



Mitigation Action Plans & Scenarios

RESEARCH PAPER

What was the contribution of the Long Term Mitigation Scenario process to South African climate mitigation policy?

ISSUE 29

Developing countries exploring pathways to climate compatibility

What was the contribution of the Long Term Mitigation Scenario process to South African climate mitigation policy?

Date: 06/05/2015

Country: South Africa

Authors: Emily Tyler

Marta Torres Gunfaus

Internal review: Brett Cohen

External review: Chantal Milne (Policy Studies, University of Cape Town)

Editor: Michelle du Toit

© MAPS 2015

Disclaimer: The contents of this paper are the responsibility of the authors, and the views expressed therein those of the author alone.

The following citation should be used for this document:

Tyler, E., Gunfaus, M.T., 2015. What was the contribution of the Long Mitigation Scenarios process to South African climate mitigation policy? Cape Town. MAPS.



Developing
countries exploring
pathways to climate
compatibility

Table of Content

1. Introduction	1
2. Objectives	1
3. Methodology	2
4. The LTMS process: What was it?	3
4.1 LTMS Key Findings	4
4.2 Core component	5
4.2.1 Process component	6
4.2.2 Technical component	6
4.3 The LTMS and the policy stages model	7
5. How did the LTMS get onto the agenda?	8
5.1 The international Climate change negotiation process	8
5.2 A policy window	8
5.3 Policy champions	9
5.4 Mandate	10
6. Did the LTMS achieve its objectives?	10
6.1 Building understanding and focus amongst stakeholders	10
6.2 Developing robust, ambitious scenarios fro climate action in South Africa	12
6.3 Informing the international process	13



Developing
countries exploring
pathways to climate
compatibility

6.4 Long-term climate policy	13
7. National climate mitigation policy in South Africa post the LTMS	14
7.1 National climate policy evolution in South Africa 2005-2015: A chronology	14
7.2 A loss of momentum: The two years after the LTMS	15
7.3 The LTMS pushback (2010)	15
8. The contribution of the LTMS towards climate mitigation policy in South Africa	16
8.1 The post -LTMS vacuum	17
8.2 Policy prescriptive or policy relevant: The breakdown of trust	18
8.3 The impact of international climate change policy	19
8.4 Political economy and policy integration	20
8.5 Moving from targets to implementation	21
9. A Conclusion	22
9.1 Reflections on the relevance of this review for the MAPS processes and beyond	23
10. Bibliography	25
Appendix A: Glossary	27
Appendix B: Interviewee List	28
Appendix C: Interviewee background document and question prompts	30



Developing
countries exploring
pathways to climate
compatibility



Developing
countries exploring
pathways to climate
compatibility

1. INTRODUCTION

In 2005 the South African Cabinet (referred to as Cabinet from now onwards) mandated the Department of Environmental Affairs and Tourism (DEAT) to commission the Long Term Mitigation Scenario (LTMS) process. Lasting two years, the LTMS was a combination of modelling and facilitated stakeholder engagement, which provided Cabinet with a set of scenarios describing what South Africa could do to mitigate climate change.

A decade later the LTMS is acknowledged as being the “foundation” of South African climate mitigation policy, both domestically and internationally (data source: Interviews). However the extent to which climate mitigation implementation has become a reality in the country is questionable. The LTMS also provided the inspiration for the Mitigation Action Plans and Scenarios (MAPS) Programme (www.mapsprogramme.org) which facilitated similar processes being run in Chile, Colombia, Peru and Brazil. Given this influence of the LTMS both within South Africa and in the developing world more broadly, the MAPS’ research team wished to deepen the understanding of the process, and the role it has played in South African mitigation policy subsequently. We have approached this task by reviewing the LTMS process. Our objectives are primarily exploratory and descriptive, and we draw on academic public policy and administration literature to provide theoretical structure to our analysis. We also, tentatively suggest that aspects of our findings may be relevant to countries wishing to advance and deepen climate mitigation policy.

2. OBJECTIVES

The policy development process is complex, combining a number of ‘streams of activity’ (Kingston, 1995, as cited in Hill, 2009) and ‘interrelated decisions’ (Jenkins, 1978 as cited in Howlett, M. Ramesh, M. Perl, 2009 p. 6). As a result it is deeply context specific: ‘The object of study is normally a unique sequence of event’ (Hill, 2009p.9). As such, despite a strong desire for public policy research to be prescriptive (i.e. to contribute to positive policy development), it very rarely is more than descriptive (Hill, 2009).

