

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

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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 (i.e. COP10)
DNA	Designated National Authority
DOE	Designated Operational Entity
DSW	Durban Solid Waste
EB	Executive Board (of the CDM)
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 (i.e. sulphur dioxide) in a single region (i.e. 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.¹ 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 CDM activity. At the start of the year, the CDM Executive Board (EB) had certified just one project. As of September 2005, there are twenty-one projects certified and another fifty-eight at the validation stage of the EB.² With the EB representing the final stage of accreditation, it is safe to assume there are literally

¹ The six greenhouse gases are: Carbon dioxide (CO₂), Methane (CH₄), Nitrous oxide (N₂O), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), Sulphur hexafluoride (SF₆)

² UNFCCC. "CDM: Project Activities" online: <http://cdm.unfccc.int/Projects/registered.html>

hundreds more CDM projects in development that still must have their sustainable development indicators and methodology/reductions claims certified by their host country's Designated National Authority (DNA) and Designated Operational Entity (DOE), respectively.

In spite of the CDM's status as quite possibly 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 attempt to 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 over a dozen projects in various stages of development, South Africa certainly has fewer projects than some other countries yet it still maintains a nice variety of methodologies and project developers. 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.

The methodology employed while undertaking this analysis is strongly influenced by Michael Buroway'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.³ Thus in the course of this research project eleven weeks were spent in South Africa uncovering primary source materials, conducting over two dozen interviews with participants in the carbon markets, and doing a number of site visits to actual 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 takes a more empirical look at 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. We conclude with some ideas for future strategic interventions in the South African carbon market for social activists.

Through all of this analysis, it will be shown that despite some good intentions, the South African carbon market appears to be developing in a direction that will deny any real benefits to local communities nor do much to further the struggle against the impending climate crisis.

³ 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 intellectual origins of carbon trading can be traced back to a small publication in 1968 titled, “Pollution, Property, and Prices” by Canadian economist John Dales. Like Garrett Hardin who penned his famous essay, “The Tragedy of the Common” that same year, Dale believed that natural resources in their unrestricted common property form would face tragic overexploitation by people’s self-interest. 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.⁴ 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.⁵ The more efficient firms would make the largest pollution reductions and sell their credits to less efficient firms, thereby guaranteeing a reduction of pollution at the lowest social cost.

⁴ John Dales Pollution, Property and Prices: An Essay in Policy-Making and Economics (Toronto: University of Toronto Press, 1968) 81

⁵ *Ibid*, 85

Though Dale's proposal took a backseat to the command and control approach to environmental policy during the 1970s, his idea would resurface in the following decades. Proponents of pollution trading – typically a triumvirate of industry groups, neoliberal ideologues, and “free-market environmentalists” – echoed Dales' logic about greater efficiency, and added claims of less administrative costs and greater incentives for innovation. After a series of proposals and pilot projects by the Environmental Protection Agency, the United State Congress amended the *Clean Air Act* in 1990 to create a national emissions-trading (ET) scheme in the pollutants that cause acid rain, namely sulphur dioxide. The amendment also allowed regions to set up their own schemes and in 1993 the Regional Clean Air Incentives Market was launched in the Los Angeles Basin. Up until 1997, the United States was the only country in the world with any significant pollution trading scheme. This of course would change following the Kyoto Protocol.

1.2. Carbon Trading and the Kyoto Protocol

When the Brazilian and American delegations presented their proposal for carbon trading mechanisms in the final days of the negotiations at the third Conference of the Parties in Kyoto, Japan they were initially met with hostility from most of the European delegation as well as a number of environmental non-government organizations (ENGOS).

Nonetheless, the carbon trading proposal was eventually adopted and appears in three separate articles of the final text of the Protocol. Article 17 of the Protocol establishes a system of “Emissions Trading” whereby Annex 1 countries (e.g. developed countries that have accepted binding emissions reductions targets) can trade emissions credits amongst themselves if they overshoot their targets. In practice emissions trading as conceived in

Kyoto is only applicable to two countries: Russia and the Ukraine. The collapse of the former Soviet economy around 1990 has meant that these countries will remain well under their reductions targets as that is the base year. However, unlike other forms of carbon trading, emissions trading has faced considerable political backlash. The unfavourable label “hot air” has been widely applied to this form of trading thus making it difficult for countries to use these credits to achieve their Kyoto targets. The second type of carbon trading is Joint Implementation – Article 4 – whereby Annex 1 countries can invest in other Annex 1 countries to help them reduce emissions and the investing country will get the reduction credits rather than the host country. Like emissions trading, joint implementation has thus far not played a significant role in the international carbon market. The global carbon market is thus transactions under Article 12, the Clean Development Mechanism. As was stated in the introduction, the CDM provides an opportunity for Annex 1 countries to receive emission reductions credits to use against their own targets by investing in project to reduce or sequester GHG emissions in non-Annex 1 countries (read: developing countries.)

