Worthington of SACAN, continue to believe that the DME's role of promoting CDM projects has left the DNA in an ultimately compromised position in its attempts to vigorously adjudicate the same projects.¹²⁷

One unfortunate consequences of the controversy over where to house the DNA was that it was not until December 2004 that the office eventually got up and running. Even when it did, the DNA was solely one person: Luwazikazi Tyani. When interviewed, Ms. Tyani admitted to being a bit overwhelmed during the first six months on the job as it was very difficult to maintain the strict turn-around times (usually thirty days) expected of validators in the CDM project cycle. Though this human capacity problem seems to be getting addressed by the recent arrival of some admin staff to the DNA, they still lack the resources to really engage the public on potential projects. The only mechanism the DNA has for this task is their website where citizens can post comments on projects within a thirty day time period. For the millions of South Africans without internet access there is no alternative for them to participate in the "public" consultation. Still worse, the DNA does not have a budget to place notices about public comment periods in local media around affected communities, thereby restricting the opportunities even citizens with internet access have to the process. In light of these systemic barriers it should not be seen as surprising that the DNA has yet to receive a single public comment on any of the projects posted to its website.

¹²⁶ Luwazikazi Tyani, personal interview 28 June 2005

¹²⁷ Worthington, *supra* note 93

Perhaps the greatest obstacle preventing a more progressive oversight role for the DNA is their apparent willingness to ignore their own sustainable development indicators. Much like the departmental location of the DNA, there was a bit of a struggle over what indicators the DNA would use for sustainable development, especially with the SSN Matrix being invented in their own backyard. In a somewhat brilliant political move, the DNA adopted overly broad criteria that it claims it will “evaluate” CDM projects on the basis of, yet also pledges to “be informed by consideration” of much more specific project indicators inline with the SSN Matrix.¹²⁸ In practice this means that legal recourse options against the DNA for approving any projects is somewhat limited as the social and economic criteria they have pledge to follow are nothing more than “Does the project contribute to national economic/social development?”¹²⁹ The intentional vagueness of these questions means it is practically impossible to prove that the DNA erred in judging a project to be in compliance as this is entirely a subjective decision. They are under no obligation to follow the actual project indicators such as impact on local skills development, FDI, existing economic activity in the area, employment levels, community social structures, etc.

Yet even with this legal loophole where the DNA has broad discretion to judge CDM projects almost anyway it likes, Luwazikazi Tyani admitted “I can foresee so many of these projects that are not going to meet SD criteria.”¹³⁰ Though she felt unable to elaborate on which projects these were and what stage of validation they were in, Tyani assured me that “these are not necessarily bad projects; they maybe good on one area, just

¹²⁸ DNA. “South Africa’s Designated National Authority” (Pretoria: Department of Minerals and Energy, 2005) at 5

¹²⁹ *Ibid.* at 3

¹³⁰ Tyani, *supra* note 126

not meet the others.”¹³¹ The most troubling aspect about this situation was the ways Tyani proposed to deal with it. One option she proposed was to expand the indicators so more projects would qualify. Just how much more expanded “Does the project contribute to national economic development?” could get was unclear. The other option proposed was to allow projects to go through no matter how they scored on the indicators as long as “they do something good with the carbon credits” such as environmental or social investments.¹³² This may seem like an adequate compromise until one recalls the financial additionality requirement; if a project developer can afford to use the carbon credits to satisfy sustainable development indicators than they are not using that money to make the project economically viable, and economically viable projects absent carbon finance are not additional. When confronted with this reality, Tyani admitted that she had not considered this maybe it was best then just to expand the sustainable development criteria. Strangely enough a third potential option of rejecting projects that failed to meet the criteria demanded of them was never mentioned in our discussion.

3.2. The Department of Minerals and Energy

Though the DME has already been discussed as potentially undermining efforts to thoroughly adjudicate the CDM projects it is trying to promote, there are other ways that Pretoria and this department specifically influence the carbon market and efforts to prevent climate change in South Africa. The first of these is through the government’s *White Paper on Renewable Energy* that was released in 2003. The White Paper includes a target of 4% of total generation from renewables by 2013, which the government never

¹³¹ Tyani, *supra* note 126

¹³² *Ibid.*

fails to make reference to on the international stage.¹³³ With such a progressive policy in place, there should be a plethora of opportunities and reasons for the government to support small-scale renewable projects that might not be able to compete against the ‘low-hanging fruit’ in the global carbon market. Yet this is simply not the case. For starters, the 4% target is *cumulative*, meaning that it will be satisfied if the annual percentage of electricity coming from renewables every year adds up to 4% by 2013. Therefore if new renewable capacity goes online next year totally just 0.5% of the market and no other new supply goes online, this target will be satisfied. Needless to say, this point usually does not make it into the government’s presentations to the international community. What is more troubling is Richard Worthington’s assertion that this target was intentionally set so low due to the influence of the World Bank and donor countries such as Denmark and the Netherlands who convinced the government that this was as much CDM finance as they could be assured of.¹³⁴ This played well into Pretoria’s budgetary preference not to spend any money on meeting the White Paper target. According to Kevin Nessip, Chief Director for DME’s Energy Planning Unit, “Green power is not a funding priority. From a fiscal point of view priorities are welfare, healthcare, education, job creation....we’re low down on the pecking order.”¹³⁵ Thus Pretoria has neither the budget nor the strong desire to be of much assistance to small-scale renewable energy producers. After all, Nessip argues, “energy should be self-sustaining.”¹³⁶

¹³³ This target was first promoted by the South African government at the Bonn Renewables Conference in 2004 and then again a year later at the Seminar of Government Experts at SB-22 in Bonn in May 2005.