Despite this, our interest in the impact of the LTMS on climate mitigation policy in South Africa is a forward looking one: We want to understand how to do similar processes more effectively elsewhere and how to approach mitigation policy differently to catalyse more significant climate mitigation policy action. So, whilst we acknowledge that our objective is constrained to description, we do take the space to reflect on this description, and conclude by suggesting that aspects of our findings may be worth considering for approaching climate mitigation policy more generally. That the LTMS took place a decade ago strengthens the reflective capacity of this research.

Specifically therefore, the paper will:

- Describe the core elements of the 2005-2007 LTMS process;
- Consider how it entered the policy agenda in South Africa;
- Consider whether it met its objectives;
- Describe its role in the ongoing development of climate mitigation policy in South Africa; and

- Reflect on what, if anything, our analysis could suggest for other countries or indeed for ongoing climate change mitigation policy in South Africa.

3. METHODOLOGY

The methodological approach comprised a literature review together with a series of face-to-face open-ended interviews. This combination was chosen in an attempt to capture and understand the many different perspectives on the LTMS process. We found this approach to be particularly important given that we have the luxury of hindsight and because South Africa is, at the moment, in the stage of formulating climate mitigation policy; a contested and political process of determining who bears the cost of a low carbon transition (Marquard & Godinho, 2013).

The literature review focused on academic public policy and administration literature, and literature documenting the LTMS and climate mitigation policy in South Africa. The former provided possible theoretical explanations and structure for the interview findings, and the latter assisted in contextualising the interview data and expanding on certain themes. In particular we considered the two books written about the LTMS process (by LTMS project lead Harald Winkler and facilitator Stefan Raubenheimer), and the two reviews undertaken at the time, one by the World Bank (Wang et al, 2008), and the other by an environmental NGO, Earthlife Africa (Hallowes, 2008).

A total of seventeen interviews were conducted between August and November 2014, mostly in person, although some were done using internet-based telecommunications software. Full audio recordings of all except the telecommunication interviews were taken. Key participants in the LTMS, together with people who are currently involved in the development of South African climate change mitigation policy were interviewed. These informants were chosen with consideration for the following criteria:

- Inclusion of a range of perspectives including business, labour, government, civil society, process designers, current policy formers (development and mitigation), and academics;
- Familiarity with contemporary South African climate mitigation policy and / or its implementation;
- Familiarity with South African development policy (in particular perspectives from outside the climate mitigation community of practice);
- A level of familiarity with the LTMS itself; and
- Availability.

A full list of interviewees, together with the background information form sent to the interviewees, are included in the Appendices. Whilst agreement was obtained from most interviewees that the majority of the interview could be attributed, in certain instances agreement to attribute specific statements, sections or occasionally whole interviews was denied. In order to honour this within a small policy community, and also to facilitate the analysis and its reading, all interview data has been kept anonymous in this final draft. Where material is sourced directly from the interviews this is either identified in the text (e.g. interviewees said...), is referenced as (data source: Interview/s), or where we felt that particular words or phrases used by the interviewees were useful in their descriptive capacity we have indicated this through the use of double quotation marks. The particular choice of referencing used in each instance is determined to aid paragraph flow and readability.



It is to be noted here that accessing perspectives of a particular process that occurred almost a decade ago was a challenging exercise. Time and subsequent personal experience clearly brought certain aspects of the process to the fore and suppressed others. We attempted to counter this by structuring the questions to encourage interviewees to distinguish between current responses and views, and those at the time of the LTMS, acknowledging that this was neither easy nor necessarily accurate.

Further, we acknowledge that as authors specialising in the field of climate mitigation we have an inbuilt bias in favour of advancing significant emission reductions in line with the findings of the Intergovernmental Panel on Climate Change (IPCC), and a belief that ways can be found to achieve this in a development context. Neither of the authors were directly involved in the design or implementation of the LTMS process, although we are part of the current MAPS Programme. As far as possible we have worked to maintain an objective stance towards the research presented in this paper, but as many in the social sciences have written (including Hill, 2009) it is very difficult, if not impossible to maintain complete neutrality.

Finally, we are particularly aware of the immediate South African context of policy formulation into which this review is written. Our aim is not to influence this context specifically, and as far as possible we have attempted only to listen, reflect and then to organise and structure what we have heard as neutrally as possible. But the caution of Hill and others above remains.