One of the most controversial aspects of Article 12 is that it requires projects to show that “Reductions in emissions that are additional to any that would occur in the absence of the certified project activity.”⁶ This requirement has become known as “additionality” and tries to ensure there is a net emissions reduction. Another controversial aspect of the CDM is the requirement that projects must also help developing countries in “achieving sustainable development.”⁷ The sustainable development requirement represented a hard fought victory by many of the countries and

⁶ The Kyoto Protocol, Article 12, paragraph 5 (2)

⁷ *Ibid.* at Article 12, paragraph 2

ENGOs that were initially against the CDM. However victorious this battle was, it appears the war has been lost as subsequent COPs have allowed countries to set their own definition of sustainable development and judged whether a project meets these criteria, rather than adopt a universal definition that would better ensure the accountability of those persons overseeing project approval.

In order to judge the above criteria a number of domestic and international governance structures have been set up to oversee CDM projects. A good way to illustrate these structures is by going through the steps necessary to verify a CDM project. The first step is entirely optional whereby a project developer can submit a Project Identification Note (PIN) to the country's Designated National Authority (DNA.) The PIN tells the verifier what the project plans to do and usually has less detail than a formal Project Design Document (PDD.) The purpose of this stage is to allow a project developer to get a sense of how they will be viewed by the DNA and should this be positive they can ask for a letter of no objection. Whether or not a PIN is submitted, everyone must submit a PDD to the Designated Operational Entity (DOE.) Countries with a large number of CDM projects usually have their own DOE, but for smaller countries, such as South Africa, there will be a regional DOE. The purpose of the DOE is to ensure the validity of the project's methodology, that their claimed emissions reductions and baseline scenarios are accurate, and that the project is additional. All of this information must be laid out in the PDD. This is also the first time the public may comment on the project, assuming they have internet access. Following the approval of the DOE, the PDD then goes back to the DNA, who must sign off on everything, but most importantly whether the project meets their sustainable development criteria. There

is another opportunity for public comment at this stage, and unlike the DOE, the decisions of the DNA can also be appealed to the relevant minister. The final step for a project is the CDM Executive Board whereby they review the findings of the DOE and DNA and make a final decision whether to grant certified emissions reductions credits (CERs). There is also a thirty-day public comment period while the project is being validated.

1.3. 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 that much of the activity seems to be concentrating around large private sector players. For example, a number of consultancy firms such as Ecosecurities, Ecofys, and Norway's Det Norske Veritas have played key roles in much of the project development and validation thus far. Equally prominent in the carbon market has been the World Bank's Prototype Carbon Fund (PCF.) In partnership with six governments and seventeen companies and a budget of US\$52 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."⁸ As the single largest purchaser of CERs, the PCF has thirty-two projects under preparation, (including one in South Africa) with a total CER value potential of US\$165 million.⁹

A second noteworthy trend is that the market is heavily concentrated in medium income countries, notably India, Brazil, and Chile. Emerging countries in the carbon market are China and Mexico. By contrast poorer countries, especially in Africa, have

⁸ Prototype Carbon Fund. "PCF Annual Report" (Washington, DC: World Bank Group, 2004) 7

⁹ *Ibid* at 7

almost entirely been left behind. 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.”¹⁰ As of September 2005, Uganda and South Africa are the only two sub-Saharan countries where large-scale carbon transactions have been completed, although transactions are being prepared in Nigeria, Ghana, Sierra Leone, and Zambia. The PCF admits that “this concentration of CDM flows towards large middle-income countries is consistent with the current direction of Foreign Direct Investment.”¹¹

A third trend is the concentration of carbon capital around non-renewable energy methodologies. The destruction of hydrofluorocarbons (HFC23) – which were banned in OECD countries as part of the Montreal Protocol’s efforts to fight ozone depletion – are by far the dominant type of emission reduction projects in terms of volumes of credits generated. Even more astounding is that just two HFC23 projects make up 30% of the credits issued thus far.¹² The reason being is that HFC23 has 11,700 times the potency of CO₂ and since credits are in CO₂ equivalent (CO₂e) a relatively small capture of HFC23 can bring a huge windfall of credits. Projects capturing methane and nitrous oxide from animal waste rank second with 25% of the total credits issued, ahead of hydro, biomass energy and landfill gas capture (about 11% each). This leaves traditional energy efficiency and renewable energy projects, which were initially expected to represent the bulk of the CDM, to now account for less than 5% of the market. As we will see later in the paper, this represents a serious challenge to the CDM’s sustainable development criteria.