¹³⁴ Worthington, *supra note 93*

¹³⁵ Kevin Nessip personal interview 28 June 2005

¹³⁶ *Ibid.* (Note: despite Nessip’s assertion, Pretoria hands over enormous subsidies to Eskom every year, for their nuclear program especially.)

While Pretoria seems content to leave renewable energy (RE) producers out in the cold, the national electricity company Eskom has taken a much more proactive stance in trying to minimize their role in the market. With complete control of the national power grid, Eskom is able to use this monopolistic power discriminately to limit access for certain producers and/or to certain customers. This can quickly make RE economically unfeasible, especially when compared with Eskom's preference for cheap coal and subsidized nuclear power. In acknowledging this practice, Nessip admitted he was "disappointed" in Eskom and is trying to ensure non-discriminatory grid access.¹³⁷ However, a better place to start might be limiting the access Eskom has to the DME. The White Paper on Renewable Energy was co-written by Eskom employees seconded to the DME.¹³⁸ Similarly, Eskom has representatives in the official South African government delegation to the Conference of the Parties to the United Nations Framework Convention on Climate Change, even though Eskom is the country's largest GHG emitter.

If the DME's reluctance to spend much money on renewables or challenge Eskom's overwhelming political influence did not already pose enough of a challenge to renewable energy in South Africa, the perverse incentive of the CDM to progressive energy policy might be the final nail in the coffin. The logic of the CDM as a perverse incentive is that if the government imposes certain standards or statutes concerning renewable energy or energy efficiency this will compromise the additionality requirement since everyone will be forced to do what is legislated rather than argue they are doing it because of carbon finance. The EB/CDM has stated that it won't allow the CDM to become a perverse incentive, but South African government officials already admit it has

¹³⁷ Nessip, *supra* note 135

¹³⁸ Worthington, *supra* note 93

been. For example, Kevin Nessip revealed that in 2004 the government considered a proposal legislating solar water heaters for houses over a certain size but realized such an undertaken might require carbon finance and thus ‘additionality’ and therefore the government decided not to pursue the policy. Similar decisions were taken around a mandatory blend for methane in petroleum and increasing the amount of landfill gas that requires capture.¹³⁹ If the carbon market were actually supporting these types of projects, the government’s decision not to legislate in this area might not be so bad. Yet with the exception of landfill gas, the market has thus far proven unwilling to engage in these types of projects and therefore producers are denied both the carbon capital and legislative impetus to develop their industry.

3.3. Local and Provincial Governments

With Pretoria failing to provide much in the way of oversight of CDM projects or incentives for renewable energy, this task has been downloaded on the other levels of government who are unable and/or unwilling to accept it. Three years after the PCF signed the Emissions Reductions Purchase Agreement with Durban, Lindsey Strachan confessed “the province has only now come to grips with this project.”¹⁴⁰ Strachan also recognizes “a major flaw” in the province’s ability to process documentation and cites examples of waiting over six months to get documents back. It should be pointed out that provinces in South Africa are not nearly as powerful as they are in other federal systems as the country is heavily centralized so provincial governments are quite often given little responsibility and even less resources.

¹³⁹ Nessip, *supra* note 135

¹⁴⁰ Strachan, *supra* note 57

This of course means even more pressure is put on the municipalities to fill the voids left by the other levels of government. As one of the first African cities in the Cities for Climate Protection (CCP) program, Cape Town got a jump start on addressing this issue when it received an initial start-up budget of US\$60,000 to identify ways to reduce its emissions and develop energy alternatives/efficiencies. Having identified where the opportunities exist to reduce emissions, Cape Town is now beginning to allocate staff and a budget to addressing this problem. This is supplemented with a public education campaign around renewable energy and climate change through Cape Town's quarterly climate newsletter. These climate initiatives are additional to the CDM projects in Kuyasa and Bellville.

Yet even with all of these progressive initiatives around climate change, municipal officials are only too willing to admit their need for support from the national government to be really effective. Craig Haskins - the head of the CCP program - admits "the basic model is that cities lead and the national government follows. This is a pity really, as we'd love to have more leadership from the national government."¹⁴¹ Cape Town has shown itself capable of coming up with some creative ways to address climate change, but without the legislative and financial resources from Pretoria there is only so much of an impact they can make.

Much like Cape Town, Durban's experience with Pretoria underlines the lack of coordination and cooperation by different levels of government in South Africa around this issue. When asked about this relationship, Lindsay Strachan complains "there hasn't been a single phone call from Pretoria asking for the status of this project."¹⁴² When

¹⁴¹ Craig Haskins, personal interview. 7 July 2005.

