

FOCUS

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Design & Layout

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Printing:

Ultra Litho

Focus is published by The

Helen Suzman Foundation,

Postnet Suite 130

Private Bag X2600

Houghton, 2041

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ISSN 1680-9822

The publication of *Focus* is made possible through generous funding provided by the Friedrich Naumann Foundation for Liberty

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This edition of Focus is dedicated to the broad topic of Sustainability, and is immediately concerned with COP 17 or, to give it its full title, the 17th Conference of the Parties to the United Nations Framework Convention on Climate Change, to be held in Durban in November and December of this year.



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The immediate challenge which the Conference faces is future global responses to climate change. In his address to the informal ministerial consultations on COP 17 – which we reprint here – President Zuma enunciated the principles which have, in the past, formed the basis of climate change negotiations, and which should serve as a guide to a credible response to the challenges of climate change. These include: multilateralism, environmental integrity, common but differentiated responsibility and respective capabilities, equity, and honouring of all international commitments and undertakings. As President Zuma notes, a central concern of COP 17 relates to the extension of the Kyoto Protocol, in operation since 2005, which has provided a framework for discussions and interventions around carbon emissions.

In his reflections on President Zuma’s address, Andy Smithen commends the President’s concern about climate change and stresses the importance of *equity* in the President’s address. He draws attention to the President’s allusions to a link between climate change and other environmental concerns, and emphasises that the focus cannot be on climate change in isolation. He warns that there exists an inherent danger of oversimplification in focusing on a single issue.

Tasneem Essop draws our attention to the important role which leaders and leadership will play in COP 17. She is forthright in her assertion that our leaders failed us in Copenhagen in 2009, and while there was some progress made in Cancun last year, she fears that there may now be a backward slide in negotiations. While the outcome of Copenhagen was the Copenhagen Accord, this agreement suffered a crisis of legitimacy and credibility even as it was crafted. Its failure to be adopted represents a failure of leadership. Her paper represents a clear call: not only do the Parties need to agree on a global goal for emission reductions, but this goal must be an ambitious one. A sense of urgency informs her reflections and her conclusion is forthright: Durban needs to secure the future for a comprehensive agreement, and it needs to lock in the progress that was made in Cancun.

Crispian Olver, discussing Rio + 20, brings to bear his considerable professional experience gained as Director-General in the Department of Environmental Affairs and Tourism. He reflects on the difficulties inherent in any attempt at true *global* governance, suggesting that the present system of environmental governance has not kept up with the rapid changes of globalisation. The challenge he poses is that the current model of economic growth is also inextricably linked to resource consumption, environmental impact and carbon emissions, and that we need to find new models which decouple these impacts from growth, and chart a more equitable and sustainable developmental path.

Johann Scholtz and Dawid de Villiers review the ‘carbon economy’ and carbon trading in South Africa. As they point out, there is a great deal of uncertainty and risk in the carbon market – given the unresolved future of the Kyoto Protocol. Notwithstanding this, they put forward an important case that the carbon market may be mature enough to survive even if the Parties to COP 17 are unable to agree on an extension.

Justin Smith, drawing on his experience in the corporate sector, suggests a business case for sustainability. He observes that market research internationally indicates that a growing number of consumers are interested in *where* the products they purchase come from and *how* they are produced – the case being that consumerist pressure does alter corporate strategy.

Nikisi Lesufi considers the hard choices we face in ‘greening’ the South African economy. He focuses particularly on mining and the impact it has – both on economic development and growth, and on the environment. His call for a ‘fact-based’ approach is important in a debate which can so easily spiral into the realm of rhetoric.

Melita Steele takes on the global climate denialist campaign. She suggests that climate change presents the greatest current threat to the planet but, by the same token, it provides an extraordinary opportunity to embark on a course of truly sustainable development. She calls for an *Energy [R]evolution*.

Anthony Leiman, while admitting that climate change is a fact of life, suggests that it is not at all clear how South African policy-makers should react to it. He suggests that, while the ‘green alternative’ of renewable energy is a prospect devoutly to be wished, the opportunity cost may be politically untenable, and he makes the barbed comment that the search for sustainability should begin with a realistic search for perspective.

Finally, Jacklyn Cock offers a radical critique of the sustainability discourse. For Cock, the entire sustainability discourse has been appropriated by neo-liberal capitalism. She brings to the debate an impassioned plea for a notion of *justice* to be introduced into the discourse around climate change and sustainability, and she makes a forthright point concerning the *economistic bias* which emphasises growth at the expense of equity and the environment.

We conclude with three reviews: Richard Steyn on Paul Gilding’s *The Great Disruption: how the climate crisis will transform the global economy*; Joubert Botha’s review of Stuart Jones’s and Robert Vivian’s *South African Economy and Policy 1990–2000: an economy in transition*; and Ewen McLay’s review of David Richards’ and Greg Mills’ *Victory Among People: lessons from countering insurgency and stabilising fragile states*.

Address by President Jacob Zuma to the Informal Ministerial Consultations on COP 17



Jacob Zuma is the President of the Republic of South Africa.

Honorable Ministers; Ladies and Gentlemen;

It is a great honour and pleasure for me to welcome you on the occasion of this informal Ministerial consultation on climate change here in the O.R. Tambo Building in Pretoria.

The fact that we are gathered here is an indication of the importance and urgency of the climate change challenge that is facing us all.

This meeting is particularly important as we prepare for the formal UN inter-sessional meeting in Panama next month. This meeting is a timely opportunity to provide leadership and political direction to our negotiators to address the more difficult political issues in Durban at the end of the year.

We have all agreed before that a global response is the only effective and sustainable answer to this global challenge.

We also agree that the impact of climate change is already evident globally in the increased frequency and intensity of extreme weather events, coastal erosion and flooding as a result of rising sea levels, increase of the occurrence of certain diseases, loss of biodiversity and economic impacts and an increase in the number of environmental refugees.

The conference in Durban presents us with an opportunity to shape the future global response to climate change. I have found the number of principles that have formed the basis of climate change negotiations over the years instructive to guide a credible response to this challenge.

Although Parties have different positions on the elements on which agreement might be possible in Durban, any outcome in Durban must remain true to these principles.

I therefore encourage you, as Ministers responsible for climate change, to apply these principles in your discussions and to ensure that the outcome in Durban is faithful to these principles.

These include the principles of multilateralism, environmental integrity, common but differentiated responsibility and respective capabilities, equity, and honouring of all international commitments and undertakings made in the climate change process.

The strengthening and preservation of the multilateral response to climate change is paramount. Climate change is a global problem that needs a global solution and the

concerns of all Parties must be heard and addressed.

Parties have always maintained that the multilateral rules-based system must prevail as without it there can be no guarantee that countries will do what they have committed to do and all the gains made over decades will be lost.

It is only through the preservation of the multilateral rules-based system that markets can be secured. Funding is essential to developing countries and without multilateral commitments to provide adequate and sustainable funding, developing countries would be even more seriously affected.

Furthermore, any outcome in Durban has to be adequate enough to respond to the principle of environmental integrity.

A less ambitious outcome that would not address the urgent needs of those seriously affected by climate change and that fall short of allowing future generations the opportunity to grow and to live in a secure environment in which to pursue their own destinies, would simply not be acceptable. More so since the Durban Conference is taking place on the African continent, which is particularly vulnerable to the impact of climate change. In this context the low level of ambition is a serious concern.

I call on the international community to honour the international commitments and undertakings made under the climate change process and not to shy away from these decisions.

There is a growing realisation among developed and developing countries alike that there is a gap between the current level of emission reduction targets and the levels required by science.

It is therefore my hope that our discussions here will produce creative ideas on how Parties can raise their levels of ambition in a manner that would take the process forward.

The principle of equity, currently expressed through the Convention principle of common but differentiated responsibilities and respective capabilities, is especially

pertinent for a fair and credible response. Climate change is the most pressing sustainable development challenge of our time. The principle of equity must be addressed in the context of sustainable development.

Similarly, an agreement that does not address the necessary means of implementation – finance, technology and capacity-building – will not be equitable. All Parties based on common but differentiated responsibility and respective capabilities, will have to do more to reach our agreed long-term global goal of limiting average temperature increase to below 2 degrees Celsius.

I call on the international community to honour the international commitments and undertakings made under the climate change process and not to shy away from these decisions.

All Parties need to provide leadership towards the future not only based on self interest, but also guided by the common good. While the time for negotiations before Durban is extremely limited, progress must be made on the operationalisation of the Cancun Agreements, including the establishment of the key mechanisms and institutional arrangements agreed to in Cancun, including the Green Climate Fund. Similarly, the commitment made in Bali must also now be addressed, as it was left unresolved in Cancun.

For an outcome in Durban a solution needs to be found that would preserve the balance between the continuation of the second commitment period of the Kyoto Protocol, the continuation of the work under the AWG-LCA as it relates to mitigation, adaptation and means of implementation and the operationalisation of the institutions created by the Cancun decisions.

As the COP President, I look to Parties for creative solutions that can preserve the balances and at the same time will adhere to the principles of the UNFCCC and the Kyoto Protocol in order to produce a credible outcome in Durban. It is my understanding that in some areas, such as the operationalisation of the institutional arrangements established in Cancun, Parties are not far from agreeing with each other.

As we consolidate progress already made in these areas, we must also apply our collective will to address the bigger outstanding political issues that cannot be postponed beyond Durban. Although a solution

for the mitigation question is critical, Honourable Ministers, you will need to balance this solution with a credible outcome on adaptation that avoids the current fragmented approach and deals with adaptation in a coherent and effective manner.

Adapting to climate change is a key priority for many developing countries, particularly small island developing states, least developed countries and Africa.

Ministers, you will agree that finance remains an issue of critical importance, not only for a comprehensive climate deal, but also to place the global community on a path that will allow us to build resilient societies.

In Cancun, a package that included a collective commitment by developed countries to provide new and additional Fast Start Financing through international institutions in the amount of 30 billion US dollars between 2010 and 2012, as well as setting a goal of mobilising jointly 100 billion US dollars by 2020, was agreed.

It has become equally important to seriously address the scaling up of the delivery of climate finance between 2013 and 2020, and initiate a formal process that will assess the sources and scale of long term finance and to ensure the capitalisation of the Green Climate Fund.

Moving forward is not merely an option in Durban, but essential. What is needed now is political guidance to steer the negotiators. We need to think creatively to accommodate each other and create the space to decide how to address problems for which possible solutions at present are perhaps not matured enough.

I would like to urge you, Honourable Ministers, to approach all ideas and options with an open mind. In this regard, I understand that various Parties have put forward options for a way forward. We are therefore not without answers. Many answers seem to be available and what is now essential is to find a middle that will lead us to a credible outcome.

In addition, we cannot avoid addressing the end of the first commitment period of the Kyoto Protocol in 2012. The international community will therefore be once again at a crossroads in Durban.

Any decision on the future of the Kyoto Protocol will inevitably be part of the broader question of the future and nature of the climate change regime.

I understand that in order to address this issue in Durban a wide variety of interests and positions will have to be balanced.

I wish to remind you that a meaningful balance will honour the principles of multilateralism, environmental integrity, equity, common but differentiated responsibility and respective capabilities, and honouring international commitments and undertaking – principles that have underpinned the process since the beginning.

Returning to practical matters, the challenge remains to reflect consensus in decision text.

I have been informed that negotiating texts in some areas are well advanced, but on many issues there is a lack of negotiating text.

Therefore, Honourable Ministers, I call on you to urge your negotiators to translate ideas and positions into text and to capture common understanding reached during the negotiations.

Without the availability of texts, our task in Durban will be so much more difficult, even on matters that should be within easy reach of agreement. We should respect the principle that this is a party driven process and that transparency and inclusivity are paramount.

As such we are accountable to the global citizenry. Ordinary people that suffer daily from the impact of climate change hold high expectations from their leaders.

They want leaders to be responsible and to find effective solutions to the threat that climate change presents to their livelihood, quality of life, dignity, and in many cases, their very survival.

We have a massive responsibility and working together we will have a successful session which will contribute to making the world a much better safe for all, especially the poor.

I thank you.

Reflections prompted by an address by President Jacob Zuma to the Informal Ministerial Consultations on COP 17

In his opening remarks, President Zuma confirms the importance and urgency of the climate change challenge. He follows this up very well in the subsequent paragraphs, stressing the need for a global approach to the problem and the importance of rising above self-interest. He sees creative thinking as integral to this process which is based on the “principles of multilateralism, environmental integrity, common but differentiated responsibility and respective capabilities, equity and honouring of all international commitments and undertakings made in the climate change process.”

The focus on climate change as such is appropriate. President Zuma’s address, however, does draw attention to a number of possibly less prominent environmental problems which exist and have been known to exist for many years. The principle of equity features in the address – not surprisingly drawing attention to problems associated with the implementation of commitments. There is an appeal to apply the principle of equity within the context of Sustainable Development. A question which may be prompted by this is whether or not thoughts and statements in the President’s address would have emerged if climate change had not attracted the attention that it has.

The consequences of climate change – extreme weather events, coastal erosion and flooding, etc – exacerbate a problem with which the world is faced in any event. Sustainable development, seen as being under threat by climate change, could, on reflection, be seen as an unachievable goal in the light of a number of other phenomena including rampant population growth. Historic attempts to limit population growth have had a number of consequences, some of them negative, including social problems and the widening of the economic gap between the developing and the developed world, with developing countries becoming more dependent on foreign investment and, in some cases, aid. In this situation developing countries become vulnerable to exploitation, possibly analogous to inequities that are supported by resistance to climate change commitments by the wealthier nations.

This is particularly true of Africa. Population growth forecasts for Africa remain high in relation to global trends, and youth dominate in numerical terms significantly. Africa possibly has one of the highest threats of political violence. Economically, Africa has vast mineral and agricultural development potential, making it attractive, despite – or perhaps because of – the prevailing demographic and political environment for investment that could rapidly become exploitation. That this investment will be from countries with very poor track records in terms of climate change and other



Andy Smithen

graduated as a civil engineer at the University of Natal in 1977 and joined the then Department of Agricultural Technical Services’s Division of Agricultural Engineering. In 1978 he became involved in soil erosion research and in 1981 obtained a Masters degree in agricultural engineering. In 1986 he joined Gencor’s Trans Natal Coal and progressed to the position of Manager: Environmental Management. In 1992, he was transferred to Gengold in the same capacity. In 1995 he joined SRK Consulting where he is currently a partner in Environmental Department, a position in which he has been exposed to many aspects of environmental and social impact assessment and management and sustainable development.

environmental issues is no longer a likelihood but a reality. The principle of equity sought by President Zuma may be very difficult – and progressively more difficult – to enforce in this situation, particularly as marginalized communities become more marginalized as a result of, amongst other things, climate change.

As the President correctly points out, a strategy that is not ambitious is doomed to failure.

While the thoughts expressed in the previous paragraphs suggest a negativity in terms of the COP 17 initiative, they should not detract from the sentiments expressed by the President in terms of the need to ensure that past initiatives become the building blocks for an implementable strategy. As the President correctly points out, a strategy that is not ambitious is doomed to failure. This is emphasized by reference to the gap between target emission levels and the levels required by science. Essentially, the question must be whether or not we can reduce levels to the extent that it will make a difference. This question is compounded by the increasing rate at which climate change will occur while it is being debated. Whether or not we have an adequate understanding of the levels required by science is, in itself, questionable. Despite these complications, it is important that the call for an ambitious programme is heeded.

In this respect, the President alludes to a link between climate change and other environmental concerns several times in his address. The focus cannot be on climate change in isolation. If it is argued – and it may well be argued – that we are fighting a losing battle against climate change, we cannot lose sight of the attention that still needs to be applied to environmental concerns in the broadest sense. These include those brought about or accelerated by climate change, leading to the required adaptation by communities.

There may be an analogy to the science of economics, and the laws of supply and demand, in this deliberation. Environmental degradation and the associated loss of resources is the subject of numerous research topics, conferences, policy formulations and political rhetoric. This is as it should be and represents attention to the supply side of the equation. A similar situation exists with respect to the demand side except that it probably does not appear to the same extent in political rhetoric. Political utterances suggesting curbing population growth are unlikely to produce the same results as the promise of benefits to the ever increasing population. In this respect, while political will to change things, enforce emission targets, or promote adaptation to change is essential, its impact is hindered by political objectives. Clearly, such objectives are influenced by the economic and strategic considerations of the countries involved. Avoidance of this situation is only possible through an awareness of what the President calls “the common good”. What is required is a realization at a global, national and even personal level that promotion of the common good is linked very strongly to the promotion of self-interest. This will require a change in strategic thinking in a number of countries and organizations.