¹⁰ Prototype Carbon Fund. “Carbon Market Trends 2005” (Washington, DC: World Bank Group, 2005) 25

¹¹ *Ibid* at 5

¹² International Institute for Sustainable Development. “Realizing the Development Dividend: Making the CDM Work for Developing Countries” (Ottawa, ON: IISD) 26

1.4. 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 unjustified property regime it creates in the air,¹³ biologists note the dubious science around carbon sinks¹⁴, and progressive economists debunk myths of greater innovation and costs savings.¹⁵ Respecting all of these critiques, this author would like to focus on explaining just one approach to this problem: climate justice. The basic idea of climate justice is that the richest persons and countries have caused this problem through their profligate burning of fossil fuels and poorer countries and persons are most vulnerable to its effects. In the context of a study of climate change and a developed country, which also happens to have one of the highest rates of inequality in the world, this perspective is worthy of further elaboration.

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.¹⁶ 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.¹⁷ As to the effect of these emissions, a September 2005 study by the research group System for Research Analysis and Training revealed "Poor developing

¹³ See: Torres, Gerald "Seventh Annual Lloyd K. Garrison Lecture on Environmental Law Who Owns the Sky?" *19 Pace Env'tl. L. Rev.* 515 and Cole, Daniel H. "Clearing the air: four propositions about property rights and environmental protection" *10 Duke Environmental Law & Policy Forum*, 1 p103 (Fall 1999)

¹⁴ See: Cathleen Fogel "Biotic Carbon Sequestration and the Kyoto Protocol: the Construction of Global Knowledge by the Intergovernmental Panel on Climate Change" (forthcoming)

¹⁵ See: Ian Parry. "Fiscal Interactions and the Case for Carbon Taxes over Grandfathered Carbon Permits" (Washington, DC: Resources for the Future) October 2003

¹⁶ Tom Athanaisou. "The Science of Drawing the Line" Climate Equity Observer. Downloaded from http://ecoequity.org/ceo/ceo_6_2.htm

¹⁷ Heidi Bachram *et al* "A new form of colonialism: emissions trading" unpublished document. 2004.

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."¹⁸ The hardest hit region, according to the study will be Africa where extreme weather patterns, caused by climate change and leading to drought, will trigger deepening food shortages in Africa where 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."¹⁹

As serious as the threat of climate change is to Africa, there are other poor countries in Asia and Latin America whose development is already being impeded by climate change. In his address to the sixth Conference of the Parties (COP6) in The Hague in 2000, Sheik Mohammed Khan of Guyana told the delegates, "Our 750,000 population has not gone up in 30 years. We constantly have disasters, floods, and droughts; just coping with it uses up 30% of our national economy."²⁰ Contrast this with lobbyists' efforts at the same conference to convince Britain of taking more serious action on climate change by warning them that they could stand to lose 70% of their golf courses in the next 20 years from rising sea levels and one can grasp the notion of climate justice.²¹

Having established that climate justice is real and supported by plenty of empirical evidence, it is imperative that our approach to solving this problem addresses the fundamental inequalities that have caused it. It is through this lens that we can now study the development of the carbon market in South Africa.

¹⁸ Reuters News Service. "Climate change hurts Africa most, scientists say" (22 September 2005)
Downloaded from: <http://abcnews.go.com/US/print?id=1148885>

¹⁹ *Ibid.*

²⁰ Paul Brown. "Islands in peril plead for deal" *The Guardian* (24 November 2000.)

²¹ *Ibid.*

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 chosen are a fairly representative sample.