¹⁴² Strachan, *supra* note 57

Strachan is forced to work with Pretoria he often finds himself turning to alternative sources to access the information he requires in a timely fashion. Yet Strachan stresses “the national government should be disseminating the information, not the Danish embassy.”¹⁴³ As a result of Pretoria’s inability to be of much assistance and the municipality’s limited resources, Strachan has basically become the “project champion” for the CDM in Durban, “there has to be much more institutional support, that’s why it’s gone on this long... We must stay away from “project champions.” That doesn’t work, the champion should be DME.”¹⁴⁴ Finally, in demanding a more active role by the public sector, Strachan also explicitly rejects the notion that the private sector is filling this void:

Take Mondi [South Africa’s largest pulp and paper company with two CDM projects in development], their own financial directors say, show me a profit in three years. They openly say this, three years! That’s the problem here, it shouldn’t be about profit...It won’t work if it’s not being driven by the public sector, they’re thinking triple bottom line, and the private sector is thinking single bottom line; this is a public issue, this is a global issue.”¹⁴⁵

Though the public sector may indeed be the only ones thinking about the triple bottom line, this has not yet resulted in many positive interventions in the South African carbon market by any level of government. This apparent incapacity appears ready to be replicated at the international level, where as we shall now see, we find more people in compromised situations than proactive ones.

3.4. International Structures

For a CDM project to be approved it must go through two stages – the DOE and EB – that are not connected to its national bureaucracy. These requirements, at least in theory,

¹⁴³ Strachan, *supra* note 57

¹⁴⁴ *Ibid.*

¹⁴⁵ *Ibid.*

help maintain proper checks and balances on the host country so even if the DNA approves of dubious projects that are not guaranteed CERs. What the theory does not take into account is human fallibility, or to be more precise, conflicts of interest. Such may be the case in both of the international verifiers associated with CDM projects in South Africa.

Beginning with the DOE, one potential conflict of interest arises with the transnational consulting firm KPMG who is both accredited to be a DOE and is intimately connected to Sasol's pipeline project. In Sasol's PIN they state that "KPMG has assisted Sasol develop the CDM aspect of the SNGCP (Sasol Natural Gas Conversion Pipeline) since 2000."¹⁴⁶ In email correspondence with Sasol to verify this statement, Gerrit Kornelius confirmed that KPMG have "assisted (and are assisting) in drawing up CDM project documentation."¹⁴⁷ Presumably there are rules in place preventing a DOE from verifying a project is had previous involvement with, although I was unable to uncover such considerations in a thorough reading of the Marrakech Accord governing the CDM's operation. However, in the authoritative legal text on the CDM; David Freestone and Charlotte Streck's *Legal Aspects of Implementing the Kyoto Protocol Mechanisms*, two program officers with the UNFCCC Secretariat in Bonn, Germany admitted "DOEs shall be neutral and not participate in the design of project activities and methodologies."¹⁴⁸ KPMG is clearly in violation of this requirement, which could compromise its neutrality in future project validations.

¹⁴⁶ Sasol *supra* note 84 at 1

¹⁴⁷ Kornelius *supra* note 92

¹⁴⁸ Maria Netto and KaiUwe Barani Schmidt, "CDM project Cycle and the Role of the UNFCCC Secretariat" in David Freestone and Charlotte Streck (eds.) Legal Aspects of Implementing the Kyoto Protocol Mechanisms (Oxford, Oxford University Press, 2005) at 180

The other oversight mechanism for CDM projects is the CDM Executive Board, which in the African example at least, raises just as many potential conflicts of interest as the KPMG example. The only African member of the EB/CDM is a South African by the name of Dr. John Kilani. In addition to his esteemed international experience, Kilani has an accomplished career in the South African mining industry. He is currently the Senior Manager of Sustainable Development for African Rainbow Minerals and prior to that held a senior management position at Anglovaal, which at the time was a subsidiary of Anglo American. Anglo American owns Mondi and Transalloy, both South African companies with CDM projects in development. Anglo was also listed as one of Sasol's major consumers of natural gas from their new pipeline.¹⁴⁹ Though it's doubtful a direct conflict of interest exists here as since Kilani is no longer employed by Anglo, this should at least raise some flags about the potential for corporate influence over this process. This contention is further supported by Kilani's active involvement in two South African lobby groups: as a trustee for the "Fossil Fuel Foundation" from 2000 to 2004 and a representative member of the Chamber of Mines of South Africa. As would be expected, Kilani's involvement in these organizations put him on the front lines of lobbying on behalf of some of the very companies he could shortly be asked to certify for CERs (i.e. Sasol, Anglo.) How Kilani plans to deal with these situations are key, but the undeniable fact is that the South African arbitrator of last resort for the CDM is a man with deep ties to one of the regulated industries. This provides little comfort for those worried about the problematic development of the South African carbon market.

¹⁴⁹ Geef *supra* note 88

4. Civilian Engagement in the Carbon Market

With domestic and international structures raising further concerns about the South African carbon market rather than alleviating them, we turn our attention now to the role played by social actors. As there is a multiplicity of social actors, there are numerous roles they play in this arena. In an attempt to accurately portray this, social actors will be divided into three main categories depending on their views on carbon trading and type of engagement in the carbon market. First we shall discuss the private sector developers; the “true believers” in the CDM whose central concern is reducing barriers to easy access of carbon finance. The second group are ENGO “reformers” who recognize more serious problems within the carbon market, though these can be solved through the right mix of policy reform and oversight. Finally, there is the international network that views carbon trading as inherently flawed and believe alternate solutions should be pursued. This group does not believe the problems inherent in carbon market can be fixed by marginal adjustments but instead require a complete rethinking of our approach to fighting climate change and north-south relations. Without further ado, let us now review each of these groups in more detail.