Alternatively, acceptance of an authoritarian approach in a multilateral context may be beneficial, if not achievable, to implement a degree of demand side management. It may be impractical to propose this as a panacea, but this impracticality must be seen in the context of the dangers of oversimplification inherent in focusing on a single issue, even one as complex as climate change, at the expense of attention to the broader issue. The broader issue includes more tangible problems.

High Environmental and Political Stakes for COP 17



Tasneem Essop

is the Head of Climate Strategy and Advocacy for the World Wide Fund (WWF) for Nature's Global Climate and Energy Initiative, which includes the role of Head of Delegation at the United Nations Framework Convention on Climate Change (UNFCCC) sessions and at COP 17. She is also currently a Commissioner in the National Planning Commission set up by the President in 2010. She writes here in her personal capacity.

Leadership: this is what we need when delegates converge in Durban to attend the 17th Conference of the Parties (COP 17) to the United Nations Framework Convention on Climate Change (UNFCCC) session. Leaders failed us in Copenhagen. They made some progress in Cancun but, during this year, in the lead up to COP 17, we have witnessed a backward slide in negotiations. This trend is worrying, as COP 17 represents a critical point in the ongoing negotiations to reach a multilateral agreement on climate change.

Much is at stake. The first commitment period of the Kyoto Protocol ends in 2012 and COP 17 has to provide certainty about the future. Durban is thus a tipping point. We can either lay the foundation for a legally binding agreement in the future or we can end up in a deadlock. Indeed, the very future of securing a multilateral agreement on climate hangs in the balance.

The Road to Durban – how did we get to such a position?

So how did we get to this point? COP 15 in Copenhagen in 2009 was expected to deliver the 'big deal' on climate change. Massive international expectations were built up ahead of that session and world leaders and citizens were galvanized into believing that the 'big deal' would happen. But the talks failed in Copenhagen and world leaders did not live up to expectations. Analysts have come up with various reasons for this failure. Two major factors that certainly contributed were the global financial crisis as well as the domestic political situation in the United States. The only outcome that was achieved was a political agreement, brokered by some Heads of States and led by President Obama, called the Copenhagen Accord. This Accord suffered a legitimacy and credibility crisis even as it was being crafted. In the end it was not adopted, but only noted, in the early hours of the final plenary of COP 15.

The failure in Copenhagen not only dealt a severe blow to climate talks but to faith in the multilateral system as well. It would take great effort to get countries to rebuild trust. COP 16 in Cancun managed to achieve this in some ways. The Mexican Presidency knew that this was its responsibility and cautiously went about trying to lay the basis for trust and some level of an agreement to be delivered in Cancun. A step-wise approach to reaching a final agreement was developed and Cancun delivered what was called a "balanced package of agreements" that would lay a foundation for a comprehensive agreement in Durban.

And this is where South Africa's problems begin. The interesting aspect of the outcome in Cancun was that all the politically difficult decisions were passed on to COP 17 in Durban. The most challenging one would be deciding on the future of the Kyoto Protocol. Under a very different set of circumstances, South Africa could have played host to a ratification COP. But the current global economic and political situation has meant that South Africa's role as COP President could come down to trying to save the only existing legally binding agreement at this point: the Kyoto Protocol.

The fact that these countries do not want to be party to the Kyoto Protocol after 2012 is a major setback for dealing with the threat of climate change. It implies that they will not be taking on legally binding emission reduction targets.

Rich nations have an obligation in terms of the Convention to take leadership and cut their emissions deeper and faster than developing countries, because of the historical responsibility they bear. The way in which they currently do this is through the Kyoto Protocol, in terms of which they have legally binding emission reduction targets.

Why saving the Kyoto Protocol in Durban is important

COP 17 in Durban takes place a year before the 1st Commitment Period of the Kyoto Protocol ends in 2012: in effect this is the last opportunity for parties to reach agreements on a post-2012 climate regime. One of the critical decisions that this COP will have to take is whether or not there will be a 2nd Commitment Period of the Kyoto Protocol. Some key countries, like Japan, Russia and Canada, have already signaled their intention not to join a 2nd Commitment Period. These countries, together with the United States, which is not a signatory to the Protocol, represent a large proportion of the major emitting countries. Their demand is for a legally binding agreement that includes all major developing countries, like China, India, Brazil and South Africa, amongst others.

The fact that these countries do not want to be party to the Kyoto Protocol after 2012 is a major setback for dealing with the threat of climate change. It implies that they will not be taking on legally binding emission reduction targets. And while parties did reach agreement in Cancun on limiting global warming to at least 2° Celsius, it is uncertain how this will be achieved without ambitious, top-down, binding targets for developed countries. The United States and others favor a bottom-up, voluntary pledge and review system instead. But the scale of the problem of climate change implies that such a voluntary system will risk placing the world on a path of runaway dangerous climate change. The emission reduction pledges currently on the table will lead us to a 3°C - 4°C warmer world, with all of its disastrous implications.

The United States has always been clear that it would never ratify the Kyoto Protocol. But what countries need from it is some form of comparable commitment. The US has put forward an emission reduction pledge, but whether even this weak pledge is credible is yet to be seen. We have been witnessing a massive pushback against any climate and energy related actions by vested interests in the US. At this point, with the largest historical emitter in the world in a position where it can offer very little, including finance, it is no wonder that the climate talks have been difficult.

Add to this the fact that we are experiencing a global economic crisis: developed countries, especially the US and the EU, are feeling the impacts of this crisis sharply

– while, on the other hand, we find that some larger developing countries like China and India are experiencing increasing economic growth. Developed countries feel that they will be placing their economies in a weakened state if they take on ambitious emissions targets while some developing countries continue to grow, and continue to increase their emissions. The US has been particularly obsessed with what China should do. The fact is that climate talks have never really been about the climate. They have instead been driven by narrow, short-term, national economic interests – no matter what consequences this will have for the planet and its people.

A further challenge arising from the uncertain future of the Kyoto Protocol – hanging in the balance as it is – is the possible implications it has for the chances of reaching any agreements in Durban. The developing countries, represented by the G77+China bloc, have made it very clear that an agreement to a 2nd Commitment Period under the Kyoto Protocol is a pre-condition for any progress in the talks. Whether this is political rhetoric or a real condition remains to be seen.

... developing countries have correctly demanded that developed countries take historical responsibility by committing to legally binding emission reduction targets, as well as supporting developing country mitigation and adaptation actions

So what does a South African COP Presidency do in the face of such challenges? Cancun has given COP 17 a clear mandate to ensure that there is no gap between a first and second Commitment Period. It is up to South Africa to facilitate such an agreement. To achieve this, countries would need to move away from their existing inflexible positions and make compromises. This will require nimble political and diplomatic skill on the part of South Africa.

A good starting point would be the European Union. They have a key leadership role to play, since they are the only other powerful bloc that can help save the Kyoto Protocol. But they would need something in return for sticking their necks out. Will they be able to step up to the challenge and move without the US and other key developed countries? And will developing countries find a way to assist them to do so by also agreeing to a negotiated outcome that is legally binding for *all* parties at least by 2015?

What about the future?

Up to now, developing countries have correctly demanded that developed countries take historical responsibility by committing to legally binding emission reduction targets, as well as supporting developing country mitigation and adaptation actions. Developing countries, on the other hand, have agreed to implement nationally appropriate mitigation actions mainly on the condition that financial support will be forthcoming from developed countries, and that these actions will not be legally binding. This is an issue of fairness – rich nations have mainly been responsible for the climate change problem we face today.

But, as we move into the future, we must recognize the global geopolitical shifts taking place, as well as the fact that some major developing countries are already exceeding the emissions of certain developed countries. Should the concept of *future* responsibility also be an issue to consider? In this context, could we foresee a future in which developing countries commit to legally binding emission reduction

targets? The way the UNFCCC is set up now, distinguishing between Annex 1 parties (developed countries) and Non-Annex 1 parties, reflects the need for fairness and equity in dealing with who should lead in taking actions, based on the principles of common but differentiated responsibilities and respective capabilities.

The question we need to address is how long would such a clearly defined distinction remain? Should we consider that certain newly industrialised developing countries which are currently defined as Non-Annex 1 could be graduated into an Annex 1 category and could therefore be expected to take on some form of legally binding emission reduction target in the future? A case in point would be the OPEC countries. These countries are part of the G77+China bloc but can we by any stretch of the imagination consider them to be on par with poorer developing countries in that bloc? And yet they have a powerful voice in the G77+China bloc, more so than Least Developed Countries and Small Island States.

Major developing countries will not be prepared to take on legally binding commitments if their developed country counterparts do not take on their fair share of the burden. This logjam has to be broken ...

To be able to move into a future climate regime that truly reflects this changing world and truly reflects the Convention's principles of common but differentiated responsibilities and respective capabilities, we would need developed countries to act in good faith and *really* reduce their emissions to the levels required by science. And they are not doing this. Developed countries would also need to provide the financial support that they have committed to. This is the crux

of the problem. Major developing countries will not be prepared to take on legally binding commitments if their developed country counterparts do not take on their fair share of the burden. This logjam has to be broken if we want to see any progress towards a fair, ambitious and binding climate regime in the future, with all doing their fair share. And Durban should be able to lay the basis for this.

COP 17 in a longer-term perspective

It is becoming clear that parties are not ready to reach such a fair, ambitious and legally binding agreement in Durban. The political will at this point in time does not match what the science says is required. COP 17 should therefore be viewed within a longer timeline that could see some of these conditions changing. The period between 2013 and 2015 could be viewed as a "transitional" period: a period in which the space is created for negotiating a future legally binding agreement for all countries.

There are a number of important developments and events taking place during this "transitional" period that could create the momentum needed for a comprehensive agreement. The UNFCCC will see the tabling of the next important Intergovernmental Panel on Climate Change (IPCC) 5th Assessment report as well as the Report on a Review of 1.5°C. These reports will almost certainly present new evidence of the stark reality of the impacts of climate change. It is hoped that the findings in these reports will compel world leaders to wake up and act. Their citizens, who are already experiencing some of the devastating impacts of climate change, will not sit back quietly and accept that their leaders will do nothing.

Linked to this, a number of other key political and global events will also take place during that time: Rio+20 next year; elections in the US; European Parliamentary

elections; preparations for China's 13th 5 year plan, amongst others. A number of countries are already beginning to take actions domestically to lower the emissions intensity of their economies. Taken together with the possibility that the global economic crisis might also stabilize during this period, what we could find is a coming together of all the conditions that can build confidence and make the time ripe for leaders to find the political will to agree to a comprehensive multilateral climate agreement that is fair, ambitious and binding.

What should Durban deliver?

In this context, therefore, COP 17 in Durban should essentially deliver a secure "holding" position for the future. This might sound heretical in the context of the need for urgency, but this is the only pragmatic option to prevent the complete breakdown of multilateral negotiations on climate. What we need to aim for in Durban are two things: *to secure the future for a comprehensive agreement, and to lock in progress made in Cancun.*

This could be achieved through agreements on a balanced package of outcomes. Such a package should include: a lifeline for the Kyoto Protocol, and an agreement between developing countries and the US on a mandate to negotiate a legally binding agreement that will include them in the future. This will help with securing the future for an agreement. All parties also need to ensure that the agreements reached at COP 16 in Cancun are implemented and operationalised, especially the institutional decisions such as the establishment of the Green Climate Fund, the Adaptation Committee and the Technology Mechanism. Progress on reaching agreement on financing for reducing emissions from deforestation and degradation is possible. A robust system of accountability and transparency through a monitoring, reporting and verification (MRV) system is also needed.

To prevent dangerous climate change parties need to agree to reduce their emissions by 80% from 1990 levels by 2050, and to agree to peak their global emissions by 2015...

Most importantly, Durban has to deliver on securing long-term finance for climate action in developing countries. The '\$100 billion per annum until 2020' pledge by rich nations cannot remain just a pledge. In Durban we need to have a clear sense of where this money can come from. Agreement on some sources of funding is therefore critical. A number of interesting options are already available for consideration, as presented by the United Nation's Secretary General's Advisory Group on Finance. The recent G20 Finance Ministers meeting also made reference to sources of climate finance in its closing communiqué. Again this would require developed and developing countries to get out of their current trenches on the issue. Developing countries want this money to come predominantly from public sources and developed countries want this to come from private sources. Surely a middle ground is achievable? What we need is for the money to flow; ideological fixation on either side will not help the world's most vulnerable.

Finally, given the urgency of the need for action, we need parties to agree on a global goal for emission reductions – and this needs to be ambitious. To prevent dangerous climate change parties need to agree to reduce their emissions by 80% from 1990 levels by 2050, and to agree to peak their global emissions by 2015, allowing the space for developing countries to peak at a later point. Agreement on a global goal is also a mandate from Cancun for Durban.

Conclusion

None of what is being proposed is unachievable. Political will and a sense of urgency are what are needed. Political leaders need to remember that this COP takes place on the soil of Africa, the continent which, in terms of the science, will be the most vulnerable to climate impacts. They also need to be reminded that the impacts are already being felt. Frequent 'extreme events' have become daily news, and no single country will be exempt. Our fates are intertwined. We need to act in the interests of the global good and not narrow self-interest.

Our children and history will judge us. As things stand we can already be judged harshly. On our watch we have seen one of the worst global economic crises; we have failed to end poverty; we have been unable to deliver peace and security; the divide between rich and poor has increased; and we are now certainly failing to act to ensure the very survival of our planet and its people.

This is what is at stake in Durban.



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Rio + 20 – just another UN Summit, or can we really advance the environmental agenda?

I have long since come to believe that people never mean half of what they say, and that it is best to disregard their talk and judge only their actions.

Dorothy Day (1897 – 1980), The Long Loneliness, 1952

In the past 40 years the environment has moved from a special interest topic to an everyday discussion with daily tips on the radio on how to live 'green' and businesses clambering onto the green bandwagon. And yet the environment has deteriorated and continues to do so world wide.

The unique feature of human civilisation is that we can talk to each other about our situation, and develop mutually binding codes of conduct that place limits on our behaviour. We have done this successfully in areas such as disease control and economic regulation, somewhat less successfully in trade and human rights. Why can we not achieve equivalent cooperation on the environment, the destruction of which poses serious long term risks to human health and development?

Rio+20, the United Nations Conference on Sustainable Development, marks the 20th anniversary of the ground breaking Rio Earth Summit, and will review progress towards achieving its ambitious agreements. One of the key topics at the Summit will be the system of global environmental governance. This paper explores the evolution of the current environmental governance system, and the prospect for real progress on some of the issues.

Some history

The world first came together to discuss environmental problems in 1972, at the United Nations Conference on the Human Environment in Stockholm. The timing was not an accident; it was becoming clear that environmental problems cross national boundaries and that natural resources could have limits. Winds carrying the ingredients of acid rain brought destruction from industrialised Europe to the forests of Scandinavia. *Limits to Growth* had just been published and foretold our current world-wide resource limits with uncanny accuracy¹. A decade earlier, Rachel Carson had scared some and enraged others by pointing out in her book, *Silent Spring*, the damage that scientists and their products can do. Science is neutral, but its application is not – and humans seem good at finding highly destructive applications (and not so good at finding constructive applications). The Stockholm conference gave birth to the United Nations Environment Programme and a range of multilateral environmental agreements². These included conventions on trade in endangered species, wetlands, weather warfare, wildlife conservation and air pollution³.

In 1987 the Brundtland Report, *Our Common Future*, defined the concept of sustainable development that we still use today: “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”⁴. Convened by the United Nations to research how the deteriorating natural environment affected social and economic development, the Brundtland Commission introduced the concept of intergenerational equity. This concept states that we should leave behind a liveable world when we die. So, people need development without damage to the environment.

Rio established structures to govern sustainable development and illuminated as never before that the risks created by environmental degradation affect the poor as much as – if not more so than – the rich.

The next important global meeting about the environment was the United Nations Conference on Environment and Development, or ‘Earth Summit’, in Rio de Janeiro in 1992. It was unique in its size and participation – it attracted more heads of states than any other international conference before, and for the first time civil society took part in such an event in a significant way⁵.

This summit produced:

- **The Rio Declaration** – 27 principles that define the rights and responsibilities of nations as they pursue human development and well-being;
- **(Local) Agenda 21** – a blueprint for implementing sustainable development;
- **The UN Commission on Sustainable Development** – to monitor and promote implementation of the outcomes from the Summit;
- **Forest Principles** – a statement that acknowledges the importance of forests and contains principles to manage, conserve and develop them sustainably;
- Two multilateral environmental conventions on climate change⁶.

Rio established structures to govern sustainable development and illuminated as never before that the risks created by environmental degradation affect the poor as much as – if not more so than – the rich.