Beginning with the former, 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 (they have held back on the Bissasar 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.²²

²² Ingrid Salgado “Companies target millions from Kyoto” *Cape Times, Business Section* (20 July 2005)

In terms of those 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 almost their universal reliance on outside private/public 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 and the World Bank's Prototype Carbon Fund. 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."²³ This requirement 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. This leaves CBLA with helping its clients identify opportunities to reduce

²³ UNFCCC "Modalities and Procedures for the Clean Development Mechanism" (Marrakech, Morocco: 2003) at paragraph 44

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. 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.”²⁴ 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.²⁵ As an aside, the Dutch government’s aggressive use of official development aid (ODA) with SSN is 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 market.²⁶ It is safe to say that the global carbon market, and the South Africa carbon market 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

²⁴ South South North homepage: <<http://southsouthnorth.org/>>

²⁵ Geoff Stiles, CBLA personal interview 29 June 2005

²⁶ PCF, *supra* note 10 at 20-21

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 four 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 appropriate starting point for 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 CDM project to date and has easily garnered the most attention of international activists and media.²⁷

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

²⁷ 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

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.²⁸ 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.²⁹ 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 2010.³⁰ 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.

As relatively uncontroversial as the above summary of this project sounds – all ideological arguments aside – 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

²⁸ 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

²⁹ *Ibid.* at 4

³⁰ *Ibid.* at 26

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 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 at the time of racial facism should not be seen as coincidental.

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.³¹ 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

³¹ Reddy *supra* note 27 at 3

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.”³² Khan quickly channeled her angry 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 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.’³³ The rubbish from this site was of 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

³² Sajida Khan, personal interview 24 May 2005 (note: all subsequent quotes from Khan can be sourced to this interview)

³³ Reddy *supra* note 27 at 3

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.³⁴ 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.³⁵

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, head of DSW and the major force behind the CDM project, "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."³⁶ 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 ("absolutely codswallop!") 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?"

³⁴ Reddy *supra* note 27 at 3

³⁵ *Ibid.* at 5

³⁶ Lindsay Strachan. personal interview 13 June 2005. Note: unless otherwise stated all future quotations from Mr. Strachan are from this source.

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.³⁷ These figures should not be interpreted literally however as the scientific validity of Khan's own calculations has not been confirmed.

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." 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." Ironically, Strachan blames the resident's opposition to the transfer station – which they

³⁷ Reddy *supra* note 27 at 8

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.” 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.”

As convincing as Lindsey Strachan tries to be about a commitment to closure and that the CDM and continued operation of the landfill are not related, he cannot help but be contradicted by facts he is well aware of. 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.³⁸

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, one of Strachan’s engineers at DSW, a man who had worked there 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.”³⁹

³⁸ PCF *supra* note 28 at 8

³⁹ Anonymous DSW employee. Personal interview 13 June 2005.

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."⁴⁰ Whether a difference of 12.5% of production is "negligible" in a US\$15 million deal with the World Bank's PCF 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 can't help but suspect that he probably erred on the high side.

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 boarder 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.⁴¹ This intentional settlement of now nearly 1000 people next to the landfill creates obvious conflicts with the rest of Clare Estates

⁴⁰ Tom Robbins "Durban Signs SA's First Carbon Finance Deal" *Business Day* 13 November 2002

⁴¹ Lindsay Horton "Environmental Justice and the CDM in Durban" Undergraduate Honors thesis, (Dartmouth College, New Hampshire)109-110

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.”⁴²

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.)”⁴³ Moreover, in eliciting the support of the community for the CDM project, Lindsey 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 figured is believed to be fifty scholarships.⁴⁴ 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 Lindsey 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.”⁴⁵

⁴² *Ibid.*, at 99

⁴³ Raj Patel. Personal Interview. 18 May 2005

⁴⁴ *Ibid.*

⁴⁵ Khan *supra* note 32

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 the permitting the continued operation of the Bisasar Road Landfill. After three years of delays, the case was due to be heard this fall (2005) but Khan's cancer has rapidly deteriorated and the case will remain in the docket until she is declared fit enough to participate in the legal action. In the meantime, the Department of Water and Forestry at the provincial level has been delayed in rendering a decision on an appeal regarding the same manner, estimated to have cost the city R40,000 to fight.⁴⁶

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.⁴⁷ 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 Mariannhill 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 tonnes 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.

⁴⁶ Strachan *supra* note 36

⁴⁷ Khan, *supra* note 32

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 – it is little wonder that Sasol gets a city named after it. Sasol describes its business as “Chemicals, mining, and synthetic liquid fuel synthesis”⁴⁸ and owns two plants in South Africa; its headquarters in the previously eluded to Sasolburg (60 kilometres south of Johannesburg) and another plant in nearby Secunda (100 km west of Johannesburg) which has the dubious distinction of being the largest point source emitter on the African continent. 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 absent of 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.