4.1. Project Developers

Among even the most ardent supporters of the CDM there is a sense that all is not well in the South African carbon market. The problem, according to people like project developer Johan Vanderberg of Cape Town-based ‘CDM Solutions’ is one of institutional capacity. For Vanderberg, it isn’t so much of the failure of the DNA to provide oversight of the CDM market in South Africa, but rather their inability to process projects quickly enough. “The biggest issue with the CDM is that it takes a long time;

people put a lot of their own money on the line and there are lots of obstacles to overcome. Coming to bank-ability [read: CER purchase agreement] means giving up a pound of flesh in transaction costs.”¹⁵⁰ Vanderberg estimates that it costs approximately R40,000 to get a project approved and a minimum of six months. This cost and time commitment are prohibitive to small-scale producers doing either energy efficiency or renewable energy. Even if project developers are able to finance the process and commit the time getting a project verified, there are still uncertainties around whether the project will be approved and how much they can sell the carbon credits for.

Though the government cannot set the spot market price of carbon to address this latter concern, project developers argue that they could increase the efficiency of the approval process, which will both reduce the time lag and the costs involved. “A fast track procedure is sorely needed,” Vanderberg argues. “There should be a prime face view that a CDM project is environmentally beneficial.”¹⁵¹ The suggestion is that since projects already reduce GHG emissions, the DNA’s sustainable development indicators are just unnecessary and inefficient bureaucratic red tape. The idea of requiring a Gold Standard or similarly applied benchmarks is “like saying to a guy with a heart transplant, if this doesn’t take away the wrinkles on your face you can’t get a new heart.”¹⁵²

At the root of much of the opposition to the costs and time involved in project verification is an unwavering faith in the free market not shared by other social actors in this field. Michael Goldblatt, a CDM consultant for the Palma Development Group, believes “the CDM is a more innocuous than people realize...the national government doesn’t have that much of role to play, just make sure they’re not an obstacle and let the

¹⁵⁰ Johan Vanderberg, personal interview, 13 July 2005

¹⁵¹ *Ibid.*

¹⁵² *Ibid.*

market develop.”¹⁵³ Presumably Goldblatt agrees with Vanderberg that rigorous oversight of the carbon market is such an obstacle to its proper development, though this argument is rooted as more in an ideological faith in the market than in practical examples of where fewer regulations have produced better projects.

In terms of advocacy, these ‘true believers’ engage in more closed door campaigns where they are able to leverage their very privileged access to politicians and bureaucrats to influence outcomes in their favour. The root of this access varies depending on the project developer. For persons like Gerrit Kornelius at Sasol it comes from the power of being one of the country’s largest corporations with deep political ties to the state. For small business developers, like Michael Goldblatt, it comes from a long history of engagement on the issue. In 2001, Goldblatt authored the *South African National Strategy Study on the CDM*, commissioned by the World Bank and Pretoria. Following its release, Goldblatt continued to serve as a consultant for the DNA and oversaw the consultation process around which department it should be located in.

Palpable results of the project developer’s market interventions can be seen in the future projects that are approved and policy changes undertaken. To listen to Luwazikazi Tyani at the DNA speak about broadening the sustainability criteria to approve of more projects, it appears the government is only too ready to cooperate.

4.2. Domestic ENGOS

For the vast majority of ENGOS in South Africa the problems associated with the carbon market run much deeper than what project developers would like to think, and thus

¹⁵³ Michael Goldblatt, personal interview, 24 June 2005

require much more creative and engaged solutions. The views of this broad community can be fairly accurately represented through just two organizations: South South North and the South Africa Climate Action Network. SSN, as has been previously mentioned, has been involved with the CDM longer and more intensely than probably any other ENGO in the world but certainly more than anyone else in South Africa. SACAN's involvement is somewhat more limited as they deal with all aspects of climate change, not just carbon trading. Having said that, SACAN has taken a number of strong positions around the CDM and since they are a network of sixteen ENGOs across South Africa it is fair to assume that many of these positions are widely held in the non-profit sector.

One of the first key differences between these ENGOs and the project developers is their comprehension and in some cases sympathy with the ideological critiques against carbon trading. In the July 2002 edition of "Climate Action News," SACAN's quarterly newsletter that is disseminated throughout South Africa – the headline of the front cover story on the CDM read "Can we justify selling Africa's atmosphere?" The fire line of this story was even more to the point on the ideological critique of carbon trading;

"The rich developed countries have emitted most of the greenhouse gases currently in the atmosphere and now the more enlightened of them are prepared to pay to further pollute our atmosphere, or more exactly, they will provide money so that they can continue their pollution while we decrease ours."¹⁵⁴

The concern that the CDM is maintaining an unequally access to the atmosphere between rich and poor countries was also recognized by Sheriene Rosenberg at SSN who in the context of certain dubious projects admitted, "you shouldn't be selling off your crown jewels so the North can keep polluting."¹⁵⁵

¹⁵⁴ SACAN "Can we justify selling Africa's atmosphere?" (*Climate Action News*: July 2002) 1

¹⁵⁵ Rosenberg *supra* note 102

While appreciating some of these theoretical critiques, ENGOs see the injustices of the CDM can be seen most clearly in some of its more controversial projects. From the moment Sasol announced its intent to have its pipeline recognized as a CDM project SACAN has been publicly denouncing it. In the November 2003 issue of *Climate Action News*, Richard Worthington made clear that “SACAN is totally opposed to Sasol claiming credits for the project under CDM.”¹⁵⁶ The concern for Worthington was that the project has been in the pipe-line for many years and was “motivated by improved efficiency with long-term cost-savings as well as dwindling coal reserves in the vicinity of the plant.”¹⁵⁷ To try to claim CDM credits for this is “clearly an opportunistic add-on” and should be rejected for a lack of additionality as well as the improved efficiencies that will entail a net loss of jobs, thus failing the sustainable development criteria.