The WSSD

Ten years after Rio, South Africa hosted the United Nations Conference on Sustainable Development, also called the World Summit on Sustainable Development (WSSD), which reviewed progress on these commitments. As Director General of the then Department of Environmental Affairs and Tourism, I was the leading South African government official in charge of preparations for this summit. This gave me a unique insight into the summit’s negotiation processes and achievements.

At the WSSD, delegations from governments and major groups met in a United Nations sponsored event, while hundreds of side events and parallel events also took place. Some of these supported the United Nations process while others challenged it⁷. The WSSD produced two official outcomes:

- The Johannesburg Plan of Implementation;
- Type II partnerships.

Before the summit, official announcements claimed that the WSSD would not be “just another Rio” and that it would produce specific commitments, targets, and timetables. When the conference started, large parts of the plan of implementation

were still under discussion. These parts involved most of the contentious North-South issues, including trade, investment, financing, governance and aid. The plan of implementation was designed to bind all countries to specific targets, deadlines, and resource contributions so that they could achieve Agenda 21's sustainable development goals.

In hindsight the final Johannesburg Plan of Implementation did not advance significantly on Agenda 21, or on what had been discussed and agreed upon since Rio on other issues⁸. The most contested sections of the implementation plan were the ones that dealt with sustainable development in a global world, means of implementation, and governance. In the end these sections largely repeated existing agreements, with no substantial new concessions to conserving the environment or to meeting the needs of the poor⁹. NGOs such as Oxfam, the Worldwide Fund for Nature, Greenpeace and Friends of the Earth saw the plan of implementation as a lame duck. In their view, the plan of implementation merely re-iterated or, in some cases, watered down existing commitments¹⁰.

On the other hand, the World Business Council for Sustainable Development insisted that the plan of implementation upheld Agenda 21. For them, the absence of new and specific commitments was not a problem, and they approved of the growing realisation that business is an indispensable part of the solution to the problems of the world¹¹.

At the WSSD the parties clearly deepened their understanding and commitment to alleviating poverty and protecting the environment. Some observers feel that this was an advance over the Rio summit¹². United Nations organisers were officially upbeat about the WSSD but, in private, they felt that Johannesburg produced only half of what had been achieved in Rio¹³.

Type II partnerships

Type II partnerships stand in contrast to global conventions that set legally binding norms and obligations for nation states¹⁴. This type of partnership came into being ahead of the WSSD, with US \$235 million committed to such voluntary, self-enforced agreements between governments, business, and civil society¹⁵. The emphasis on such partnerships at the WSSD showed that participants recognised that governments alone cannot deliver sustainable development. They were also a result of frustration with the slow pace of implementation of many parts of Agenda 21¹⁶.

Apart from a few notable successes, many of these partnerships did not last long; they could not replace governments in creating enabling environments for sustainable development programmes and projects¹⁷. In fact, the Type II partnerships seem to have been a bit of a smokescreen. Many of the listed partners were cash-strapped UN agencies waiting for money to fulfil their promised action or touting actions that they were already undertaking before the WSSD. The idea of multistakeholder partnerships for social and environmental improvement was a good one, but the WSSD did not produce the necessary level of commitment to take these to scale¹⁸.

The most contested sections of the implementation plan were the ones that dealt with sustainable development in a global world, means of implementation, and governance. In the end these sections largely repeated existing agreements, with no substantial new concessions to conserving the environment or to meeting the needs of the poor.

What were the constraints on WSSD?

Unfavourable international conditions played a large part in the outcomes of the WSSD. The September 11 attacks dominated the international political agenda and caused a global economic slowdown. The Bush administration was also not known for its environmental concerns, and had little time for the multi-lateral processes of the United Nations. In some respects, in the context of a much more insular and security focused global environment, the maintenance of existing positions and agreements was in itself an achievement.

At the same time, the World Trade Organisation dominated the international development agenda, with many countries determined to maintain the separation between the environment and trade agreements.

And people were just plain tired of summits¹⁹.

Inside the WSSD processes more problems lurked. The United States, Australia, Canada, New Zealand and Japan, operating as the “JUSCANZ” group, blocked or watered down many pro-development and environment proposals and received at least covert support from many of the G77 members. The EU could not muster the support to challenge them. The EU itself refused to address issues of globalisation, trade and investment, and equivocated on issues regarding international governance²⁰.

... the United States teamed up with Iran and Saudi Arabia to block renewable and clean energy targets.

At the same time, many developing countries came to the WSSD with no serious proposals to address their own problems with poverty, conservation and governance. They went to Johannesburg to see what the developed countries could offer them, and in doing so they lost much credibility²¹.

Another problem was the bloc system in the United Nations, in which countries with less power form blocs of interest groups. In theory, more decided countries in a bloc could persuade undecided countries on an issue, but in practice it worked the other way around. At the same time, rich, nonbloc countries could form alliances depending on the issue. In one case, the United States teamed up with Iran and Saudi Arabia to block renewable and clean energy targets²².

The United Nations has a built-in requirement for consensus at such conferences. As had happened at the International Conference on Financing for Development in March of the same year, bold and interesting proposals had to make way for the lowest common denominator: the least commitment to sustainable development and the environment²³.

Why can't we just save the world?

The process of establishing a common global approach to regulating and responding to cross-boundary environmental issues will inevitably involve some loss of national sovereignty to global and regional bodies. This will not be easy in a still highly polarised and unequal global economy, currently mired in concerns about debt levels and economic recession.

The Stockholm summit was the launch pad for global environmental governance – the attempt to regulate human behaviour above the nation state level and so improve

the state of the environment. However, global environmental governance has come up against some obstacles²⁴:

- The environment crosses national boundaries, but nation states decide what is good for their nations rather than for the world. They especially do not like ceding their authority to a supra-national institution. At the same time, globalisation is weakening nation states' direct control over their interests.
- The United Nations Environment programme does not have the same standing and resources as other UN agencies do. Its location in Nairobi was a progressive step in the 1970s, but it had to cope with the poor service and infrastructure available there at the time.
- The UN Commission on Sustainable Development has no mechanisms to implement internationally agreed goals and targets, and no financing element. Also, it does not have the status of a UN body that reports to the General Assembly and so it tends to be ignored.
- The multitudes of UN agencies, treaties and conventions that concern environmental problems all have their own objectives and mandates. This results in a fragmented approach to environmental governance with onerous monitoring and reporting requirements. Some countries find the burden too large and are reluctant to be part of the system.
- Many environmental outcomes depend on social and economic priorities and these three areas of policy remain fragmented. Environmental advocates have little or no control over the global financial system which, in its current form, does not encourage sustainable development.
- The World Bank is the main source of funding for environmental programmes, but it has no clear objective to promote sustainable development. Critics argue that the Bank's agenda is donor driven and so it reflects the priorities of the developed world.

The World Bank is the main source of funding for environmental programmes, but it has no clear objective to promote sustainable development. Critics argue that the Bank's agenda is donor driven and so it reflects the priorities of the developed world.

So, after 40 years of global environmental governance (GEG) we have invested much in talks and treaties, but little in the environment. In fact, the number and intensity of GEG negotiations during the last twenty years has created a never-ending negotiation system that can sometimes see negotiation as its primary function. In this system, environmental institutions have become negotiation support services²⁵.

The next step – can Rio+20 save the world?

Some argue that summits fail when they have no grand purpose and suggest that we need to find such a purpose for Rio+20²⁶. The UN has decided that the summit will have two themes: global environmental governance and the 'green' economy. This article has focused on the first issue.

The current system of global environmental governance came into being in steps over thirty years and is ill equipped to deal with the interconnected problems we face. Globalisation and its consequences have outpaced the capabilities of the institutions

and agreements set up to deal with environmental problems. Global environmental governance needs reform. This reform will have to be system wide, realistic and acceptable to many stakeholders. This is a tall order, as history has shown, but the worsened state of the environment compared to 40 years ago compels us to action.

A performance-based system will measure success by an improvement to the state of the environment after implementing an agreement rather than on the number of countries that have complied with the agreement.

A suggested reform to global environmental governance is to focus on ways to make the world-wide institutions that have to govern the global environment more coherent. People are already talking about ways to do this, but the discussions themselves are happening within institutions and not across institutions. A global summit that focuses on improving this coherence could drastically improve the impact and effectiveness of such institutions²⁷.

Opening global environmental governance to actors other than national governments may also bring better environmental governance. Local government, civil society and the private sector are key implementers of environmental programmes and so their involvement in policy decisions will result in policies that have a better chance of being implemented²⁸. The private sector is particularly good at crossing national boundaries to move products and services around the globe. In fact, industry already has a structure to enforce standards around the world – the International Standards Organisation.

One reform that could be especially useful is to base the new global environmental governance system on performance rather than on compliance. A performance-based system will measure success by an improvement to the state of the environment after implementing an agreement rather than on the number of countries that have complied with the agreement²⁹. Such a system should also change the culture of unaccountability for noncompliers that currently pervades global environmental governance.

Improving accountability

To make countries accountable to environmental agreements, we need better metrics and reporting of environmental performance. These should measure and report actual progress, rather than effort: Sisyphus put a lot of effort into his rock, but he never made progress. Countries will need the necessary resources to measure their progress and report on it, especially developing countries. Resources spent on reporting can be reduced if reporting requirements for existing and future environmental agreements could be coordinated. Tailoring reporting requirements to countries' capacity would further encourage them to actually produce the reports. A dearth of capacity is, as in so many other areas, a culprit when it comes to environmental performance. In many cases capacity is so lacking that countries simply cannot implement environmental agreements at all. Such countries will need help to build their capacities both inside and outside of government. In this way, they can create effective and enduring networks of accountability³⁰.

Accountability needs transparency. Third-party reviews and peer-reviews of the impact a country's implementation of an environmental agreement has will greatly improve the effectiveness of such agreements. Peer-review systems such as the African Peer Review Mechanism could have the same function. Environmental whistleblowers could also call national governments to account for failing to make

progress on measures to which they have agreed. The Internet is a useful tool for whistleblowers, as Wikileaks has shown³¹.

A system that holds parties to account should reward good behaviour as much as it punishes bad behaviour. Rewards for countries who keep to their commitments could include trade preference or first access to international credit or support³².

Conclusion

Let us return to the issue of values and human development. Until now, many people have assumed that human welfare depends on development and that development depends on economic growth. This assumption has migrated from the Western world to the emerging economic power houses of Brazil, Russia, China and India. However, economic growth does not necessarily lead to development or human well being.

Rather, traditional economic growth has concentrated wealth into the hands of few at the expense of many. South Africa's large increase in the number of poor people and small increase in the number of middle or upper class people is a good example of this.

The current model of economic growth is also inextricably tied to resource consumption, environmental impact and carbon emissions. We need to find new models that decouple these impacts from growth, and chart a more equitable and sustainable development path. Development, especially sustainable development, needs to consider which values should go together with economic growth to keep people's greed in check, and decouple environmental impact. Global environmental governance needs values that are less destructive than the ones that we are currently using. A summit that could agree on such values would be invaluable.

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The Carbon Economy and Carbon Trading in South Africa



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The predicted widespread and potentially severe impact of climate change (colloquially referred to as “global warming”) has led to a range of international initiatives to promote Greenhouse Gas (GHG) emission mitigation by developing a so called “carbon economy”.¹

In the carbon economy, so-called “carbon-income” is basically derived from the trade in Certified Emission Reduction credits, more generally referred to as “carbon credits”, which are yielded or produced by qualifying GHG mitigation projects.

The carbon economy derives its basis from the Kyoto Protocol. The Clean Development Mechanism (CDM), one of the Kyoto Protocol's three market-based mechanisms, was conceived as:

“a way to allow industrial countries greater flexibility in meeting their emissions targets, while at the same time transferring cleaner technologies to developing countries so they can build cleaner technologies into their own economic development programs”.²

The CDM presents developing countries with both significant opportunities as well as considerable challenges. This article provides a basic overview of carbon trading in the South African context.

The Kyoto protocol

The CDM was established under the Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC). The UNFCCC was produced at the 1992 United Nations Conference on Environment and Development in Rio de Janeiro (also known as the Earth Summit). The Earth Summit sought to address the issue of climate change and pursue the possibility of limiting worldwide GHG emissions.

The UNFCCC was opened for signature on 9 May 1992 and entered into force on 21 March 1994. The parties to the UNFCCC meet annually at the Conferences of the Parties (COP) in order to discuss progress and negotiate further action.

The Kyoto Protocol was adopted by COP 3 – held in December 1997 in Kyoto, Japan – and came into force on 16 February 2005 when the requisite number of countries acceded to it. South Africa ratified the UNFCCC in August 1997 and acceded to the Kyoto Protocol in March 2002.

The Kyoto Protocol is only binding on “industrialised” or “developed” states. These are states listed in Annex 1 to the Protocol and those deemed to have been the main contributors of GHG emissions during the industrialisation period. Notably, none of the so-called “BRICS” countries – Brazil, Russia, India, China and South Africa – are listed in Annex 1.

While countries are expected to employ mitigation activities, the Kyoto Protocol allows for flexibility in how countries meet their targets.

The Kyoto Protocol sets mandatory limits on the emissions of six GHGs by industrialised countries. While the targets vary from nation to nation, the aim is to reduce the combined emissions by 5% of the 1990 levels over the first commitment period, namely 2008 to 2012. The first commitment period will expire in 2012 and, as will be discussed below, it is hoped that COP 17 (which will take place in Durban, South Africa towards the end of 2011) will result in the parties signing up for a second commitment period to cut emissions beyond 2012.

The Enforcement Branch of the Kyoto protocol monitors countries’ compliance with the reduction targets. Should an Annex 1 country fail to meet its obligations the Enforcement Branch will declare that that country is in non-compliance, and require it to make up the difference between its emissions and its assigned amount during the second commitment period, plus an additional deduction of 30%. In addition, it will require the country to submit a compliance action plan and, importantly, suspend the eligibility of the country to make transfers under emissions trading until it is reinstated.

While countries are expected to employ mitigation activities, the Kyoto Protocol allows for flexibility in how countries meet their targets.

Each country has a prescribed number of “emission units” which make up the target emission. The Kyoto Protocol provides mechanisms for countries to acquire “carbon credits” through involvement in GHG reduction activities throughout the world. The credits go towards reducing their overall emissions.

Market mechanisms designed to achieve emission reduction

There are three mechanisms that assist states in meeting their emission reduction targets:

- International Emissions Trading;
- Joint Implementation;
- CDM.

These systems are regarded as effective because, as has been observed in a UNFCCC publication, the “*atmosphere is equally damaged by GHG emissions wherever they occur*”

and equally helped by emission cuts wherever they are made”.³ The mechanisms also create an economically viable way for countries to reduce their GHG emissions.

The carbon market is regulated by the Marrakesh Accords, developed at COP 7 in 2001.

CDM projects provide the opportunity for developed countries to implement project activities that reduce emissions in non-developed countries, in return for carbon credits.

The Marrakesh Accords provide that the emissions of countries must be monitored and precise records have to be kept of the trades. Registries are currently being formed and will act like banks, keeping a record of the country’s emission units. In addition, an international transaction log will be created.⁴ The Marrakesh Accords also established “operating procedures, eligibility criteria, roles and responsibilities of parties and role-players and definitions.”⁵

CDM

The CDM is particularly relevant for a developing country such as South Africa. It is a voluntary, project-based mechanism that was developed under Article 12 of the Kyoto Protocol with the dual purpose of reducing emissions and contributing to sustainable development in developing countries. CDM projects provide the opportunity for developed countries to implement project activities that reduce emissions in non-developed countries, in return for carbon credits.

The CDM is administered by the CDM Executive Board, which reports and is accountable to COP. The CDM Board appoints Designated Operational Entities (DOEs) to monitor and assess the key stages of the CDM project cycle.

The cost of creating GHG reduction projects is usually much lower in a developing country. For this reason, the CDM allows developed countries to fund GHG reduction projects in developing countries. The developed country will receive carbon credits for the reductions that result from the project. These credits can then be used by the developed country to meet its emission reduction targets. The developing country benefits through the capital as well as the environmentally friendly technology that allows their factories or electrical generating plants to operate more efficiently in the long term.

For a host country to be eligible for participation in the CDM it must have ratified the Kyoto Protocol and have designated a national authority to provide official host country approval of a project.

The designated national authority in South Africa is the Department of Minerals and Energy (DME).⁶ In practice, however, the Department of Environmental Affairs and Tourism is the lead department for implementing UNFCCC and dealing with climate change.