⁴⁸ Sasol homepage: <www.sasol.co.za>

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."⁴⁹ This was a well-known fact at the time, since the drop of production at the mine from 70 million tonnes/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 sustainable mode of operation."⁵⁰ Therefore, the company devised two potential options forward; build a new mine in further outside of 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."⁵¹ 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.⁵² 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. Fortunately, this researcher was

⁴⁹ Sasol. "Project Identification Note: Sasol Natural Gas Conversion Project" Submitted to the DNA: 31 January 2005 at 4

⁵⁰ *Ibid.* at 5

⁵¹ *Ibid.* at 5

⁵² *Ibid.* at 5

able to find out the real story about Sasol through an uninvited and undetected appearance at 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 project finance, there was no mention of ERCs, just that the project's US\$1.2 billion sticker price has been "completely paid for." 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 that point an unidentified Canadian researcher asked Mr. Geef if Sasol was indeed pursuing carbon credits for their pipeline. Not realizing who this questioner was, Mr. Geef answered,

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.)⁵³

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."⁵⁴

⁵³ Peter Geef. Presentation to South Africa National Energy Association, Sandton, South Africa. 21 June 2005.

⁵⁴ *Ibid.*

Not wanting to entirely trust the unassuming musings of a mid-level manager unaware of the consequences of his actions,⁵⁵ Sasol's "Greenhouse Gas Abatement Officer" Gerrit Kornelius was contacted for further comment. 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.⁵⁶ 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 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."⁵⁷ 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 and just wished was 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."⁵⁸ On the face of it, it is very hard to disagree with this interpretation.

⁵⁵ Richard Worthington of SACAN also attended the meeting and sent out my summary of it to approximately sixty activists, researchers, and project developers across South Africa the next morning.

⁵⁶ Greg Fyfe. "Gas – The African Way" *Global Energy Review* June, 2004. 46

⁵⁷ Gerrit Kornelius. Private correspondence. 22 July 2005

⁵⁸ Richard Worthington. Personal interview. 20 June 2005 (Note: unless otherwise noted all future citations from Mr. Worthington arose out of this interview.)

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.

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.⁵⁹ Since BSWD is smaller than Bissasar 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.”⁶⁰

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

⁵⁹ SSN “Project Design Document: Belville South Landfill Gas Recovery and Use Project” Downloaded from: www.southsouthnorth.org

⁶⁰ Strachen *supra* note 36

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.⁶¹

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 BSDW 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 claims, at least to anyone who will listen, to be much more concerned about developing sustainable projects than other consultancies like EcoSecurities, or in the case of Durban, the PCF.⁶² 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."⁶³ 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.

⁶¹ 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>

⁶² 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)

⁶³ Deborah Roberts, personal interview 28 July 2005

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 BSWD 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 dramatic urban sprawl that has taken place over the past two decades.⁶⁴ 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."⁶⁵ Following reconstruction of local government in 1997, the Cape Town Municipal Corporation 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.

⁶⁴SSN *supra* note 61

⁶⁵ City of Cape Town. "*Cape Town Integrated Waste Management Plan*" at 5-1 downloaded from: www.capetown.gov.za (?)

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.”⁶⁶ 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 open will be capped soon and the portion for 2006 will be capped now.”⁶⁷ 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.

⁶⁶ Walter Loots. Personal interview. 14 July 2005

⁶⁷ Sheriene Rosenberg (SSN) personal interview 30 June 2005

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 – i.e. widespread “failure to demonstrate ‘additionality’ and deliver added environmental and social benefits”⁶⁸ – 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 some extra screens “necessary to deliver real contributions to sustainable development in host countries plus long term benefits to the climate.”⁶⁹

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

⁶⁸ BASE “*Gold Standard backgrounder*” Downloaded from: www.cdmgoldstandard.org at 1

⁶⁹ *Ibid* at 3

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.⁷⁰

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.”⁷¹ 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.”⁷² 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

⁷⁰ *Ibid.* at 6e

⁷¹ SSN *supra* note 61

⁷² Rosenberg *supra* note 67

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 was unable to confirm if there are any formal plans for how this carbon money is to be spent and does not even recall participating in serious discussions on the matter. Should SSN's proposal be adopted it is unclear how taking carbon finance out of the local community in Bellville would further economic development there.

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 this is 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.”⁷³ Yet for this to really be considered “ecologically sound” a number of important questions about waste management deserve 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 development strategies for waste reduction as a top sustainable development priority, a discussion completely absent in this CDM project.