The other project that is widely opposed by ENGOs in South Africa is not surprisingly Bisasar Road. For SSN, the cause of all the problems in Durban lies with the involvement of the Prototype Carbon Fund and the World Bank. The argument against the PCF is that it is governed solely by free market ideals, which are often in conflict with community benefits. In their words, the PCF is after “a cheap bang for their buck; they basically just get the low cost credits... [they] pillage the country and don’t contribute to their sustainable development.”¹⁵⁸ SACAN holds a similar suspicion around this project and devoted their March 2003 newsletter to a debate on it. This debate raised a number of critiques of the project from activists across South Africa including the PCF’s motives, the incentive for poor waste management, a lack of community consultation, and the lack of commitment on a specific closure date.

¹⁵⁶ Richard Worthington “Sasol CDM Project Questioned” *Climate Action News* (November, 2003) at 3

¹⁵⁷ *Ibid* at 3

¹⁵⁸ Rosenberg *supra* note 102

While these ENGOs have found plenty of problems with the CDM and seem to sympathize with the claim that free market economics contributes to this, they reject the idea that the two forces must be addressed simultaneously. Richard Worthington believes that rejecting Kyoto on the basis of its flawed market mechanism implies,

“we have to change the world economic system before tackling climate change. Sure, I’d love it if we had a more co-operative economic system in place, but we can’t wait for that before tackling climate change...[This] a poor strategy that plays into the hands of Bush.”¹⁵⁹

Thus a more reformist approach to the problem is adopted, rooted in the acceptance that “Whether we like it or not, there will be trade in certified emission reductions; the best we can do is influence how these are created.”¹⁶⁰

In practical terms, the attempts of ENGOs to influence this process is by shaming bad projects, supporting better ones, and advocating for strong reforms so there is more to support and less to shame. A number of references have already been made to how SACAN uses their newsletter to inform many activists on the ground about some of the problems with the CDM and shame projects that reflect this. As a network they are also able to use other means to get their message out, such as when Worthington emailed over forty social actors engaged in this issue about Peter Geef’s confession that Sasol’s project is not additional the morning after it was made. In terms of more active engagement around negative projects, SACAN has written to the PCF and DSW expressing their concerns over the Durban project and also conveyed their opposition to this and other projects in Pretoria.

Despite Worthington’s belief that the Kuyasa project is a poor financial model for a CDM project, SACAN has been a strong public supporter of it and continues to support

¹⁵⁹ Worthington *supra* note 93

¹⁶⁰ Worthington, *supra* note 154 at 4

the Gold Standard as a necessary reform model to maximize the benefits of carbon trading. This is also the position of SSN who for all intents and purposes is the intellectual force behind the Gold Standard. The strategy employed in supporting the Gold Standard is active on a number of levels: through a domestic campaign with the DNA, internationally through the Conferences of the Parties, and within the market itself where these projects are “incentivized” to be seen as appealing to purchasers of CERs.¹⁶¹

As to the success of the reformers’ efforts, the most obvious one to quantify is the fact that SSN has had a Gold Standard project certified and has another on its way. This has certainly raised the profile of an alternative model to the ‘low hanging fruit’ associated with the PCF and some of the other questionable projects. As to legislative reforms, the ENGOs appear to have failed in their campaign to have the DNA adopt the Gold Standard or other objective criteria that projects would have to meet to get their approval. In fact, most ENGOs do not appear aware of the project developers’ desires to loosen the weak criteria already in place and may get sideswiped in such a campaign. At the international level, efforts to get the G77 to adopt the Gold Standard have also thus far proved elusive as “rather than use it to further everyone’s collective interests, (the G77) has become a vehicle for them to keep tabs on each other.”¹⁶²

Despite some of these setbacks, ENGOs continue to engage heavily in trying to shape the South African carbon market and it is safe to assume for all its flaws it may have developed in even more troubling ways without their input.

¹⁶¹ Rosenberg, *supra* note 102

¹⁶² Worthington, *supra* note 93

4.3. The Climate Justice Activists

The birth of the global grassroots movement against carbon trading was a conference titled “Commodifying Carbon: Consequences and Strategies” in October 2004 in Durban. The conference was attended by nearly thirty energy and environmental activists, academics, and persons from affected communities. Every continent was represented at the meeting and the majority of the participants were from the Global South. Throughout the weekend-long meeting stories about the affects of CDM projects across the world were shared, activist bonds were formed, and strategies to combat the carbon market were discussed. Perhaps the most important outcome of the meeting was the creation of the “Durban Declaration.” Under the banner of “Climate Justice Now!” the meetings’ participants rejected the claim that “carbon trading will halt the climate crisis.”¹⁶³ Rather this crisis is caused by the mining and use of fossil fuels, something that carbon trading fails and in many ways solidifies, thus making it a “false solution which entrenches and magnifies social inequalities.” In its conclusion, the Declaration committed to

“seek real solutions [to the climate crisis] that are viable and truly sustainable and that do not sacrifice marginalized communities...[and] to help build a global grassroots movement for climate justice, mobilize communities around the world and pledge our solidarity with people opposing carbon trading on the ground.