CDM Project Steps

The steps to a successful CDM Project involve a complex and highly regulated procedural process which is referred to as the Carbon Asset Management Cycle. The steps consist of a series of milestone requirements which have to be met to receive approval from the CDM Board. This approval is essential as only CDM Board

accredited carbon credits can be traded. The services of a DOE have to be secured in order to register and validate each step. The strict requirement from the UNFCCC is that any project must have a measurable and long-term ability to reduce emissions, and must promise reductions in addition to any that would otherwise occur.⁷

The Carbon Market and Emissions Trading

The carbon credit trading system is a market-driven system which offers a cost-efficient incentive for those in industry to initiate GHG emission reductions.

Generally, trading systems entail the issuing of carbon credits, usually by a government agency, to entities which emit pollutants. The credits or allowances which are issued are an indication of the levels of pollution which an entity is allowed to emit. In the case of carbon credits, these may then be sold to an excessive carbon or other pollution emitter – most likely a company in the developed world involved in heavy industry. In principle, where there is the need to buy the credits, due to excessive emissions, the price will escalate. In theory this sort of initiative should make it more cost effective for heavy emitters to engage in emissions reductions programs. As the aim of the trading system is to reduce emissions and pollution over time, the allowances may be lowered or the portion of the credits available in the market may be reduced, thus resulting in a net reduction in emissions each time a trade occurs.

As the aim of the trading system is to reduce emissions and pollution over time, the allowances may be lowered or the portion of the credits available in the market may be reduced, thus resulting in a net reduction in emissions each time a trade occurs.

Transfers and acquisitions of carbon credits are tracked and recorded through the registry systems under the Protocol, as well as by a national registry established by each Annex 1 Party.

Carbon Transactions

Carbon transactions are recorded in Emission Reductions Purchase Agreements. These transactions consist of one party paying another party in return for GHG emission reductions, which the buyer can use to meet its compliance objectives. Payment is made using cash, equity, debt or in-kind contributions.

There are two types of carbon transactions:

- allowance-based transactions, which involve the purchase of emission allowances created and allocated to a party by regulators under a cap-and-trade regime such as the Assigned Amount Units under the Kyoto Protocol;
- project-based transactions, which involve the purchase of emission credits from a project that reduces GHG emissions. These projects are usually under the CDM or Joint Implementation mechanisms.

Carbon transactions may be either *fixed forward* or *indexed forward* contracts. In many cases, there is a fixed price for part of the volumes delivered and thereafter an indexed price for the remainder. Indexed prices are most often linked to a European Union Allowances (EUA) price index or a market spot price.⁸

This allows both the buyer and seller to hedge their risk that EUA or carbon credit prices may move against them by pegging the price of credits to the price of allowances.

In typical indexed transactions, the price of a portion of carbon credits can be determined by taking a percentage of the price of EUAs at the time of transfer. The price of EUAs will be set by a daily EUA price index.

CDMs and carbon trading in South Africa

In South Africa, the first carbon credits were issued in June 2008.

... South African companies have been slow to take advantage of CDMs and, to date, very few companies have been awarded carbon credits.

To date, there are 228 CDM projects that have been submitted to the Department of Minerals and Energy – 189 Project Idea Notes and 39 Project Design Documents (PDDs). Out of these 39 PDDs, 20 have been registered by the CDM Board as CDM projects (7 issued with carbon credits), and 19 are at different stages of the project cycle – DME approval, validation stage and/or request for review. The projects submitted to the DME for initial review and approval cover the following types: bio-fuels, energy efficiency, waste management, cogeneration, fuel switching and hydro-power. They include sectors such as manufacturing, mining, agriculture, energy, waste management, housing, transport and residential.⁹

Whilst CDMs are still considered a useful mechanism to help finance clean development projects that are typically costly, South African companies have been slow to take advantage of CDMs and, to date, very few companies have been awarded carbon credits.

Two notable CDM projects in South Africa are the Kuyasa Housing Project and the eThekweni Municipality Landfill.

- The Kuyasa project is based in the Khayelitsha settlement in Cape Town. The project is a collaborative partnership between the City of Cape Town and SouthSouthNorth, an international CDM NGO. In August 2004 the project was awarded gold standard recognition by the UNFCCC which allows it to earn carbon credits. The project was also awarded joint third place at the global Point Carbon's Best CDM Project 2004 Competition in Amsterdam. The project involved retrofitting eight low-cost houses and two crèches with simple energy-saving devices such as insulated ceilings, low-watt bulbs and solar water heaters. This has saved almost 2.85 tons of carbon dioxide each year. The retrofitted buildings are 5% warmer in winter and 5% cooler in summer allowing a saving of up to 40% on electricity bills. The project seeks to include more than 2000 dwellings in the Kuyasa settlement over the next 21 years.
- The eThekweni Municipality Landfill project is funded by the French Development Agency and aims to generate electricity through the fermentation of household waste. The methane released by the waste will be converted into electric power by generators. The project is expected to generate up to 10 Megawatts of electricity (enough to illuminate about 9000 homes). This will reduce the volume of coal burnt at city power stations, thereby reducing GHG emissions. The landfill sites used in the project are Bisasar Road, Marianhill and La Mercy.

More recently, Gold Fields' Beatrix Mine in Welkom has been accorded CDM status. The project captures methane gas, which is considered to be a more destructive gas than carbon dioxide, at source in the mine.¹⁰ The gas is then conveyed to the

surface and then flared or, alternatively, used to generate electricity. It is expected that Gold Fields' carbon emissions will be reduced by 1.7 million tons of carbon dioxide equivalent between 2011 and 2018. It is expected that Gold Fields could earn up to R200 million from the sale of carbon credits that will be yielded from the Beatrix Mine project.¹¹

There have also been developments in the carbon credit market outside of CDM projects and the trade in carbon credits. Pioneers within the carbon credit market, Sterling Waterford, created the first investment derivative (Carbon Credit Note) and also publicly listed the first carbon credit derivative on the JSE. The company subsequently released their first fixed-interest carbon credit linked instrument – The Collateralised Enhanced Yield Certificate – another first in this market. In 2008 Sterling Waterford Holdings issued and listed a second retail investment note (Carbon Credit Note 2) on the JSE Securities Exchange. It matures in December 2012 and is listed under the short code CBN013 on the JSE.

Future developments: COP 17

As noted above, the first commitment period of the Kyoto Protocol will end post 2012.

COP 15, which was held in Copenhagen, Denmark in 2009 fell short of reaching a post-2012 multilateral agreement on climate change and is widely believed to have been a failure. Some progress was made during COP 16, which was held in Cancun, Mexico, with the establishment of important structural elements relating to technological and financial aspects of carbon trading.

The seventeenth annual Conference of the Parties (COP 17) to assess progress in dealing with climate change and negotiations for an instrument for the reduction of greenhouse gas emissions will take place in November and December 2011 in Durban. The primary focus of the conference will be to secure a global climate agreement as the Kyoto Protocol's first commitment period (2008–2012) is about to end.

There is, accordingly, a great deal of uncertainty (and risk) in the carbon market, given the unresolved future of the Kyoto Protocol. As the only compulsory cap on emissions globally is driven by the Kyoto Protocol, there is a chance that all post 2012 trading schemes will essentially be voluntary. Many analysts, however, believe that the carbon market is mature enough to survive even if the parties to COP 17 are unable to agree to an extension of the current commitment period or a new commitment period.

NOTES

1. See "The Clean Development Mechanism: a guide for potential participants in South Africa" (available at <http://www.erc.uct.ac.za/Research/publications-pre2004/02CDMGuideforParticipants.pdf>) published by Future Energy Solutions from AEA Technology plc and the Energy Research Institute of the University of Cape Town.
2. <http://www.saiia.org.za/archive-eafrica/what-is-carbon-trading.html>
3. A Summary of the Kyoto Protocol available at http://unfccc.int/kyoto_protocol/background/items/2879.php
4. The Clean Development Mechanism http://unfccc.int/kyoto_protocol/background/items/2881.php
5. Department of Minerals and Energy: Designated National Authority What is the Clean Development Mechanism http://www.dme.gov.za/dna/dna_what.stm
6. This is by way of a regulation under Section 25 of the National Environmental Management Act, gazetted on 24 December 2004.
7. "The Clean Development Mechanism: a guide for potential participants in South Africa" referred to in note 1 above contains a detailed overview of the Carbon Asset Management Cycle.
8. An EUA Price Index linked price is a price determined as a percentage of the cost of EUAs at the time of the transfer of credits. The trade is priced as an index to the EU ETS to manage price risk in both the European allowance and Kyoto credit markets.
9. http://www.energy.gov.za/files/esources/kyoto/kyoto_frame.html
10. See Business Day, 15 September 2011.
11. See Beeld, 15 September 2011.



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Justin holds a B Com Law (cum Laude), an LLB degree (cum Laude) and a B Com Honours in Financial Management (cum Laude), all from the University of Pretoria, and an LLM in Environmental Law, International Economic Law, and International Law from UNISA.

The Business Case for Sustainability

With South Africa hosting the Conference of the Parties (COP 17) in November/December 2011, the eyes of the world are going to be on Durban. This scrutiny will, firstly, assess South Africa's success as a host in patching together a coherent agreement as a follow up to the Kyoto Protocol, but also evaluate its efforts in reducing green house gas emissions – South Africa being the 12th largest emitter globally. This is a consequence of our coal-based energy system, but is significantly out of line with the size of our Gross Domestic Product (GDP).

Challenging national targets have been set by Government (34% reduction from business as usual by 2020 and 42% reduction by 2030), but these are going to depend on the investment of the business community in efficiency programmes and new technologies. South African companies thus have a crucial role to play in ensuring a sustainable future for the country.

Background

'Sustainability' is a fundamental part of a company's governance practices, but also an opportunity to position the company in a positive light to its customers and other stakeholders. An integrated sustainability programme can be a way of managing key social, environmental and economic risks as well as seizing opportunities for new products, services and markets.

Sustainability is most often defined in terms of the Brundtland Commission (the World Commission on the Environment and Development 1987) report – development that meets the needs of the present without compromising the ability of future generations to meet their own needs. A number of other terms such as corporate social responsibility are used fairly interchangeably, but each amounts to a consideration of economic, social and environmental aspects in the strategy and operations of an organisation.

At an international level the sustainability agenda is strongly influenced by a number of codes, guidelines or initiatives, such as the Global Reporting Initiative (GRI), Carbon Disclosure Project (CDP) and Dow Jones World Sustainability Indices. These collectively identify many of the key issues that companies should be managing and, in the case of CDP and the

Dow Jones, assess company progress against their industry or national business counterparts.

From a South African perspective, the JSE Socially Responsible Investment index criteria and other legislative requirements place a uniquely South African perspective on these issues via a strong focus on transformation imperatives and social upliftment.

The business case

A business focus on sustainability has a number of benefits for the organisation, especially around identifying opportunities for operational efficiencies and saving costs, as well as positioning the company as a responsible corporate citizen to a wide range of stakeholder groups and influencing change in its value chain.

Resource scarcity is a major challenge for business, particularly related to increasing electricity, fuel and water costs. Responsible management of these scarce resources has the significant benefit of impressive Rand savings that can be achieved through energy and water efficiency programmes, packaging reductions, increasing recycled content in products and packaging, and through logistics efficiency programmes. A shift from paper-based administration or communication to electronic methods is another popular saving opportunity. With 25% year on year electricity price increases, water tariff increases and fuel price increases, it should not be a hard sell to any business to focus on resource efficiency.

These consumers want to be sure that production has taken place in a way that respects the environment, labour rights and conditions, and ideally benefits community development.

A focus on sustainability issues can also help to identify new products and services for an organisation, thereby creating a boost in sales and creating a focus on innovation. This innovation focus is not limited to products or services, but also drives changes in processes within organisations.

Market research internationally as well as in South Africa shows that a growing number of consumers are interested in where the products they purchase come from and how they are produced. These consumers want to be sure that production has taken place in a way that respects the environment, labour rights and conditions, and ideally benefits community development.

Companies that profile themselves as dealing with these issues in a credible manner, can build their brand as an ethical organisation and benefit from increased support from consumers. One point to note is that consumers increasingly don't feel that they should pay a significant premium for such products, so areas like Fairtrade products and organic cotton textiles are having to ensure they are not much more expensive than their conventionally produced counterparts.

An interesting variation on the growing interest around ethical organisations is the affinity many employees feel for companies that have strong programmes around the environment and social development. This has been shown to be a strong attraction and retention area for a number of companies, including two local ones I have worked with. In their cases, their sustainability programmes showed very high and still increasing awareness around sustainability issues amongst employees, and strong support for their ethical business conduct in internal staff surveys.

The socially responsible investment (SRI) portion has grown to between 10 and 15% of the international investment community, and refers to investment that considers sustainability strategy and performance in the selection and management of stocks within a portfolio. This creates another significant financial advantage for companies with strong sustainability programmes that can position themselves as an investment destination for the SRI market. This is enhanced in South Africa, as European and North American SRI funds often look for emerging market companies to invest in. SRI investors generally look at longer term investment horizons and companies that are looking at a broader range of risks and opportunities that could impact their business – something that is inherent in an integrated sustainability strategy.

Very simply, the final reason behind the business case is that, morally, considering sustainability in a company's operations and strategies is the right thing to do.

A strong sustainability programme can ensure compliance with a wide range of legislation and codes of conduct covering areas such as Broad-based Black Economic Empowerment (BBBEE), environmental issues, integrated reporting in terms of King III and many other areas. Early adoption driven by sustainability considerations can also improve relationships with government, regulators and other

stakeholders, and position the organisation positively.

Very simply, the final reason behind the business case is that, morally, considering sustainability in a company's operations and strategies is the right thing to do.

It is clear that a multifaceted business case exists for companies in South Africa to develop and grow their sustainability strategies, and indeed to tailor them to those issues that affect their industries, in the countries in which they operate. In this way they can ensure development takes into account our unique environmental heritage and community upliftment.



Nikisi Lesufi

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Lesufi serves on the board of the TEBA fund Trust, National Nuclear Regulator, Council of the Fossil Foundation of Southern Africa, Management Committee of the Water Institute of Southern Africa (Mine Water Division), Provincial Environmental Advisory Board of Limpopo, the Premier of Limpopo's Economic Advisory Forum, Water Sector Leadership Group, and is Patron and Trustee of the Tembisa Child Welfare and Family Society.

Hard Choices in 'Greening' South Africa's Economy

The South African mining and metals industry is under enormous pressure to reduce its energy intensity and to seek alternative measures to help keep the industry sustainable.

It should be noted that, wherever feasible and possible, the South African mining industry has significantly reduced its energy intensity through energy efficiency programmes and other means. It is also important to stress upfront that the minerals and energy complex of the country has formed the foundation for the industrialization of the South African economy over the past 120 years and continues to play a significant role as the country's core industrial cluster. This cluster accounts for over half of the country's merchandise exports, about 7% of GDP (rising to 20% with multiplier effects), 94% of the country's electricity production, 30% of liquid fuels production and about 500 000 direct jobs in the economy.

The recent national Greenhouse Gas (GHG) emissions inventory confirmed that the bulk of South Africa's energy source is coal to generate electricity. Indeed, this accounts for just over 50% of South Africa's emissions bill. The mining and metals industry, like any other sector of South Africa's economy, plays a major role in using this energy, and consequently in the latter emissions bill. This, to a large extent, is owed to our historical overreliance on low electricity costs for better margins, as well as to deep-level gold mines. It is clear that the impact of industrial energy efficiency policies on South African sectors has fundamental implications – such as profitability and employment – as well as environmental implications – such as lower greenhouse gas emissions and future sustainable development of the country. The fundamental issue to deal with is how to reconcile or combine these two sets of implications.

Unfortunately, the advent of the 'green economy' phenomenon and the emissions reduction commitments made by, inter alia, South Africa during the 2009 climate change conference in Copenhagen, have necessitated deep introspection about the structure of our coal-based economy. Taking cognizance of the fact that South Africa is one of the most mineral-endowed countries in the world, the mining industry is so central to the economy that it would take decades to make the dramatic change to low-carbon, and this transition would entail a change in economic and social structure.

Developmental Objectives in the Context of Climate Change

South Africa as an active player within the climate change arena is caught between a rock and hard place, having also to realise its developmental, economic, energy security, beneficiation and job creation objectives. Furthermore, as a result of

The proposed carbon tax at R100 per ton of CO₂ would add another 18 cents to the cost, making South Africa a much less competitive electricity supply country in relation to our major competitors.

the legacy of apartheid, millions of people require housing, clean water, sewage, land, energy and other basic services. South Africa must deal with these socio-economic development priorities urgently. It is thus crucial that there is policy coherence between government's industrialization, growth, job creation, energy security and beneficiation policies and its policy on addressing climate change. For instance, in the New Growth Path and Industrial Policy Action

Plan, the government is targeting growth in the minerals and energy complex as a key component of the effort to create another 5 million jobs over the next decade. Therefore, climate change response policy cannot be mutually exclusive from these other growth and energy policy objectives but, rather, must speak to and be integrated into the entire suite of key policy objectives. For example, there is a great need to integrate climate change policies with energy policy, industrial policies, and developmental agenda, to name a few – and, arguably, to reconcile the apparent contradictions between them, which will require trade-offs.