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.”⁷⁴ For Loots, the “real solution to the problem is in sorting and treating waste.”⁷⁵ 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

⁷³ BASE *supra* note 61 at 1

⁷⁴ City of Cape Town *supra* note 65 at 6-25

⁷⁵ Loots, *supra* note 66

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.⁷⁶

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 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."⁷⁷ 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.⁷⁸

⁷⁶ *Ibid.*

⁷⁷ *Ibid.*

⁷⁸ Roberts, *supra* note 63

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 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 the first African and Gold Standard CDM project on the planet, the Kuyasa CDM was 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 suppressed demand for coal-fired electricity. In total, 2.85

tonnes of CO₂ per household per year are avoided as a result of the project. 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 2039 RDP homes throughout Kuyasa. At this time, the baseline study has been official certified by the EB, but phase two is still has numerous financial inputs outstanding. This is a point we shall return to shortly.

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 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 what ten households would participate in it, 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.”⁷⁹ 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.⁸⁰

⁷⁹ SSN *supra* note 67

⁸⁰ *Ibid.*

During a site visit in Kuyasa, this researcher 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 not uncommon 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 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."⁸¹ 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 no more than 20% depending on the spot market price of CERs when the developers sign a purchase agreement. 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

⁸¹ Muzelli (Kuyasa project beneficiary) personal interview 6 July 2005

sustainable.”⁸² 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.⁸³ 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 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.”⁸⁴

The question then becomes how this project can go forward into phase two under the present carbon market conditions. According to SSN’s own analysis, the upfront capital costs for phase two will be around R12 million with ongoing maintenance costs of R383,000 over the ten-year period. Of the remaining financial inputs, the analysis noted,

Based on conservative assumptions, the CER revenue will cover 15% of the upfront implementation costs of the project, and represents a revenue stream over an eight year period until 2012. Bridging finance in year zero is likely to be required for this amount as very few CER purchasers will pay upfront.⁸⁵

With only 15% of the budget coming from carbon finance, SSN is looking to residents to help cover some of the project costs, what they refer to as “ensuring ownership of these technologies.”⁸⁶ One of the ways this is being considered is through the use of pre-paid electricity meters that would simply deduct a payment amount over three to five years.

⁸² Malgas *supra* note 62

⁸³ Rosenberg, *supra* note 67

⁸⁴ Worthington *supra* note 58

⁸⁵ SSN “The Kuyasa Low-cost Housing Energy Upgrade Project” downloaded from: www.southsouthnorth.org at 3

⁸⁶ Rosenberg *supra* note 67

However, in discussions with Craig Haskins at the City of Cape Town he admitted, “this is an election year and thus not a viable option to discuss right now.”⁸⁷

With funding from residents temporarily out of the question (though one suspects not for long) another option project developers are looking at is the ‘offset’ market. The offset market exists entirely outside of the CDM as a vehicle by which private companies or individuals can purchase emissions reductions (hopefully independently certified, but rarely through the EB) to offset the continued emissions of GHG from their operations (a Corporate Social Responsibility-type initiative) or a purchase they are making (i.e. plane trips.) The upside to the offset market according to Sheriene Rosenberg at SSN is “its turning out to be one of the biggest contributors to sustainable development; people don’t want projects like Mondi (read: low-hanging fruit was dubious additionality.)” The downside to the offset market was not realized by Rosenberg when she admitted, “Just for the offset market, Kuyasa can be sold over and over again.” With no oversight capacity in the offset market there is nothing stopping projects like Kuyasa from recycling the same carbon credits in multiple deals. However, every time a deal is completed Kuyasa’s environmental benefits are compromised as equal amounts of CO₂ will be emitted into the air. Should this happen more than once there will be a net negative effect on climate change.

The final funding option for Kuyasa would be continued support from all three levels of government. As compared to the previous two options this seems most preferable. However it is difficult to rely on such political charity as it is dependent on a myriad of factors, especially the urgency of other priorities. Just to give one example of another priority, housing activist Peter van Hausen cites that there is currently a backlog

⁸⁷ Craig Haskins, personal interview 4 July 2005

of 260,000 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.⁸⁸ 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. That year 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 expect the City to spend much money on energy upgrades for people who already own their homes when millions of people don't.

Thus the residents of Kuyasa are left with the genuine problem of additionality. It cannot be denied that absent carbon finance the plan to provide 2089 homes with energy upgrades may not go ahead. All other funding sources are problematic. Thus although this is exactly the type of project that many people hoped the CDM could deliver, now that it exists the carbon market simply cannot support it. The basic problem is that the projects that are out there are driven first and foremost by economic considerations and thus are driving down the price of carbon. This can be seen in all of the other three case studies that have been reviewed: 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.