Taking its name from the declaration and conference location, the *Durban Group for Climate Justice* (“Durban Group”) has indeed developed as a global grassroots movement, as pledged in the Declaration. In the days following the conference an internet listserv was established to allow the participants to disseminate information on carbon trading and climate change developments in a quick and inexpensive fashion as

¹⁶³ Durban Declaration on Climate Justice at 1 online: www.carbontradewatch.org/durban

well as coordinate events and campaigns. As more groups and individuals signed the Declaration so to did the listserv grow to include wider perspectives and more regions.

As to the strategic activities of the Durban Group, the first event they had a presence in following the meeting was the tenth Conference of the Parties (COP10) in Buenos Aires, Argentina in December, 2004. At COP10 a number of members of the Durban Group held a well-attended side event on the impacts of the CDM on local and indigenous communities in the Global South. The following month a larger number of members were able to attend the World Social Forum in Porto Alegre, Brazil, where members held well attended public discussions on carbon trading, met more privately with other ENGOs to discuss the issue and possible strategic alliances, and to plan their own campaigns for the following year. These activities came to include an open letter to Kofi Annan and the United Nation about their concerns over carbon trading and the CDM on 16 February 2005, the day the Kyoto Protocol came into force. With Tony Blair making climate change one of the central issues of the G8 meeting in Gleneagles, Scotland in July, members of the Durban Group released a publication critical of the G8 countries' climate change and carbon trading policies just prior to the meeting.¹⁶⁴

Perhaps the Durban Group's most high profile international activism to date was the Eleventh Conference of the Parties meeting in Montreal in late 2005. Making use of some strong local contacts, the Durban Group was able to run a 'Climate Justice Convergence Centre' just four blocks from the conference centre for the entire two weeks of its duration. The Convergence Centre was the only real space for activists away from the conference facilities and thus significant amounts of strategizing and networking went

¹⁶⁴ See: Carbon Trade Watch "Hoodwinked in the Hothouse: the G8, climate change, and free-market environmentalism" (Amsterdam, Transnational Institute, 2005) online: <www.carbontradewatch.org>

on there, in addition to a daily workshop and film series. Inside the COP itself, the Durban Group also held a number of press conferences highlighting such issues as the World Bank's detrimental role in climate change and the carbon market, as well as a solidarity event with the Costa Rican government for their moratorium on oil and gas exploration. Though the conference itself spent very little time on the CDM other than to adopt the Marrakech Accord as international law, carbon trading played a very prominent role in the many side events and workshops over the two weeks.¹⁶⁵

In terms of the presence of the Durban Group in South Africa, participants at the October 2004 conference have almost exclusively confined their strategic actions to the struggle around Bissar Road and have shown little awareness and less engagement with other CDM projects. The activities around Bissar Road include op-ed pieces in national media (a piece co-authored by Patrick Bond and Trusha Reddy in the *Mail & Guardian*) and the making of short film on the subject for the South African Broadcasting Corporation by local filmmaker Rehana Dada. Amsterdam-based Carbon Trade Watch and other organizations involved with the Durban Group also issued a public letter to the PCF articulating their concerns over the lack of consultations on the CDM project and its entrenching of environmental injustices in the community. Finally, Sajida Khan has continued her courageous court battle against the landfill, though it should be noted that this commenced long before the Durban Group was formed.

Though it seems premature to judge the impacts of the Durban Group less than 18 months after it has formed, it can be lauded for being the lone critic of carbon trading left in

¹⁶⁵ For more on the prominence of CDM consultancies and pro-trading delegates at COP11 please see: Graham Erion and Michael Dorsey, "Montreal Climate Conference 2005: Neoliberal Bird Flu Takes Over Climate Talks" *The Bullet* (Socialist Project: 2005) online: <http://www.socialistproject.ca/bullet/bullet009.html>

the international arena following COP9 in Marrakech, the last time major ENGOs discussed the subject. Moreover, as more signatories are added to the declaration it appears that their message is resonating with a lot of people frustrated by the status quo of continued growth of emissions in most Annex 1 countries. Yet for the most part this has yet to translate into successful local campaigns against carbon trading projects in Southern countries. South Africa is no exception to this and one could argue that with the exception of Bissasar Road project, signatories to the Durban declaration in South Africa have had less impact on their own carbon market than the more moderate ENGOs who are not signatories. How these climate justice activists can translate their strong critiques against CDM projects into on-the-ground successes for fence-line communities will be the next challenge for this emerging network.

Conclusion

This study set out to investigate the ways in which the carbon market has developed in South Africa and the influence of institutional and social actors therein. Reflecting on the outcome of this research, it appears that many of the troubling trends apparent in the global carbon market are being replicated in South Africa. These include dubious projects adversely impacting local communities, profit-oriented private sector developers neglecting additionality, and community-supported renewable energy projects – that were to be the centrepiece of the CDM – remaining unsustainable on carbon finance alone. At an institutional level, compromised and/or under-resourced civil servants are unable to address these contradictions. As for social actors, the more faith organizations have in the carbon market (and thus the more inline with the government’s objectives) the more influence they appear to have with these market forces. Social actors more critical of trading have begun to raise the profile of the issue in the international policy arena, yet the actual struggle against projects on the ground continues to be in isolation with no activist networking or widespread opposition to carbon trading in South Africa. This puts local communities at an even greater disadvantage when they wish to engage in this process as they are challenged by the elite-centred technical jargon and complex processes.