China, India, Russia and others are progressively taking jobs from South Africa by importing South African ore in raw form and investing in higher value adding steps such as smelting/extraction, metal refining, and producing products for refining. South Africa then has to re-import the value added goods from these countries so that jobs can be created and retained within its borders. While current government policy has embraced sustainable development goals, the country continues to provide significant investment in energy-intensive industries. These industries are still an important source of employment, investment and income for the country.

Operational and Trade Vulnerability

South Africa already faces a rapidly escalating electricity price, which has significant implications for the competitiveness and viability of existing mines and operations that were established on the basis of technologies relevant at that time. The *Integrated Resource Plan (IRP) 2010 Revised Balanced Growth Scenario* already has electricity prices rising to over R1 per kWh by 2018. The proposed carbon tax at R100 per ton of CO₂ would add another 18 cents to the cost, making South Africa a much less competitive electricity supply country in relation to our major competitors. It takes considerable expense and time for the existing mines, smelters and refineries to change technologies and it is therefore critically important to provide long phase-in periods for issues such as stringent climate policies.

In a NEDLAC FRIDGE study “to provide an overview of the use of economic instruments and develop sector plans to mitigate the impacts of climate change”¹, it was concluded that:

“Our mining industry is facing one of the fiercest competitions from other countries and the rising cost of doing business is one of our limiting factors to staying competitive. Our declining mineral reserves, increasing depths to access these minerals and increasing labour costs, etc, are all part of the equation that needs added variables to caution our dwindling competitiveness in the global trade market.”²

In a Business and Industry Advisory Committee to the OECD discussion document on Carbon Leakage and Competitiveness Impacts, it was noted that, while some sectors are likely to grow, other sectors – such as domestic energy-intensive industries exposed to international competition – may incur sizeable competitiveness and output losses from unilateral and regional emissions reduction action³. One particular concern is that asymmetric environmental policies will reshape international competitive advantages, incentivizing such industries to defer investment decisions or, worse, move away from countries where environmental measures are more stringent to jurisdictions not subject to the same requirements. Should this be the case, global carbon emission reductions would be eroded, giving rise to the so-called phenomenon of 'carbon leakage', i.e. an increase in carbon dioxide emissions (and economic activity) in one country as a result of an emissions reduction by another country.

It is therefore crucial for South Africa to craft an enabling framework that facilitates carbon abatement in the domestic market place and which does not expose the country's carbon intensive trade-exposed industries to unfair competition from other key exporting countries that may not have instituted a strict climate policy. The practical reality is that South Africa does not yet have a proper fact-base on all the key abatement and mitigation opportunities and their respective costs. The adoption of negative incentives may not reduce the carbon intensity of the economy in the absence of a facilitative environment for abatement. It is also important to state that many of South Africa's key competitors have either held off on implementing carbon tax systems, or have provided their carbon intensive trade exposed industries with significant offsets, to preserve their competitiveness in international markets. It is also the very reason why many of these countries have also not wanted to be global front-runners on responding to global climate change.

One of the key industrial policy and objectives facing the country, and the mining industry in particular, is beneficiation, which is sometimes highly energy-intensive and may not be compatible with a low carbon future.

One of the key industrial policy and objectives facing the country, and the mining industry in particular, is beneficiation, which is sometimes highly energy-intensive and may not be compatible with a low carbon future. Therefore, South Africa will have to weigh its climate change ambitions for a low-carbon trajectory against this particular industrial policy objective.

Conclusions

It is important that a proper fact-base on abatement and mitigation opportunities, costs and benefits is developed to ensure a more thorough understanding of what is possible for the country over the next two decades. Government, by its own admission, is unsure of the size of the opportunities for CO₂ abatement or the costs related to such opportunities. There is not yet a published or agreed abatement cost curve for South Africa. This is a significant blind spot for the authorities in terms of designing an appropriate suite of actions to tackle climate change.

Climate policies should promote, or at least retain, the competitiveness of carbon intensive trade-exposed sectors. The use of offsets and other mechanisms must be explored so as not to undermine the international competitiveness of the carbon intensive trade-exposed sectors – until such time as there is a more level global playing field.

... SA mining industry must follow the route of its international counterparts such as those in Australia, Canada, etc, by developing climate change policies in unison with government policy currently under development.

Balancing the potential benefits from further development of South Africa's mineral and agricultural endowments with a less resource- and energy-intensive development path has been highlighted as a key future challenge for future deliberations by the nascent National Planning Commission (NPC).

In its *Diagnostic Overview*, released by NPC chairperson Minister Trevor Manuel and deputy chairperson Cyril Ramaphosa, the NPC warned

that the costs of such a transition would not “fall evenly” and export sectors could “suffer”⁴.

The Diagnostic Overview describes the prevailing resource-intensive nature of the South African economy as “unsustainable”, and vulnerable to external forces that can induce local booms and busts. Further, it notes that the coal-heavy nature of the economy opens it to penalties as the world seeks to mitigate climate change by reducing emissions of carbon dioxide. With these assertions, it is clear that for sectors that are high energy users or GHG emitters, and for the economy across the board, the 34% reduction target will be challenging. Overall, the implications for energy-intensive and trade-exposed sectors of the economy need to be clearly understood.

But the report also notes that the export earnings of the mining sector currently help to fund South Africa's imports and create a large number of low-skilled jobs. Therefore, government and industry need to look at innovative ways in which to support and transform the sector as it changes to a low-carbon future. Furthermore, the SA mining industry must follow the route of its international counterparts such as those in Australia, Canada, etc, by developing climate change policies in unison with government policy currently under development.

In conclusion, further work needs to be done in developing domestic policy measures to address the vulnerability of energy intensive and trade-exposed sectors – such as mining – to response measures by developed countries. Such measures should be designed in the overall context of climate policy, enabling these sectors to contribute to action on climate change and also to benefit – rather than suffer – from climate response measures.

NOTES

- 1 NEDLAC Fund for Research into Industrial Development, Growth and Equity (FRIDGE) Research Report, Study to provide an overview of the use of Economic Instruments and develop Sectoral Plans to mitigate the effects of Climate Change (http://www.dti.gov.za/industrial_development/docs/fridge/FRIDGE_Final_Report.pdf)
- 2 Ibid.
- 3 Business and Industry Advisory Committee to the OECD, Thought Starter: Carbon Leakage and Competitiveness Impacts (http://www.biacc.org/statements/env/10-10_Thought_Starter_Carbon_Leakage_and_Competitiveness.pdf)
- 4 National Planning Commission, Diagnostic Overview (<http://www.info.gov.za/view/DownloadFileAction?id=147192>)

The Politics of Doubt: The Impact of the Global Climate Denialist Campaign



Melita Steele

completed her MSc in Environmental Science at Rhodes University in 2008. In November 2009 Melita began working as a climate campaigner for Greenpeace Africa, where she works towards an Energy [R] evolution in South Africa to avoid catastrophic climate change. In 2011, Melita was named as one of the Mail and Guardian's Top 200 young South Africans, and was elected to serve on the Civil Society COP 17 Steering Committee (C17).

South Africa and climate change

South Africa is making crucial energy decisions at a time when humankind is at a critical juncture. Since the industrial revolution, the planet has warmed by 0.74°C – an alteration of the climate system caused by human activities such as the burning of carbon-intensive fossil fuels¹. The impacts we are witnessing are occurring far sooner than had been predicted. Droughts in many parts of the world, the near-total loss of the Arctic ice-cap and an additional 150,000 deaths per year² indicate that we are already experiencing dangerous climate change. And it is the world's poorest and most vulnerable people who will be affected first, which means that the African continent is on the frontline of climate change. The challenge humanity faces now is to avoid “catastrophic” climate change.

Climate change is projected to increase the number and severity of extreme weather events around the world. Climate scientists warn that if we warm the atmosphere by more than 2°C from pre-industrial levels, we invite catastrophic climate change and trigger processes that will result in even more emissions being released, taking global warming beyond our control.

South Africa is the largest CO₂ emitter on the African continent and is among the 15 largest emitters in the world. As such, the country has a special responsibility to act and implement a coordinated, coherent, efficient and effective response to the global challenge of climate change. Currently, South Africa's greenhouse-gas emissions are still on a sharp upward trajectory. More than 90% of our electricity comes from coal and two of the biggest coal-fired power stations in the world (Medupi and Kusile) are currently under construction.

The Intergovernmental Panel on Climate Change (IPCC)

The IPCC is the leading international scientific body for the assessment of climate change. It was established by the United Nations Environment Programme (UNEP) and the World Meteorological Organisation (WMO) to provide the world with a clear scientific view on the current state of knowledge of climate change and its potential socio-economic and environmental impacts. The IPCC reviews and assesses the most recent scientific, technical and socio-economic information produced worldwide. It does not conduct any research itself, nor does it specifically monitor climate related data or parameters.

Thousands of scientists from across the globe contribute to the work of the IPCC on a voluntary basis, and some of these scientists are from South Africa. Review is a crucial part of the IPCC process, to ensure complete and objective assessment of current information. The IPCC is open to all member countries of the United

Nations (UN) and WMO – currently 194 countries are members of the IPCC. Governments participate in the review process and the plenary sessions, where the main decisions about the IPCC work programme are taken and reports are accepted, adopted and approved.

Because of its scientific and intergovernmental nature, the IPCC embodies a unique opportunity to provide balanced and meticulous scientific information to decision makers. By endorsing the IPCC reports, governments acknowledge the authority of their scientific content. The work of the IPCC is therefore entirely policy-relevant, but endeavours to avoid being policy-prescriptive³.

The global climate denialist (sceptic) campaign

The IPCC scientific assessment of climate change is a thorough and robust process. It is possibly the largest ever organised scientific endeavour, involving thousands of scientists from many different research institutes around the world, backed up by massive amounts of data. It is also a human endeavour, and therefore not perfect. Despite ever stronger evidence of climate change and the threats it poses, the IPCC has been attacked at every turn.

There have been sustained personal attacks on IPCC climate scientists for nothing more than reporting their results...

As global action on climate change has become more likely, so the campaign against climate science has intensified through climate denialism. While it is important that scientists critically assess findings (including those of the IPCC), there has been a consistent and systematic campaign to sow doubt and promote the denial of climate change, specifically when it comes to the work of the IPCC. This campaign has been run for nearly 20 years by groups and organisations, many funded (directly and indirectly) by fossil fuel companies⁴. This denialist campaign is aimed at one thing: to force upon decision-makers and the public the view that human-induced climate change does not exist. The reason for this is that the IPCC has concluded that greenhouse gas emissions increases at present rates will certainly lead to warming, and therefore to catastrophic climate change⁵. This is a direct threat to business-as-usual in the fossil fuel industry.

The claims and attacks are many and varied. They have been based on: attacking the models, attacking the objectivity, claiming that the IPCC is ‘political’ rather than ‘scientific’, attacking the data, and attacking the scientists. There have been sustained personal attacks on IPCC climate scientists for nothing more than reporting their results (including Ben Santer, Kevin Trenbeth and Michael Mann). Some of the claims/attacks have used these arguments:

- Stabilising carbon dioxide emissions would have little environmental benefit⁶
- Model based projections are controversial and uncertain, thus scientists are divided in their opinion about the likelihood and consequences of climate change⁷
- The science does not support the prospect of catastrophic climate change⁸
- The wording of IPCC reports is inflammatory⁹
- Two errors in the 2,800 page IPCC AR4 report undermine the IPCC’s entire body of work¹⁰

South Africa is not immune to the climate denialist campaign. Increasingly, the same individuals are consistently and publicly questioning the merits of climate change science, the viability of renewable energy as a solution to climate change, and the need for South Africa to shift away from its addiction to fossil fuels.

Is the science on climate change settled?

Climate change denialists have made highly selective use of findings from non-peer reviewed literature to sow doubt about the real science in attempts to undermine faith in the consensus.

The way that scientific research works is that the understanding of any particular subject continues to develop as more information becomes available. This is precisely how climate science has developed. Today, there is a strong international scientific consensus on climate change. This consensus is based on the work of thousands of scientists, and has been accepted by governments around the world. None of the work by climate denialists has changed the harsh reality that anthropogenic climate change is happening.

The IPCC's conclusions reflect the fact that the only remaining theory that is supported by the scientific evidence is that global warming is caused by the growing emissions of greenhouse gases, and that human activity is undeniably responsible.

It is important to differentiate between the scientists who have challenged the theories of anthropogenic climate change in good faith, seeking to put forward other possible explanations for our changing climate, and the efforts of the denialist campaign, which aims to undermine the credibility of climate science and prevent government action on climate change.

Arguments about sunspots, the Earth's rotation around the sun, the accuracy of temperature measurements, the likely severity of global warming and other theories have all played out over the last 20 years through the scientific literature. The IPCC's conclusions reflect the fact that the only remaining theory that is supported by the scientific evidence is that global warming is caused by the growing emissions of greenhouse gases, and that human activity is undeniably responsible.

The impacts of climate denialism

The purpose of climate denialism is to influence governments to prevent action against climate change. The impacts of this campaign have been to muddy the waters around climate science through interventions in the scientific literature, therefore affecting the political debate around climate change. What this has also meant is that people around the world hear conflicting views on climate change and are uncertain which to believe. The denialist campaign has worked hard to sow these seeds of doubt, with the aim that both ordinary citizens and the media question the certainty around climate science.

By implication, what climate denialism has done is delay the urgent action that is needed to stop catastrophic climate change. This makes it incredibly dangerous.

The kind of action needed to prevent catastrophic climate change

There is much South Africa can do to become a climate leader. Climate change presents the greatest threat the planet faces. But it also provides an opportunity for sustainable development. South Africa has massive renewable energy sources,

from wind and marine energy, to some of the best solar resources in the world. Harnessing these resources would not only make a huge contribution to averting catastrophic climate change, but would also create a green economy based on green jobs. We can and must create a much more sustainable society by using existing clean technologies. Time is not on our side though; the transition must begin immediately. Action is required both through the international UN climate negotiations (aimed at limiting greenhouse gas emissions) and through concrete and immediate action domestically.

The threats posed by climate change demand nothing short of an *Energy [R]evolution*, a transformation in the way that energy is produced, distributed and consumed. The *South African Advanced Energy [R]evolution scenario*¹¹ provides an ambitious blueprint for how emission reductions can be made and how South Africa's energy can be sustainably managed up to the middle of this century. It is entirely possible to reduce our consumption of energy (by increasing energy efficiency), while still continuing to develop and providing the same level of energy services.

Renewable energy is mature, ready and can be deployed on a large scale. It will play a vital role in providing secure, reliable, and zero-emission energy in the future. In fact, this scenario illustrates that if renewable energy is implemented with enough ambition, together with comprehensive energy efficiency measures, South Africa would not have to build Kusile.

Conclusion

As the hosts of the international climate negotiations (COP 17) at the end of this year and the biggest carbon emitter on the African continent, the spotlight will very much be on South Africa and its actions on climate change. As President Jacob Zuma stated at the Green Economy Summit in May 2010, "We have the means, indeed, the responsibility, to ensure that our policies, programmes and activities contribute to emission reduction and respond to the impact of climate change on our country and region".¹²

South Africa urgently needs to end its addiction to coal and dangerous nuclear energy. We need an *Energy [R]evolution* in the struggle to both stop runaway climate change and to create a clean and sustainable future. This country cannot afford to pay the price for nuclear or coal: not economically, not in terms of the environment and not in terms of the safety and health of the people of South Africa.

Climate change is happening, it is caused by human activity, and it will have catastrophic consequences. These three assertions are backed by the most rigorous scientific undertaking in history – the IPCC process. It is time for world leaders to fully acknowledge what climate science is telling us, leaving climate denialism behind, and taking urgent action to drastically reduce greenhouse gas emissions. The importance of the decisions being taken now cannot be underestimated. Failure to act now will have catastrophic consequences for future generations. Let us not have to say to them that we did not have the courage to do enough today.