⁸⁸ 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.'"⁸⁹

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.⁹⁰

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.

⁸⁹ Luwazikazi Tyani, personal interview 28 June 2005 (all subsequent quotes from Mr. Tyani are from this source)

⁹⁰ Worthington, *supra* note 58

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 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. 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?”⁹¹ 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.” 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 not meet the others.” The most troubling aspect about this situation was the ways Tyani

⁹¹ DNA. “South Africa’s Designated National Authority” (Pretoria: Department of Minerals and Energy, 2005) at 3

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. 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. If that is the case, then the project is by its very nature not financially additional (i.e. they could have done it anyway without carbon finance.)

When confronted with this reality, Tyani admitted that she had not thought of that and maybe it was best then just to expand the 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

fails to make reference to on the international stage.⁹² 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.⁹³ 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.”⁹⁴ 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.”⁹⁵

⁹² 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.

⁹³ Worthington, *supra* note 58

⁹⁴ Kevin Nessip personal interview 28 June 2005

⁹⁵ *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. 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.⁹⁶ 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 has stated that it won't allow the CDM to become a perverse incentive, but South African government officials already admit it has been. For example, Kevin Nessip in revealed that in 2004 the government considered a proposal

⁹⁶ Worthington, *supra* note 58

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.⁹⁷ 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.”⁹⁸ 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.

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

⁹⁷ Nessip, *supra* note 94

⁹⁸ Strachan, *supra* note 36

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."⁹⁹ 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, Lindsey Strachan complains "there hasn't been a single phone call from Pretoria asking for the status of this project." When 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

⁹⁹ CH

embassy.” 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.” 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.”

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, 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, it has been widely known among actors in the South African carbon market that the transnational consulting firm KPMG is trying to become the DOE for the Southern African region. In countries with large numbers of CDM projects (i.e. India, Brazil) there will be multiple DOEs, some of which will specialize in certain methodologies. However, in Southern Africa where there are still relatively few projects (only a couple of Uganda and then the dozen or so in South Africa.) there can be a DOE certified for the entire region rather than the country. Thus far KPMG has been validated by the EB as a DOE for certain types of methodologies and as of September 2005 they seem to be in the process of certifying them for the Southern African region specifically. Assuming this comes to pass, it raises an interesting conflict of interest around the Sasol CDM project. As we can recall, the Sasol project has some misleading claims around additionality in its PDD that are directly contradicted by some of its own managers. It is precisely the job of the DOE to validate a project's baseline scenarios, meaning its additionality. Where this gets interesting is that 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."¹⁰⁰ 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."¹⁰¹ Therefore, it is looking like KPMG will be in a position to verify the very PDD that it was commissioned to write. Although it's certainly possible that "Chinese walls" or other ethical measures could be taken to minimize this conflict of interest, one may still question the likelihood of KPMG refusing to verify its own client.

¹⁰⁰ Sasol *supra* note 49 at 1

¹⁰¹ Kornelius *supra* note 57

Should Sasol be approved by its PDD author, it would be up to the CDM Executive Board to refuse them certification. The only African member of the EB 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.¹⁰² 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.

¹⁰² Geef *supra* note 47

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.”¹⁰³ 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.” The suggestion is that since projects already reduce GHG emissions, the DNA’s sustainable development indicators are an unnecessary expense and inefficient bureaucratic red tape. The idea of requiring a Gold Standard or internationally 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.”

At the root of much of the opposition to the costs and time involved in project verification is almost a neoliberal 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

¹⁰³ Johan Vanderberg, personal interview, 13 July 2005 (note: all subsequent quotations of Mr. Vanderberg are from this source)

market develop.”¹⁰⁴ 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

¹⁰⁴ 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.

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 byline 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."¹⁰⁵

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."¹⁰⁶

¹⁰⁵ SACAN "Can we justify selling Africa's atmosphere?" (*Climate Action News*: July 2002) 1

¹⁰⁶ Rosenberg *supra* note 67

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.”¹⁰⁷ 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.”¹⁰⁸ 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.”¹⁰⁹ 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.

¹⁰⁷ Richard Worthington “Sasol CDM Project Questioned” *Climate Action News* (November, 2003) 3

¹⁰⁸ *Ibid* at 3

¹⁰⁹ Rosenberg *supra* note 67

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.”¹¹⁰

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.”¹¹¹

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

¹¹⁰ Worthington *supra* note 58

¹¹¹ Worthington, *supra* note 107 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.¹¹²

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.”¹¹³

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.