By all accounts this is a sobering indictment of the carbon market’s first inroads into an African country and its failure thus far to simultaneously accommodate the needs of local communities while preserving the global climate. In concluding this investigation I would like to humbly offer some suggestions on how we can greatly

improve this situation for South Africans and the rest of the planet. These will consider process and substance in South Africa, reforming Northern priorities, and post-2012.

Reforms in South Africa

The first suggestion I would offer for the carbon market in South Africa would be to change the process by which projects are developed and approved from one that is imposed on the local community to one where the community's needs are front and centre every step of the way. This could be done through a revised Gold Standard certification system that placed as much emphasis on the process by which the projects are developed as on the sustainability of their outcome. The Gold Standard is currently endorsed by international ENGOs such as Greenpeace and WWF as well as Canadian ENGOs such as the David Suzuki Foundation and the Sierra Club of Canada. Yet the previous analysis of the Bellville South landfill project shows that, as it currently functions, the Gold Standard cannot guarantee local benefits and support. Possible process-based Gold Standard reforms could include a duty to do structured in-person consultations in the community and show evidence of incorporating community feedback into the project design in order to be validated. This would represent an enormous improvement over the current internet based comment periods that are consultation in name only. A further process based suggestion would be to have the community appoint one of their representatives to the verification and monitoring process. There is little use in undertaking greater efforts to ensure the community's needs are incorporated into project designs if the monitoring and verification are left to Northern-based Designated

Operational Entities like DSV or KPMG who have little or no concern for the local communities.

While an improved Gold Standard could certainly help guide project-development in a better direction, a philosophical change is also required among project developers. The current system is one where most projects are designed and selected by outside organizations and consultancies (i.e. the World Bank, EcoSecurities) on the basis of the maximum return on investment for Northern investors. It should be little surprise that under this system, communities see these projects as imposed on them rather than something that they have ownership over. As we saw in Kuyasa, community ownership of these projects comes from going into the communities and assessing what their needs are and how the carbon market can meet them, rather than beginning from the starting point of the needs of Northern countries for cheap credits and then finding a Southern community to exploit. No matter how regulated the carbon market is, Southern communities may still suffer from it if project developers do not change their priorities to focus on uplifting such communities first and benefiting wealthy Northern countries second. Suffice it to say in the opinion of this author, certain organizations such as the World Bank's Prototype Carbon Fund have demonstrated a clear historical incapacity to think in such terms and thus their involvement in this market should be minimized to the greatest extent possible.

Northern Reforms

Changes to the Gold Standard and the mindset of project developers can do much to alter the supply of bad projects but such reforms will soon be moot if Northern countries

continue to demand them. The situation requires drastic action on two fronts. The first is to go back to the language of Article 17 of the Kyoto Protocol: “Any such [carbon] trading shall be *supplemental* to domestic actions for the purpose of meeting quantified emission limitation and reduction commitments under that Article.”¹⁶⁶ According to the Marrakesh Accord on the rules around flexibility mechanisms, which was recently codified in law when adopted at MOP1 in Montreal, supplemental to domestic action means that “domestic action shall thus constitute a significant element of the effort made by each Party included in Annex I...” Yet in 2000 the Dutch government made available a budget to buy 50 percent of its Kyoto target of a six percent reduction by 2012 as credits from the Joint Implementation and Clean Development Mechanism instruments. This target equals 100 million tons of carbon dioxide equivalent.¹⁶⁷ In 2005 the Canadian government released Project Green, a plan to meet their Kyoto targets, nearly half of which (115 MT of CO₂e) was allocated in a Climate Fund that could be used to purchase CDM/JI credits. While these governments seem content to exploit the somewhat ambiguous language of international law in this area, their citizens must start to do a better job holding them accountable for reaching their targets primarily through domestic actions and leaving CDM credits as truly supplemental. According to the Canadian Oxford Dictionary, supplemental means, “Something added to complete a thing, make up for a deficiency, or extend or strengthen the whole.” Setting a target of 80% reductions being met through domestic actions seems a lot more of a “significant effort” than a mere half and half split. This position could easily be adopted by a coalition of ENGOs, along

¹⁶⁶ Kyoto Protocol, *supra* note 13 at Article 17, emphasis added.

¹⁶⁷ PCF, *supra* note 40 at 9

with renewable energy producers and municipalities who stand to benefit from domestic emission reductions efforts.

The second focus for Northern countries is to make sure that any CERs they purchase between now and 2012 come from the best possible CDM projects and not the so-called low-hanging fruit. This can be achieved through the adoption of an “ethical purchasing policy” by the CDM/JI office in Canada and its equivalent in other countries. Such a policy would, as a first priority, focus on renewable energy projects that have clear environmental and developmental benefits for local communities. Projects that are certified under a revised Gold Standard (with process-based indicators) would be given top priority. Should there not be enough Gold Standard projects to meet 20% of Canada’s target by 2012, other projects could be considered with some caveats. Landfill gas capture projects in urban landfills that have not been closed are out. As are carbon sinks due to the increasingly shaky science around the carbon ledger between biological and fossil carbon. Finally, anything associated with the Prototype Carbon Fund should not be considered and Canada should withdrawal immediately as one of the PCF’s funders. This should not be seen as an exhaustive list but more an indication of the types of consideration Northern countries should be giving to their purchase of CERs.