NOTES

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- 2 World Health Organisation. Available: <http://www.who.int/globalchange/news/fsclimandhealth/en/index.html>
- 3 <http://www.ipcc.ch/organization/organization.shtml>
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- 11 http://www.energyblueprint.info/fileadmin/media/documents/national/2011/E_R_South_Africa_May_2011-LR.pdf
- 12 http://www.environment.gov.za/greeneconomy_summit/President%20of%20Republic.pdf

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Economic Planning for Sustainability in the Face of Climate Change

*This pendant world, in bigness as a star
Of smallest magnitude close by the moon*

(Milton, *Paradise Lost* bkII, ll1050/1)

Climate change is a fact of life. What isn't clear, though, is how South African policy makers should react to it. For a country in Africa merely having a large, disempowered population of urban poor should not preclude policies to counter global warming. But political realities may make the opportunity costs of imposing such policies unacceptably high. There is, of course, a counter-argument. Some cite Michael Porter's hypothesis that imposing strict regulation now will translate into increased competitiveness when such regulations become widespread in the future. What, then, are the real challenges to sustainability in South Africa, and how high up the ladder should climate change rank?

When Jack Pezzey wrote his first survey of the literature on sustainability in 1992¹, the number of definitions he found already ran into the thousands. Although authors on the topic seemed to take their cue from Humpty Dumpty and use the word to mean just what they chose it to mean, all were, to some extent, trying to answer the same questions. That said, some definitions were so fluffy as to be meaningless. The Brundtland Commission's definition of sustainable development was a classic of this sort. "Development that meets the needs of the present without compromising the ability of future generations to meet their own" is the sort of definition that gives policy makers no help at all. At the other extreme some presented simple operational rules. But with simplicity came narrowness. The Hartwick Rule² was a case in point. Dating back to

the mid-1980s, its bottom line was that, to achieve sustainability in a mineral based economy, one should simply reinvest mining rents in activities that would yield real returns, and then live on those returns. A simple example is the person who uses the revenue from selling his family silver to buy a consol and then lives (sustainably) on the interest. Unfortunately, though, this sort of rule cannot be extrapolated to deal with the non-marketed by-products of the modern economy.

Sorting through the conceptual morass, however, one does find a number of commonalities. Writings on sustainability typically follow one or more of three strands: environmental, economic and political. The economic and political dimensions will return a little later in this article. For now it is enough to focus on the ecological/environmental dimensions, which are, after all, the ones most often associated with sustainability. The public eye is filled with images of pandas, whales and rhinos, and, amongst the more sophisticated, with visions of threatened ecosystems. This is not surprising. These are the aspects best suited to fund raising, and, consequently, most frequently and dramatically presented in the public media. Global warming too has sold itself to the media. This is not to say that it is not real, but that it has become the high profile face of much earnest fundraising.

The literature does not ignore the high profile aspects of environmental sustainability, but its perspective is broader and more balanced than the popular view. Ecological economics in particular looks at the ways in which production and consumption deplete non-renewable stocks, treat the environment as a waste sink, and increase entropy – in other words they increase

the proportion of energy and materials which are no longer usable with current technologies. This problem was elegantly identified by Boulding in his short essay, 'The Economics of the Coming Spaceship Earth'³, a thought exercise prompted in part by the first space missions. In it he argued that ours is a closed system, that the era of the expanding frontier and apparently limitless resources is gone, and that consequently any activities that affect the Earth's ecological balance may have dire consequences.

The article of faith on which most western economists fall back when all else fails, and which they are most reluctant to abandon, is that, whatever its limitations, the market mechanism is still the best available means for allocating resources and meeting society's needs.

This leads us to the challenge of anthropogenic climate change and the global warming debate, a debate which has been gaining intensity for over twenty years. Interestingly, as the scientific element of the debate has lost heat, so the economic component has warmed. It seems sensible to start any discussion on climate change with a rhetorical question: if the science is so assured, why is the policy response in doubt? The answer to this question, as to so many in economics, is found in the price mechanism. The article of faith on which most western economists fall back when all else

is fails, and which they are most reluctant to abandon, is that, whatever its limitations, the market mechanism is still the best available means for allocating resources and meeting society's needs. When faced by the Malthusian predictions of the Club of Rome⁴ the consensus economic response was that these had emerged because the Club's model had ignored the market. As any resource becomes increasingly scarce so its price rises; the result should be increased incentives to explore, to improve the efficiency of production methods and to adapt, engendering substitute inputs and new technologies. The ingenuity of man and the power of the market will keep human welfare rising despite depleting resources. This view became the foundation of neoclassical weak sustainability.

But what of resources that are not traded and have no price – resources like the atmosphere around us and the global climate it determines? After seeing the financial carnage of the past three years, itself a result of market freedom, an economic sceptic might further ask, 'Didn't the free market also cause global warming, and can it cure climate change?' While the rise in atmospheric carbon is clearly a consequence of increasing populations and rising living standards, I believe that the answer to both questions is unambiguously, 'No'. The question we should be asking is a different one, 'Can the free market mitigate the effects of climate change sufficiently to leave it a non-issue?'

There appears to be historical basis for the belief that it can, in the form of the success of the Montreal Protocol on Substances That Deplete the Ozone Layer. After entering into force in 1989 it was ratified by nearly 196 parties and effectively halted the use of halogenated fluorocarbons (refrigerants like *Freon*) which were depleting atmospheric ozone. Production of halogenated fluorocarbons (HFCs) was in the hands of a few large corporations. The patents (established in the early 1930s) had long run their course, and substitute products were available to the same large producers. The problem was clear, and while the corporations initially resisted, it was apparent that neither the market for refrigerants nor their profits would be seriously eroded. Opposition was therefore brief and the international agreement was rapidly signed by over 190 states. The incentives to cheat on the production

and use of HFCs are limited as substitute products exist, and the benefits of the agreement are already evident. HFCs were private goods, the producers were few in number, the transaction costs of addressing the problem were low, and public awareness was high. Market incentives could have been used to solve the problem, but there was no need.

The issue of global warming, though, presents totally different challenges. The heart of the problem is that humanity treats the atmosphere (like so many other environmental assets) as a free good, a product that has no market. Many speak airily of 'the tragedy of the commons' but our atmosphere is no common. As the failure of Kyoto shows, even nation states are unwilling to manage it communally. In legal terms it is a *res nullius*. Rather than a few multinational firms producing clearly defined problem products like HFCs, global warming comes from a wide array of greenhouse gases generated daily by millions of individuals spread over the entire globe. In the absence of cheap and atmosphere friendly substitutes for fossil fuels, the transactional costs of persuading or coercing all those who generate greenhouse gases to cut their emissions are unattainably high.

Climate change is a long term issue, while elections are short term realities. Ironically democracy seems part of the problem. For as long as electorates are unwilling to suffer in the present for the sake of the future, only very brave or very secure governments will be free to act.

At a state level the problem looks less tricky: a few large economies have been the sources of the problem, and if they act quickly they might soon deal with it. The incentives are, however, perverse. Climate change is a long term issue, while elections are short term realities. Ironically democracy seems part of the problem. For as long as electorates are unwilling to suffer in the present for the sake of the future, only very brave or very secure governments will be free to act.

This leads to a second question: are rising levels of greenhouse gases the hopeless global tragedy described by the green campaigners? Perhaps not. The emissions which are at the heart of long term climate change are often generated together with others that present more immediate threats and, while not quite as well advertised, these are often far more problematic.⁵ Ironically, it is this rather perverse characteristic of fossil fuels that offers a way forward. As an example consider the cases of the USA and China, the two largest individual contributors to greenhouse gas emissions. The USA refused to ratify the Kyoto Protocol, and China, while it approved the protocol, undertook no obligations in terms of it. But both have put in place regulations to curb urban air pollution. These are regulations which coincidentally reduce the use of problem fuels and increase the efficiency with which such fuels are used. Coal is widely held as a greenhouse villain, but when poorly combusted it does more profound and immediate damage in terms of particulates and acid rain. It was these problems that saw Western Europe cut the use of coal as a fuel, not the threat of climate change. Moreover, they have raised the cost of constructing an environmentally acceptable coal-fired power station to a level at which more climate-friendly energy sources have become cost competitive.

The same issue is relevant in South Africa. Locally, air pollution in our cities imposes direct costs on residents that dwarf those which we impose on the global commons through our contribution to climate change, yet, perhaps because of familiarity, these are often glossed over. Consider first the external cost through climate change

of the atmospheric carbon released in South Africa; now look at the local effects of air pollution in lost worker productivity and statistical life years lost each year. To put this into perspective, a 2001 study of air quality interventions in the Gauteng Highveld found that simply insulating fuel burning houses, which would reduce their annual coal purchases by 40% from R750 to R450, would have profound net benefits. If only 20% of the 72,000 coal burning households were insulated the present value (at 8%) of the improvement in worker productivity over the following thirty years would be a R161m, with a R98m present value for the decline in statistical mortality (at 2001 prices!)⁶. By comparison Nedbank advertises the price of CO₂ reductions at a mere R120 per tonne⁷, similar to the prices in Europe which have oscillated around that level over the past few years - European carbon allowance, introduced in 2005 at 15 euro per tonne, is now down to two thirds of that⁸.

If temperatures rise by two degrees every fifty years, and rainfall patterns slowly shift, will farmers be incapable of reasoned responses? 'Look at the Mayans' we are told, or 'consider the fate of the Pueblo Indians of New Mexico'. Even Easter Island is hailed forth as case study.

The impact of South Africa's poorly combusted fossil fuels on the global climate may be relatively small, but as anyone who has driven past Soweto during the temperature inversion of winter morning can testify, their impacts on the air we breathe every day are profound. The essence of this line of argument: if policy makers are to change our energy sources, they can justify their actions as responses to immediate concerns for the country's own citizens⁹. There is thus no need to cite possible impacts on distant nations or distant generations.

Accepting anthropogenic climate change as a reality does not prevent one from being a climate sceptic. For this one merely has to interrogate the costs climate change will impose. Much is made of the impacts on ecosystems and on small island states. But ecosystems have been living with rapid fluctuations in the global climate for eons. Mini ice ages and rapid warming periods have been well documented. The history of Greenland under the Vikings was defined by them, and much of England's political trauma from the fourteenth to the seventeenth centuries seems to have been predicated on periodic climatic fluxes.

But slow steady warming based on rising levels of atmospheric carbon seems to pose different questions. If temperatures rise by two degrees every fifty years, and rainfall patterns slowly shift, will farmers be incapable of reasoned responses? 'Look at the Mayans' we are told, or 'consider the fate of the Pueblo Indians of New Mexico'. Even Easter Island is hailed forth as case study. Historically, people often existed in geographically isolated units, with a narrow range of crops available, and no help from global markets to meet short term threats to food security. Today seed technology is evolving at apparently exponential rates. In an era of hybrid and genetically modified seeds, with wide selections of crops and international produce markets, are we as vulnerable as we were? It isn't fashionable to argue this, but one can make a strong argument that higher levels of CO₂ and longer summers in the temperate lands of the USA, Canada and Russia will actually *increase* global production of cereal crops. There will be costs to some, but there are likely to be considerable benefits to others. The classic rebuttal would be to say that climate change presupposes greater probabilities of extreme weather events – basically hail, locusts, drought, floods, wailing, gnashing of teeth and bands of marauding Riffs – but of this there is little empiric evidence. Bad weather events have been on the go

for years; look at what took Jacob's sons to Egypt! So what challenge does this pose for equity across nations, across income groups and across generations?

What are the policy steps that follow on the ecological side? Cutting carbon can certainly be one, but its welfare benefits pale against others – like curbing population growth, cutting the amount of primary natural resources used up in each unit of national income, and reducing pollution in general.

This leads us to the two remaining legs of the sustainability tripod, economics and politics. The root of most economic approaches lies in the Rawlsian concept of justice. Rawls suggested that the most just society will be the one that maximizes the welfare of its worst-off members at any point in time. The logic of sustainability takes this idea and extends it over time. In these terms the most just growth path will be the one that maximizes the welfare of its worst off generation. Of course identifying this 'worst off' generation presents a problem. In the absence of clarity, a number of alternatives have emerged. These include growth paths in which social welfare is non-declining, or since this is difficult to identify, where production is non-declining. Then there are rule-based approaches like Hartwick's 'reinvest all resource rents'. If one's concern is with the worst-off individual across generations (or if the growth path followed requires non-declining income per capita), then both income distribution and population growth become key aspects of policy. In the first world (and in China) declining birth rates have helped raise per capital incomes. This has not been costless; aging populations raise the spectre of potentially unsupportable dependency ratios. For South Africa, however, whose greatest present social problem is youth unemployment, this will not be a credible issue for many years to come. Keeping birth rates down is not only a sound approach to socio-economic sustainability, but also helps reduce humanity's impact on the environment. People, as much as motor cars, drive climate change.

Both income and population are issues with political ramifications, and on reflection it seems obvious that political sustainability is the crucial component of the problem.

The demographic profile of South Africa's population, the rate of urbanization and the level of urban unemployment, present clear and present sustainability challenges.

Both income and population are issues with political ramifications, and on reflection it seems obvious that political sustainability is the crucial component of the problem. The demographic profile of South Africa's population, the rate of urbanization and the level of urban unemployment, present clear and present sustainability challenges. Populist politics are anathema to sustainability, and there can be no greater support for populism than widespread city-based youth unemployment. Demagoguery is surely the greatest and most present challenge to the country's future welfare, and any climate change policy that provides a footing for the demagogues has to be a concern. In cities where the poor, living in uninsulated homes, are burning coal, wood and paraffin for cooking and space heating, cheap accessible electricity has much to recommend it. Does it matter that it comes from the combustion of coal? Of course not. Put bluntly the question is whether the coal should be burnt in controlled furnaces away from metropolitan areas, or in uncontrolled poorly designed stoves with low chimneys in dense urban settlements prone to temperature inversion. If cheap coal based power can encourage industrialization, create jobs, improve living standards and enhance public health, then one has to question the "sustainability" of policies that preclude it.

The ‘green alternative’ of renewable natural energy is a prospect devoutly to be wished; but unemployment, smog and urban poverty are omnipresent realities of South African life. The opportunity cost of genuine commitment to the green alternative may be politically untenable. The urban climate, whether physical or political, urgently needs cheap secure supplies of electricity. Coal fired thermal power stations are one source, Nuclear power is another. Between the two lies natural gas. Yet we see sustainability campaigners opposing coal on grounds of climate change, opposing the nuclear option as a matter of principle, and opposing the exploration for gas in the Karoo on the grounds that it may have negative impacts, albeit on South Africa’s least settled landscape. Maybe the search for sustainability should begin with a realistic search for perspective!

NOTES

- 1 Pezzey, J.(1992) Sustainable development concepts: an economic analysis - Environment Paper; no. 2 World Bank
- 2 Hartwick, J.M. (1977) Intergenerational equity and the Investing of rents from Exhaustible Resources. *American Economic Review* 67.5: 972-974
- 3 Boulding, K. (1966) The Economics of the Coming Spaceship Earth. *Resources for the Future Forum on Environmental Quality in a Growing Economy*. Washington, D.C. <http://dieoff.org/page160.htm>
- 4 Meadows et al 1972
- 5 While these may ultimately be separate issues, the severity of particulates far exceeds that of global warming. Particulates are killing thousands annually in South Africa; greenhouse gases promise that they might affect the comfort of our grandchildren. See table, below, for details of some of the estimates of deaths caused by particulate matter annually in SA.

Cause of death	Annual Nr. Of deaths	% related to domestic use	Area	Source
Ambient PM	4 6371	69%	Metropolitan areas	Norman et al. (2007b)
Indoor PM	2 4893	100%	SA	Norman et al.(2007a)
Paraffin poisoning	4 000	100%	SA	Lloyd (2006:1), Bizzo et al (2004:66)

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‘Green Capitalism’ or Environmental Justice? A Critique of the Sustainability Discourse

The sustainability discourse has been appropriated by neo-liberal capitalism. It is driving a key feature of capital’s response to the ecological crisis: the commodification of nature. This involves the transformation of nature and all social relations into economic relations, subordinated to the logic of the market and the imperatives of profit. The immediate outcome is the deepening of both social and environmental injustice.

Green capitalism

The ecological crisis is not some future and indeterminate event. It is now generally acknowledged that we are in the first stages of ecological collapse. Capital’s response to the ecological crisis is that the system can continue to expand by creating a new ‘sustainable’ or ‘green capitalism’, bringing the efficiency of the market to bear on nature and its reproduction.

These visions amount to little more than “a renewed strategy for profiting from planetary destruction”¹. The business of ‘sustainability’, in this view, is simply “a new frontier for accumulation in which carbon trading is the model scheme”².

The two pillars on which ‘green capitalism’ rests are technological innovation and expanding markets while keeping the existing institutions of capitalism intact. This is Thomas Friedman’s ‘green revolution’ which relies on linking the two. As he insists, green technology represents “the mother of all markets”³.