¹¹² Rosenberg, *supra* note 67

¹¹³ Worthington, *supra* not 58

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, South Africa. 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.”¹¹⁴ 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 its signatories

“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

¹¹⁴ Durban Declaration on Climate Justice, 1

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.¹¹⁵ Finally, with COP11 upcoming in Montreal, where discussions on the post-2012 climate regime will commence, the Durban Group has been active in planning events and strategies to get its message on the radar screens of delegates and media representatives.

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 Bissasar Road and have shown little awareness and less engagement with

¹¹⁵ See: Carbon Trade Watch "Hoodwinked in the Hothouse: the G8, climate change, and free-market environmentalism" (Amsterdam, Transnational Institute, 2005) online: <www.carbontradewatch.org>

other CDM projects. The activities around Bisasar 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 only one year after it has formed, it can be lauded for being the lone critic of carbon trading left in 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 Bisasar 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.

Conclusion

This study set out to investigate the ways in which the carbon market has developed in South Africa and how social actors can influence this market. In answering this question, we began by setting out the context of global carbon market that includes some troubling trends in the way it has thus far developed, namely projects concentrating in medium income countries around “low hanging fruit.” Much of the global carbon market trends are replicated in the South African case studies that we reviewed: dubious projects adversely impacting local communities, profit-oriented private sector developers neglecting additionality, and a ‘model’ RE project financially unsustainable. At an institutional level, compromised and/or under-resourced civil servants only contribute to the “crony” nature of this market rather fundamentally address it.

In terms of the influence of social actors, as is often the case in socio-economic issues, the more faith people have in the carbon market (and thus the more inline with the government’s objectives) the more influence they appear to have with friendly verifiers. Social actors more critical of trading have begun to raise the profile of the issue in the international policy arena and, to a lesser extent, with domestic audiences. However the actual struggle against projects on the ground continues to be in isolation as there is 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 each time they have to learn the elite-centred technical jargon (i.e. additionality does not translate well into Zulu or Xhosa) and complex validation cycle.

Yet juxtaposed to all of the bleakness are some real opportunities for civil society to have a positive impact in this process and make some real gains in the struggle to

prevent catastrophic climate change. The root of such optimism is two-fold: first, there are already many progressive energy and environmental activists working in South Africa who are doing great work and having a positive impact on their communities. Secondly, history has shown that the legitimacy of this market is much more fragile than its supporters like to admit and thus the resistance of a handful of people can make a substantial impact.

One of the reasons that the carbon market has been able to develop the way it has is that the issue of climate change and carbon trading are treated rather quietly in South Africa. A perceived reason for this is often the inability of social activists to link their struggles with global warming and see how issues of resource extraction, access to clean energy, north-south relations, and corporate accountability are all deeply tied into this issue. Though these connections could certainly be strengthened, a better place one might start is recognizing the implicit efforts of certain elites to maintain the status quo and isolate the public from these issues. For example, why is it that the DNA has yet to receive any public comments on any of the projects it has approved? The Kuyasa project went through the entire validation cycle without a single comment at either the DNA, DOE, or EB. Surely energy and social activists might have something to say about SSN's musings over getting "ownership of these technologies" through further indebting participants with pre-paid electricity meters? South African housing activists have also been engaged for years on issues around design, including mandatory ceilings, and could easily contribute to a discussion of certain aspects of this project's additionality. Their silence on these issues has been taken as consent. It should be seen as the probable results of systemic efforts to disengage the public. Once we confront this reality the

potential of these people to contribute their vast knowledge and experiences to these debates becomes palpable.

When South Africans do make the connections between carbon trading and the issues they are campaigning on, the record has shown there are able to influence outcomes in their favour. Durban activists successfully linked the environmental injustice of the Bissasar Road landfill in their community to the injustice of Northern countries bribing Southern ones with carbon credits to allow them to maintain their disproportionate pollution levels. The efforts of just a few involved citizens created an international stir among activists and media, who began a deeper questioning of the legitimacy of the carbon market. Were there to be like-minded persons in Cape Town, Sasolburg, and other cities with CDM projects in South Africa it is easy to argue that the carbon market would look very different in this country. The time has now come to develop these linkages and recapture the climate debate. The stakes could not be higher, but those fighting for justice and community rights need not look any further than the Durban struggle for hope or inspiration.