Post-2012 Reforms

In devising the previous suggested reforms I took it as a given that the carbon market will remain integral to the functioning of the Kyoto Protocol until it expires in 2012 and thus the various solutions offered were intended to achieve a best-case scenario up until that point. However, climate change policy post-2012 has yet to be determined and I reject

the assumption that the carbon market must be the centre-piece of the next global climate change framework. Rather, if we are indeed serious about preventing catastrophic climate change, I submit that it is imperative that we look beyond market mechanisms.

The fundamental flaw of market mechanisms in delivering this world to a sustainable climate is nothing more than the market logic they are governed by. It has previously been suggested that carbon investors are more concerned about their return on investment than ensuring local and global sustainability. This explains why “low-hanging fruit” makes up such a large portion of the carbon credits issued to date and why problems of additionality continue to plague the market. One need not study the carbon market in South Africa to come to such conclusions. During an official Montreal 2005 side event sponsored by the International Emissions Trading Association and the World Bank's Prototype Carbon Fund, some of the most intelligent minds in carbon finance shared some frank assessments on the market. Jack Cogen, president of Natsource, currently the largest private sector buyer of carbon credits, made one of the more candid observations on the panel; “The carbon market doesn't care about sustainable development. All it cares about is the carbon price...the carbon market is not going to be able to put sustainable development and everything else into one price.”¹⁶⁸ During the same panel discussion, James Cameron, a London-based carbon trader with Climate Change Capital, admitted that additionality requirements force project developers into dishonest situations where “they have to tell their backers that their projects are going to make lots of money, but tell the UN that they wouldn't be financially viable [without carbon finance.]”¹⁶⁹

¹⁶⁸ Jack Cogen. Presentation to IETA side event, Montreal 2005 UN Conference [5 December 2005]

¹⁶⁹ James Cameron, Presentation to IETA side event, Montreal 2005 UN Conference [5 December 2005]

What I found most shocking about these statements is not their actual substance – three months of researching CDM projects in South Africa already taught me that the carbon market tends to ignore sustainability and additionality – it was the fact that when they were said no one else in the room seemed surprised at all. No one challenged these quotes or made any real attempt to defend the carbon market’s legitimacy in these areas. The sense I got from the room full of people in business suits (mostly white men) was that they accept that this is still a market and its job is to make money and if it does this than everyone will have done their job. Their job is not to guarantee community benefits. Their job is not to prevent catastrophic climate change. This might have been the job of other delegates at the UN Conference, but for the men in this room their focus was much simpler than that. Yet at the end of the day, it is not an understatement to suggest that these are in fact the people we are entrusting our future to, which becomes a very scary proposition when we actually listen to what they have to say about this responsibility.

Emissions trading has indeed effectively transferred the responsibility for sustainable development and the global climate over to the private sector. Now nearly a decade after the signing of the Kyoto Protocol there is ample evidence to suggest that this was a mistake. Further regulating the carbon market can soften the harsher consequences of this mistake, but this should not be seen as anything more than a Band-aid solution. To actually fix this planet, what is needed post-2012 is an entirely new approach. I remain quite hesitant to offer ideas of what that approach should be as I feel strongly that such solutions should come from the ground up in communities most urgently affected by climate change, rather than from a privileged academic living in the part of the world that has caused this problem. Accepting that I cannot change who I am however, I will

humbly refer to one such solution that is not market based. This is the idea of a Clean Development Fund, which was the original precursor to the CDM as proposed by the Brazilian delegation in Kyoto. A Clean Development Fund would be used to jump-start renewable energy projects in the Global South and help assist their decarbonisation track, much in the way that the CDM was once promised to do as well. The key difference however is that the Fund would not function as a free-market but rather be funded through a series of levies on Annex 1 countries who failed to reach annual reductions targets. Such a system would not be perfect and there would still be a need to ensure community benefits and oversight around issues like additionality; preference would still be given to projects that would not have happened absent funding. Accepting these challenges, such a system would still remain a vast improvement over the carbon market as its governing logic would be ensuring sustainability and emissions reductions as opposed to the opposite of making money.

As exciting as a scheme like the Clean Development Fund is, I do not wish to create the impression that climate change can be solved by international law alone. It cannot. Rather, it is a question of struggle: struggles against injustice, against oil companies, against co-opted politicians, against this crony carbon market, and struggles in our own lives to use less energy. To take it back to South Africa, this is where I draw inspiration from for such a struggle. The residents of Clare Estates took on the World Bank and through their tireless activism and recourse to the courts have thus far prevented their landfill from being granted a new lease on life under the guise of the CDM. The Sasolburg Air Quality Monitoring Committee and other activists in the South African Climate Action Network are struggling against one of the most powerful

companies in the country to prevent Sasol from getting dubious credits for a pipeline they admit is not additional. There is every reason to believe this is why Sasol has not yet submitted its official project documents and might not ever. The residents of Kuyasa have had an easier struggle in securing their community-based renewable energy project, but have played an equally important role in exposing the myth of the carbon market through their strong support of a project that is admittedly not sustainable on carbon finance alone. These communities are united by a desire for a better life, rooted in a cleaner environment. As these struggles are united and their voices amplified we may one day come to taste the sweet fruits of a new lease on the life of our climate, rather than the sour taste of the carbon market's low-hanging fruit.

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