More specifically, ‘green capitalism’ involves:

- appeals to nature (and even the crisis) as a marketing tool;
- developing largely untested clean coal technology through Carbon Capture and Storage, which involves installing equipment that captures carbon dioxide and other greenhouse gases and then pumping the gas underground;
- the development of new sources of energy such as solar, nuclear and wind, thereby creating new markets;
- the massive development of biofuels, which involves diverting land from food production;
- the carbon trading regime enshrined in the Kyoto Protocols.

Many of these strategies put the onus of solving climate change on changing individual life styles. This *individualizing* is illustrated by Al Gore’s documentary

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An Inconvenient Truth and relies heavily on manipulative advertising – ‘greenwash’ – to persuade us of the efficacy of these strategies.

Greenwash is also evident in much corporate sustainability reporting as part of their presentation of a benign image of themselves.

The current emphasis is on how sustainability can increase profitability or, in the sanitized language of capital, “can add value to a company”.

‘Sustainability’: the ideological anchor of green capitalism.

In South Africa, as elsewhere, there has been a steep growth in the number of companies producing sustainability reports, and in the emergence of various corporate indicators and guidelines. Media coverage is growing with, in 2010 alone, a *Financial Times Special Report on Sustainability*, the publication of the quarterly *Dialogue Sustainability Review* as a supplement to the *Financial Mail*, and the *Earth* supplement to the daily newspaper, *Business Day*.

The current emphasis is on how sustainability can increase profitability or, in the sanitized language of capital, “can add value to a company”.

In 2004, the Johannesburg Stock Exchange introduced the Socially Responsible Investment Index (SRI) to “help crystallize good triple-bottom line and governance policy and practices”. Companies apply to be listed – in 2008, 61 companies made it onto the index, from 105 companies that were reviewed for inclusion⁴. According to an asset manager, “Very important is that [social responsibility] should not mean lower returns. In fact it should sometimes mean higher returns as the profile of some of these investments can be higher risk and lower liquidity”⁵.

Chris Laszio’s *Sustainable Value: How the world’s leading companies are doing well by doing good* emphasizes the importance of a company’s reputation, goodwill and stakeholder relationships. Based on this assumption, Laszio develops a strong business case for taking a systematic approach to building stakeholder value, including shareholder value, through the integration of sustainability in all aspects of a business⁶.

The cynicism involved is also illustrated by a statement from a Santam executive, “Even if you don’t believe in climate change, it makes financial sense”. In similar terms it has been claimed that the climate crisis represents “a lucrative entrepreneurial opportunity”⁷. This is congruent with the treatment of disasters (often ecological) as exciting market opportunities, described by Klein as ‘disaster capitalism’⁸.

Similarly, for the JSE, “[I]nvesting in sustainability makes sense”⁹. From July 2010 all companies listed on the JSE are required to publish an integrated sustainability report. Thus the worst corporate polluters in South Africa all now produce lengthy sustainability reports.

ArcelorMittal SA’s 2009 sustainability report claims that “[o]ver the last year, we made an even greater commitment to engagement with all stakeholder groups by accelerating interactions with communities, employees, regulators, government and advocacy groups”. This claim, however, is hotly disputed by Phineas Malapela, the chair of the Vaal Environmental Justice Alliance¹⁰.

Other major polluters show a total neglect of environmental factors in their definition of sustainable development. For example, BHP Billiton, “the world’s leading diversified natural resources company,” describes “the company’s vision of Sustainable Development” as follows: “to be the company of choice – creating sustainable value for shareholders, employees, contractors, suppliers, customers, business partners and host communities.”¹¹

The main concern of the corporations remains profitability: the awareness that shrinking natural resources could damage it, while measures such as energy efficiency could reduce costs, reduce risks and enhance a company’s public image. The former CEO of Walmart recently described sustainability as “the single biggest business opportunity of the 21st century and the next main source of competitive advantage”¹². Hence the opening claim: the sustainability discourse has been appropriated by neo-liberal capitalism.

Critiques of green capitalism

Critiques of ‘green capitalism’ are rooted in the understanding that it is capital’s logic of accumulation that is destroying the ecological conditions that sustain life: through the pollution and consumption of natural resources, destruction of habitats and biodiversity, and global warming.

The expansionist logic of the capitalist system means it is not sustainable. As Barbara Harris-White claims, “sustainable capitalism is a fiction”¹³. She writes, “sustainability has never been given a testable definition... it has been watered down to ‘resources sustainably available in the environment’ and even leached into mere ‘growth’”¹⁴.

Joel Kovel stresses that the cause of the ecological crisis is the expansionist logic of the capitalist system, and in similar terms, Vandana Shiva stresses, “the same corporate interests that have created the crisis try to offer the disease as the cure – more fossil fuel based chemical fertilizers”¹⁵.

If capitalism continues, the future looks grim. If capitalism remains the dominant social order we can expect unbearable climate conditions, an intensification of social and ecological crises and, as Ian Angus writes, “the spread of the most barbaric forms of class rule, as the imperialist powers fight among themselves and with the global south for continued control of the world’s diminishing resources. At worst human life may not survive”¹⁶.

But – at least in the short run – as ecological breakdown accelerates, the dominant classes will survive, living in protected enclaves in what Foster calls a fortress world. “Fortress World is a planetary apartheid system, gated and maintained by force, in which the gap between global rich and global poor constantly widens and the differential access to environmental resources and amenities increases sharply. It consists of bubbles of privilege amidst oceans of misery”¹⁷. This retreat into fortified enclaves already exists in South Africa – now the most unequal society in the world – as the powerful and the privileged move into the growing number of gated communities and golf estates.

If capitalism remains the dominant social order we can expect unbearable climate conditions, an intensification of social and ecological crises and, as Ian Angus writes, “the spread of the most barbaric forms of class rule, as the imperialist powers fight among themselves and with the global south for continued control of the world’s diminishing resources. At worst human life may not survive.”

However, the argument that the discourse of sustainability is the ideological anchor of green capitalism does not mean we should throw the baby out with the bathwater: the immediate challenge is to reclaim the notion of sustainability by linking it to considerations of justice.

Critique of the concept of sustainable development

When the concept of sustainable development was launched at the United Nations Conference on Environment and Development in Rio de Janeiro, 1992, it held out great potential. By the Johannesburg World Summit on Sustainable Development in 2002, the concept had become vacuous and was largely about sustaining economic growth at virtually any ecological cost.

Environmental justice is linked to social justice as an all-encompassing notion that affirms the value of life – all forms of life – against the interests of wealth, power and technology.

The concept of sustainable development says nothing about justice and has been extensively criticised for the vagueness which has enabled it to be incorporated into neo-liberal approaches. It allows environmentalism to be voided of political content and “be defined as a public concern with environmental deterioration – a concern, not necessarily the object of a social struggle, a cause without conflict¹⁸.” Giddens writes, “‘Sustainable development’ is more of a slogan than an analytical concept¹⁹ and dismisses it as “something of an oxymoron²⁰.”

The discourse of sustainable development is, of course, an advance on earlier protectionist models of environmentalism in that it is concerned with ‘human needs’. But it is generally marked by technicist, pragmatic and reformist attempts to bring environmental externalities into the marketplace through ecological modernisation. The discourse of environmental justice provides a radical alternative. As the leading US anti-toxics activist, Louis Gibbs, has argued, “the growing environmental justice movement asks the question, ‘What is morally correct?’ instead of ‘What is legally, scientifically and pragmatically possible?’”

This is very relevant for us in South Africa. During the apartheid regime, environmentalism effectively operated as a conservation strategy that neglected social needs. The notion of environmental justice represents an important shift away from this traditional authoritarian concept of environmentalism which was mainly concerned with the conservation of threatened plants, animals and wilderness areas, to include urban, health, labour and development issues²¹. Environmental justice is linked to social justice as an all-encompassing notion that affirms the value of life – all forms of life – against the interests of wealth, power and technology.

Linking this broadened notion of justice to sustainability means that we have to rethink the notion of economic growth. Growth has come to mean “primarily growth in profits and wealth for a relative few²².” A transition to sustainability poses profound challenges to capital. There are simply not enough resources for all to enjoy the intensely consumerist and waste-creating lifestyles of the advanced industrial nations. As George Monbiot writes, “The continuous growth prescribed by modern economics, whether informed by Marx or Keynes or Hayek, depends on the notion that the planet has an infinite capacity to supply us with wealth and absorb our pollution. In a finite world this is impossible. Pull this rug from under the dominant economic theories and the whole system of thought collapses²³.”



The key concern of ecological sustainability is not only to protect limited resources but to ensure that resources are used for the benefit of all, not the privileged few. This means linking sustainability to justice. However, the post-apartheid state's overall commitment to neo-liberal principles means the prioritizing of sustainability and efficiency over justice, and a preoccupation with cost-recovery over high levels of cross-subsidisation and equity.

Water

Domestic consumption makes up about 12% of South Africa's water usage. More than half of this goes to the largely white, affluent suburbs with their gardens, swimming pools and golf courses.

Meanwhile, in the name of sustainability and cost recovery, pre-paid water meters have been installed in many South African townships. The logic of these technological tools is to restrain use in the context of scarcity. The basic need for water (a right in terms of our post-apartheid constitution) becomes a commodity to be bought and sold. They have had devastating impacts on the poor.

The basic allocation of 6,000 litres of free water monthly works out at 25 litres per person per day in an 8 person household, enough to flush the toilet twice. The amount should be compared to the average household consumption of 45 – 60,000 litres in the predominantly white suburbs.

The basic allocation of 6,000 litres of free water monthly works out at 25 litres per person per day in an 8 person household, enough to flush the toilet twice. The amount should be compared to the average household consumption of 45 – 60,000 litres in the predominantly white suburbs²⁴.

The growing numbers of golf courses use an average of one million litres of water a day. For example, the Pecanwood Golf Estate near Johannesburg uses the average amount of 1.5 million litres of water a day²⁵. A sight visit in 2009 confirmed that some of the Pecanwood workers, who live in a nearby informal settlement, have to walk 5 km to buy water at R3 for 20 litres. The township residents with pre-paid water meters are fortunate by comparison.



Linking justice and sustainability would involve a higher free component funded through a sharply rising block tariff – in other words, a much higher level of cross-subsidisation from the wealthy to the poor.

The outcome for the poor is deprivation either in the form of the harsh restrictions imposed by pre-paid meters or the service disconnections for the many households that have fallen into arrears.

Energy

In South Africa almost a quarter of households lack adequate access to electricity, either due to the lack of infrastructure or unaffordable pre-paid meters. They have to rely on dangerous paraffin stoves and candles, or the time consuming collection of firewood. The outcome is shack fires that sweep through informal settlements in South Africa almost every weekend. These are fires in which the poorest of the poor lose all

their possessions and sometimes even their lives.

Justice demands the provision of affordable energy for all. Instead, the post-apartheid state is prioritising corporate interests: thus the revelation the parastatal, Eskom, has been supplying electricity to multinationals such as BHP Billiton at 12c a kilowatt hour – below the cost of electricity production. Meanwhile, the free allowance of 70 kilowatt hours per household per month is grossly inadequate. Linking justice and sustainability demands that energy takes the form of not only affordable but clean and safe energy – which means renewable energy.

Access to both energy and water should involve linking sustainability and justice. The problem is the logic of commodification in the form of the cost recovery policies that constitute the foundation of neo-liberal capitalism. The outcome for the poor is deprivation either in the form of the harsh restrictions imposed by pre-paid meters or the service disconnections for the many households that have fallen into arrears.

Conclusion

We are living in a period when our relationship to nature is being dramatically transformed through this process of commodification. More and more of nature is being framed in terms of exchange value and mediated through the market. According to Burawoy this commodification of nature is the “central feature” of the contemporary period of “third wave marketisation” or neo-liberal capitalism²⁶.

The outcome is a world in which billions are chronically malnourished, lacking access to clean water and electricity. This is surely not a world we want to sustain. For all these reasons, Joel Kovel prefers the term *sufficiency*.

“Sufficiency makes more sense, building a world where nobody is hungry or cold or lacks health care or succor in old age... Sufficiency is a better term than... sustainability, as the latter leaves ambiguous the question of whether what is to be sustained is the existing system or not.”²⁷

The threat of ecological collapse means that there is an urgent need for debate and, at least, a questioning of the appropriation of the sustainability discourse by capital, as well as the economic bias which ignores how the emphasis on growth furthers negative distributional and environmental impacts. This involves challenging what Jane Goodall has termed the ‘dark forces’, particularly the vested interests involved in the fossil fuel industry²⁸.

The paradigmatic ‘dark force’ at the moment is BP. This is what the ‘prince of darkness’, the CEO of BP, had to say recently about the transition to a low carbon economy:

“...we have before us a period of economic transition as great as, if not greater than, the Industrial Revolution”²⁹.

Our survival depends on how we act now.

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REVIEW

Richard Steyn is a writer and publisher, and a Trustee of the HSF.

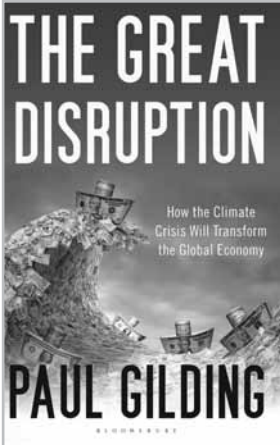
The Great Disruption: How the Climate Crisis Will Transform the Global Economy

When environmental activist and sustainability consultant Paul Gilding delivers his grim warning to business audiences that our planet is overstretched and about to subject us all to a series of devastating ecological, social and economic shocks, the most common responses are anger and denial. And then, as the force of his argument hits home, avoidance and despair set in. But despair is a necessary stage to move through, Gilding suggests in this mind-opening and surprisingly optimistic book, if we are to alleviate a dire situation. Otherwise, our future is one of growing misery and decay.

A former head of Greenpeace and businessman, now attached to Cambridge University's Programme for Sustainability Leadership, Gilding argues that the problem goes wider than climate change and is the result of an overburdening of the ecosystems upon which human life and livelihoods depend. At its current population of more than six billion, the earth is operating at 140 % of its capacity. By 2050, when the population will have climbed to an estimated nine billion, it will be at 500-700 % of capacity. Unless we can drastically decrease resource use and pollution per unit of economic output, something has to give.

Having been in the forefront of the environmental debate for almost four decades, the author is conversant with the arguments for and against climate change, but gives short shrift to the denialists. By the time the debate is settled one way or the other, he says, it could be far too late to change direction. Common sense – not to mention the weight of scientific evidence – suggests that the earth's resources are being used up at a rate that cannot be replenished. Hurricanes, wildfires, heat waves, water shortages, depleted fish stocks, deforestation and famine are symptoms of a cataclysm on the way.

The corollary of Gilding's argument that the planet is overburdened is that the end is nigh for exponential economic growth. While growth may be deeply ingrained in our global political, economic and cultural systems, there will be nowhere to put an economy that is twice the size of the earth's, let alone five times its size. As in the financial crisis of 2008-9, governments will throw everything into the task of trying to restore growth, and indeed growth will occur in some countries and companies at different times. 'But the faster we grow, the faster we will hit the limits'. Our refusal to acknowledge the limits of growth, he asserts, means that we are entering a long period of economic stagnation, geopolitical instability and ecological chaos.



THE GREAT DISRUPTION:
HOW THE CLIMATE CRISIS
WILL TRANSFORM THE
GLOBAL ECONOMY; Paul
Gilding; Bloomsbury
Press; 292 pp.
ISBN: 13-9781608193530
10-1608193535

In answer to the questions most often thrown at him by hostile audiences, Gilding explains that three things drive mankind's ecological impact: population, affluence and technology. Given the difficulties of population control, solving the problem means falling back on technological development, and growing the economy in a different way – with cheaper energy and resources that are renewable.

Here Gilding waxes surprisingly optimistic: although the challenge posed by the Great Disruption is unprecedented in scale and severity from anything yet encountered in history, he believes it's more likely to be a disruption in human evolution than the collapse of civilisation as we know it. Even if we don't respond in time to climate change when it's abundantly clear that we risk wiping out 50% of the diversity on earth, the Great Awakening is certain to come when our economy and lifestyle come under direct threat. Then, and only then, will mankind unleash the innovation and adaptation of which we are capable.

Two responses, the author predicts, will shape the next forty years: the old economy will try to fix itself by continuing to strive for economic growth, but with reduced carbon intensity. The new economy – which will run in parallel with the old – will be more resource-conscious, more closely aligned with the ecosystem, less consumer-oriented and more cognisant of the limits to growth. As the new system overtakes the old, its benefits will include an energy system based on water, wind and solar power that will lead to cleaner cities, cheaper power and better standards of public health.

Instead of growth, our aim should be a 'steady-state', sustainable economy in which there is less rampant materialism, less inequality (of living standards and salaries), and more emphasis on the quality of life.

While the challenge is all-embracing, Gilding believes that climate change, as the most immediate and apparent danger, will be the primary focus in the medium term. This being so, he and his scientific colleagues are calling for a global temperature target of one degree centigrade above what it was at the time of the Industrial Revolution. Two degrees – the target set by the 2009 Copenhagen Conference – will lead to widespread environmental and social damage and is a recipe for failure, he avers.

If Gilding is right, the end of growth will bring about massive economic and political dislocation, because our global system is based on the assumption that economic growth is the source of every country's prosperity and success. Instead of growth, our aim should be a 'steady-state', sustainable economy in which there is less rampant materialism, less inequality (of living standards and salaries), and more emphasis on the quality of life.

Far-fetched or Utopian? I don't think so. It should be obvious by now that an economy predicated on infinite growth on a finite planet is ultimately unsustainable. And that millions more are going to be mired in misery and deprivation if we carry on the way we are.

Even if Gilding's predictions do not all materialise – most notably his conviction about humanity's capacity to achieve a common purpose – we are clearly in for years of convulsive change. Reading this stimulating and challenging book will have far-sighted governments and companies, and you and me, better prepared for it.

REVIEW

Joubert Botha

has been an academic all his life, both in South Africa and overseas in Britain, Holland, Germany and Canada. He holds a doctorate from the City University of Amsterdam on monetary economics. He was a Senior Lecturer at UCT from 1959-1964, a Professor and Head of the Economics Department at Wits from 1972-1999, and Managing Editor of the SA Journal of Economics from 1973-2000, where, in his own words, "I battled through all those years of apartheid, when very few academics from overseas dared publish in the SAJE. I once asked for a review copy from a publisher in New York, only to get my letter back with a scribble in pencil: 'We don't deal with people from your country.' Now all doors are open to us!"

South African Economy and Policy, 1990-2000.

An economy in transition

This book concentrates on developments since the momentous changes in economic policy in the decade of the nineties, especially since the democratic election in 1994. It is the most extensive single volume on the South African economy to date. As the time span is narrow, the twenty-nine chapters – covering almost 600 pages and written by twenty-one well-known economists – delve deeply into changes in the various industries covered.

This limits a review largely to observations of a general nature. The introduction by Stuart Jones gives a very able summary of the unfolding events over the decade. That in itself is difficult for, as he rightly observes, it was a decade of revolution, with politics "capturing the headlines and completely overshadowing" the important economic changes. A number of politically orientated economists soon publicly applauded these welcome changes which, as Jones implies, were somewhat premature in the light of subsequent developments. His outline is forthright and candid – "warts and all" – the underlying theme being the consequences of appointing to top positions party-loyal individuals totally unqualified for advanced administration at national, provincial and even local levels. The book, implicitly, purports to show what that entailed, although the various authors wisely steered clear of describing, let alone analysing, events on a mundane level.

Initially the most urgent question – which held everyone in suspense at the time – revolved around systemic aspects: uncertainties about the economic policy of leaders whose ideologies had been moulded over many years in socialist countries. In a succinct overview first chapter, Philip Mohr mentions the dramatic manner in which the change had come about. In January 1992 at the Davos meeting in Switzerland, Nelson Mandela, confronted by the *laissez faire* sentiments of global economic leaders, suddenly "discarded his prepared speech and adopted a much more moderate stance" (p.19). One can imagine the upheaval a prepared pro-socialist address would have caused among delegates, many of whom were representing private interests of world renown, all still stunned by the then-recent cataclysmic implosion of the economic order in the socialist countries.

That set the tone for what was about to happen in South Africa. But it was merely the beginning. Every relevant organisation, through seminars and published strategies, came to the fore with suggestions and plans for a future economic system for South Africa, from the left wing ANC/Cosatu/Communist Party alliance on the one side, to the free market ideas of organised business on the other. This is ably recorded by Mohr (pp. 18-21), who does not, however, spell out in greater detail the arguments advanced by the major political parties, especially those advocating a socialist state. This is unfortunate. It is interesting – and important to students – to come to grips with the essence of the arguments pro and contra in the various published

documents, especially in those whose authors were obviously left unimpressed by the disastrous fairly recent upheavals in Eastern Europe.

The editors themselves made important contributions to the book. Robert Vivian wrote on the specialised, technically complex and very important question of retirement funds and the insurance industry, a major channel of national savings into productive activity. It is a rare field, not known for its interest among academic economists; hence the few whose views and analyses have so far appeared in print.

Stuart Jones wrote no less than eleven chapters and summaries, some of them technically difficult, and all displaying his wide interest in various fields. His grip on the financial sector is remarkable for his description and in-depth analysis of the kaleidoscopic changes in the private banking sector, of the stock exchange, trade and mineral policies, etc. As the doyen of economic historians in South Africa, Stuart has kept the flag flying against heavy odds for a place for economic history in university syllabi. His contributions display the wide sweep of knowledge which one has come justifiably to associate with economic history as an intellectual discipline.

There is no discussion within the broader framework of the wholly unwelcome demographic changes since 1994, with unknown millions of unskilled immigrants entering the country, either as refugees or as work-seekers – and that in a country suffering from what is regarded as having the highest rate of unemployment, and HIV/AIDS, in the world

The reader could expect the authors to have contrasted briefly – very briefly – the current situation with that of the past. The structure of the book renders that difficult because of the ten separate chapters on policy in Part III, which in a way cover ground similar to that of preceding chapters on single industries.

This is true especially of agriculture and demography, both fields that had undergone substantial, dramatic, structural changes since 1994. Very early on in the book appears a detailed chapter on agriculture, with nine tables and thirteen graphs on the statistics of the period, but no emphasis on the veritable revolution that that sector had undergone since 1994. Mention of this is made in Part III, albeit in catalogue fashion, without the kind of sober analysis which one could have reason to expect. Only then is the background to the events covered in Chapter 3 put in some perspective. There is no discussion of the plight of farming under a regime imbued with the principles of central control within the framework of a socialist state. This must largely be deduced from the figures in the tables and graphs.

Much the same holds for the chapter on demography. There is no discussion within the broader framework of the wholly unwelcome demographic changes since 1994, with unknown millions of unskilled immigrants entering the country, either as refugees or as work-seekers – and that in a country suffering from what is regarded as having the highest rate of unemployment, and HIV/AIDS, in the world – or the equally unknown millions of mostly highly qualified emigrants in search of greener pastures elsewhere.

In fifteen tables on conventional issues, much is said on straightforward questions such as fertility rates and connected matters, leading to the lame conclusion: “The single most important development was the continuing drop in fertility, representing a drive to sociological modernisation” (p.46).

SOUTH AFRICAN
ECONOMY AND
POLICY, 1990–2000
An economy in transition



STUART JONES AND
ROBERT W. VIVIAN (EDS),
Manchester University
Press, 2010, 580pp.
ISBN: 978-0-7190-8150-7
0-7190-8150-5

The drastic, virtually immeasurable change in the composition of the population and the work force is simply swept aside by the inane and undefined expression of a “drive to sociological modernisation.” When does a country become sociologically “modernised” – following a “drop in fertility rates”? What has been government policy in this respect, if any? To what extent has the demography changed, and unemployment been aggravated, by the influx of unskilled emigrant labour and the efflux of qualified workers? On these highly relevant matters the author is silent.

This raises an important question in regard to style in the writing of economics. When economic events are “completely overshadowed” by politics (*supra*), analysts could be expected to consider the arguments within the governing political framework, perhaps even to the extent of descending to the level of analysing economic agendas of the contending political parties. That is not, of course, “pure” economic analysis. It represents the equally important application of economic principles to burning issues of the day, analysed in terms of the general economic desideratum of efficiency, productivity and equity. The reader might have expected less emphasis on conventional statistical details – some indifferently analysed – and more on related systemic questions under the new dispensation, and the occasional official grumbings for more State control and the nationalisation of strategic industries.

The book, on the whole, constitutes an important and substantial contribution to South African economics literature, thanks to what must have been a Herculean editorial task.

REVIEW

Brigadier Ewen McLay

is a practising counterinsurgent. He joined the British Army towards the end of the Cold War and since then has accrued much experience of stabilisation operations and countering insurgency. His operational experience is drawn from Northern Ireland, the Balkans, Iraq and some considerable time in Afghanistan. His most recent deployment saw him running a strategic advisory team for the commander of Regional Command (South) in southern Afghanistan over the period November 2009 - November 2010. He will return for his third tour of southern Afghanistan in May 2012.

Victory Among People – **Lessons from Countering Insurgency and Stabilising Fragile States**

Right up front in the introduction to David Richards' and Greg Mills' Victory Among People – Lessons from Countering Insurgency and Stabilising Fragile States is the assertion that "conventional war is a thing of the past". This bold starting point begs an urgent question: are nations presently developing security organizations and industries that are relevant to future conflict?

It is true that predicting the future is an imprecise science. Some time ago, as a student in Glasgow, I was regularly relieved to see that the man outside the tube station proclaiming 'the end is nigh' continued to live yet another day. Despite the passing of many apocalyptic deadlines, I am told that this harbinger of doom is still there, and in rude health too. But predict the future we must. Professor Sir Michael Howard, President Emeritus of the International Institute for Strategic Studies, offers wise advice to those involved in the future gazing business: "No matter how clearly one thinks, it is impossible to anticipate precisely the character of future conflict. The key is to not be so far off the mark that it becomes impossible to adjust once that character is revealed."

The British Armed Forces' Development, Concepts and Doctrine Centre (DCDC), one of many organisations engaged in shining a light on the future, recognises the primacy of the modern insurgency in mapping global strategic trends to 2040. Its influential *Future Character of Conflict* paper argues that global trends indicate increasing instability and growing opportunity for confrontation and conflict. In particular, the changing dynamic between the major powers will influence how nations prepare to fight. DCDC predicts that globalisation will accelerate the pace of change in the character of conflict and create a 'Global Joint Operations Area'. State failure, it posits, will be one of the dominant and defining features of future conflict. Further, it assesses that preventative engagement may help to mitigate the occurrence and consequences of state failure if the military instrument is used as an integrated element of what it terms 'smart power'. DCDC also postulates that access to resources (energy, food or water) will drive states' security interests, and that control over these resources and their methods of distribution will be a crucial feature of conflict in the international system. These factors may dictate why we fight, where we fight and thus how we fight. Fuelled by insecurity, imbalance and grievances (real or perceived), it also seems likely that the threat of extremist non-state actors will remain a significant threat to legitimate polities. Lastly, the future character of conflict could result in nation states and alliances having less discretion than may be presently assumed.

This challenging backdrop painted by DCDC presents a powerful case for the study of the anatomy of insurgency, by those with a responsibility for applying the political, informational, diplomatic, security and economic levers of power. David Richards' and Greg Mills' *Victory Among People* provides a rich starting point for this study.

Victory Among People is much more than just a review of contemporary conflicts. It needs to be at the top of the reading list for any prospective or practising counterinsurgent – politician, government official, development specialist or soldier. The compendium takes the reader beyond academic commentary and sets out convincing deductions and recommendations for preventing or countering insurgency. The defining strength of *Victory Among People* is drawn from the dense and rich case studies used to build the compendium. The deductions and themes emerging throughout provide essential reference points that will help inform real decisions, actions and reactions.

Much ink has been spilt in recent years on the subject of contemporary conflicts. What makes *Victory Among People* different to the plethora of other studies of counterinsurgency is the breadth, diversity and range of perspectives. The compendium comprises some 21 standalone chapters which, collectively, set out regional case studies of 16 campaigns and several specific capabilities that are central to delivering progress in modern conflicts. The specific capabilities tackled in the compendium include highly informed studies of *intelligence*, *information operations* and *special forces*. Each of these capabilities, when handled with precision, provides a potent 'weapon' in the counterinsurgent's armoury. As a practising counterinsurgent and avid reader of whatever comes off the press on the subject, I found the compendium to be highly convincing and credible for a number of key reasons.

First, it is true that no one insurgency is the same as another – they are all distinct. The alchemy of the political, geographic, cultural, demographic and security variables in each conflict will never combine to produce the same local or, indeed, strategic conditions. It follows that there can be no single master-plan for countering insurgency. Attempts to import a successful strategy from one campaign into another are likely to court disaster. But, as Greg Mills explains in his introduction – drawing on Churchill's dictum, "The farther backward you can look, the farther forward you are likely to see" – by examining a broad and diverse set of regional case studies of conflicts separated by continents and decades it is possible to extract key themes that are common to all. The regional case studies make compelling reading, and range from analyses of African conflicts, such as the Congo, Uganda and Somalia, to countries that are in the post conflict phase, such as Liberia and Sierra Leone. In addition, *Victory Among People* looks towards Asia and unpacks seemingly intractable struggles in Kashmir, Afghanistan and Southern Thailand. It also brings to bear first hand analysis from conflicts that do not sit neatly in any hard and fast categories, such as Colombia and Bangladesh. Whilst each chapter stands by itself, when moving through the compendium (in any direction you choose), the steady drum beat of common themes thumps home the importance and credibility of *Victory Among People*. Each of the following resonated powerfully with me: the utmost primacy of politics; the population is the prize; armies (especially foreign armies) do not win insurgencies; clumsy execution of development and stabilisation programmes will fuel the insurgency; national principles and values must be attuned to the local environment; the fundamental need for a comprehensive approach; local knowledge and local ownership of the problem is decisive.

Second, *Victory Among People* is not constructed by distant academics drawing on

VICTORY AMONG PEOPLE

Lessons from Countering Insurgency
and Stabilising Fragile States

Edited by David Richards and Greg Mills

VICTORY AMONG
PEOPLE – LESSONS
FROM COUNTERING
INSURGENCY AND
STABILISING FRAGILE
STATES. Edited by
General Sir David
Richards and Greg Mills.
ISBN:
(HB) 0-85516-158-2
(PB) 0-85516-163-9

second- and third-hand evidence. Instead, the sixteen authors contributing to the compendium represent a stellar and highly credible group. Most still have dust on their boots from recent first-hand operational experience, and each is a highly regarded practitioner with deep and broad experience of contemporary insurgencies. It is impossible to single any one of them; rather, it is their collective experience which underpins the credibility and relevance of *Victory Among People* as a whole. Reading the final section of the compendium, 'About the Authors,' first helps calibrate the considerable weight deserved by the analysis and recommendations made throughout. What's more, the compendium was developed in a federated way, with significant latitude being given to each of the authors. This does attract some risk, in that unilateral efforts to examine discrete campaigns could present befuddling contradictions. But the federated tactic worked: the emergence of a set of powerful common themes from unilateral analyses lends much authority to the broad conclusions drawn.

Third, most recent studies on conflict provide a one-dimensional view of the campaign under scrutiny. *Victory Among People* is unique in that it examines a number of campaigns from the insurgent's perspective. This novel and instructive approach underscores the fact that insurgents and counterinsurgents are often different sides of the same coin. They both compete for the same prize – which is fundamentally about winning the support of the population. When serving as the commander of NATO's International Security Assistance Force in Afghanistan, General Stanley McCrystal often described counter insurgency as a broad ranging approach aimed at '*winning the argument*'. The chapter scrutinising conflict in and around Rwanda provides an insight into the thinking and approach to insurgency developed by the Rwanda Patriotic Army (RPA). The winning blend for the RPA included treating the opposition and population humanely, having a clear political objective which could be understood and bought into by the population, and creating a learning culture where tactics and approach developed at a faster rate than the opposition's. While the genocide in 1994 made the RPA's victory an imperative, it was understood that there ultimately would need to be political accommodation that was inclusive to all.

Books on countering insurgency too often conjure up images of a bandoliered and weapon-carrying military. But in fact we are all counter insurgents in some way or another. Militaries do not win insurgencies.

As someone who has been at the delivery end of stabilisation operations and counterinsurgencies for over 20 years, these themes represent the Holy Grail for the practising counterinsurgent.

In summary, David Richards and Greg Mills have pulled together a classic reference manual or operational guide for countering insurgency. The compendium gets beyond froth and truisms to provide practical guidance for understanding and tackling insurgencies. Books on countering insurgency too often conjure up images of a bandoliered and weapon-carrying military. But in fact we are all counter insurgents in some way or another. Militaries do not win insurgencies. In fact, if left to operate in isolation from the more decisive aspects of countering insurgencies, they lose them. As David Richards and Greg Mills note in the introduction, "*victory among people is down to managed cooperation between arms of government over a sustained long-term timeframe with politics at the forefront at all times*".

Victory Among People, therefore, is for all of us.

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