4. THE LONG TERM MITIGATION SCENARIO PROCESS: WHAT WAS IT?

The LTMS process took place between 2006 and 2008 (Winkler, 2010), was convened by DEAT, and led by Harald Winkler a climate mitigation academic of international standing based at the Energy Research Centre (ERC) at the University of Cape Town. During that time, a core group of stakeholders, the Scenario Building Team (SBT) met over six times (Winkler, 2010). The SBT through a facilitated process used data and modelling tools to identify a set of emissions trajectories for South Africa between 2010 and 2050. These trajectories were underpinned by a wealth of technical documents and technical research meetings, which analysed and defined possible individual mitigation actions in the South African context. The LTMS also included a high level component where the trajectories were presented to a group of South African corporate Chief Executive Officers (CEOs). The findings were synthesised into a high-level policy document (Scenario Building Team, 2007) that were sent to Cabinet as part of a suite of climate change documentation (data source: Interview). Later in 2008, Cabinet released a Vision, Strategic Direction and Framework for Climate Change (see Van Schalkwyk, 2008).



4.1 LTMS Key Findings

The LTMS generated a set of strategic options and scenarios. These are depicted in Figure 1 below.

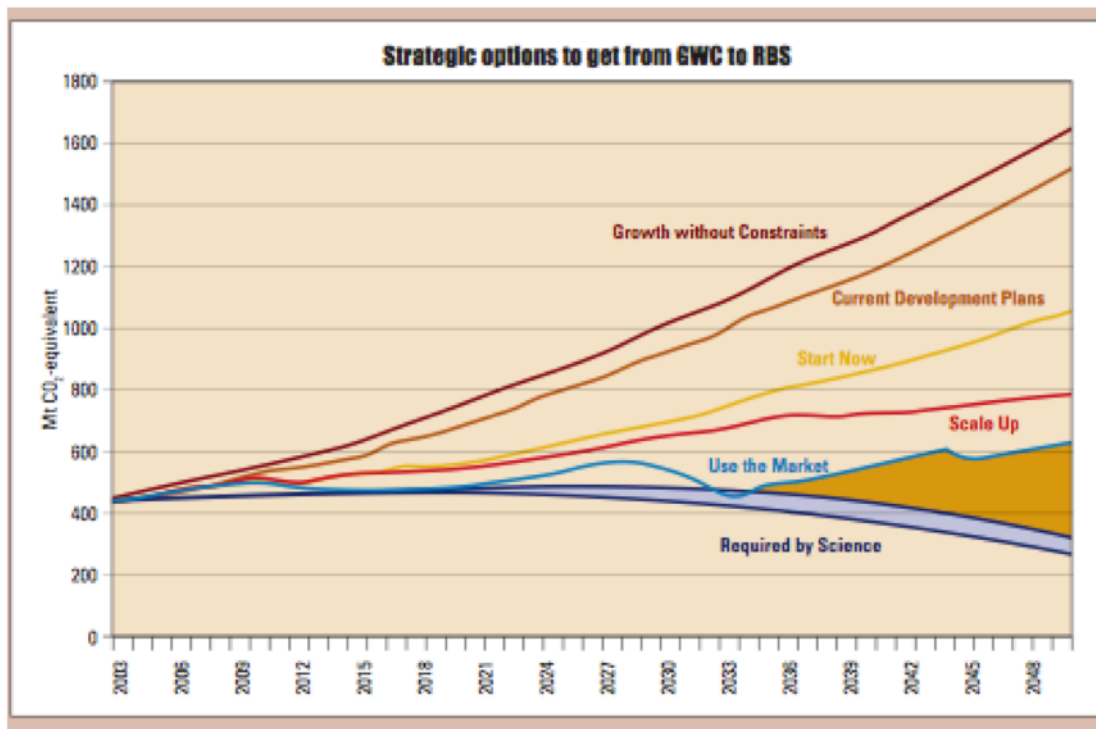


Figure 1: The LTMS process: Scenarios and Strategic Options (Scenarios Building Team, 2007)

The 'Required by Science' (RBS) scenario comprises an emissions path whereby South Africa takes its equitable share of the global mitigation effort required, according to the Intergovernmental Panel on Climate Change's (IPCC's) Fourth Assessment Report, to adhere to the two degree global warming limit agreed to by the United Nations Framework Convention on Climate Change (UNFCCC) (data source: Interview). This scenario was not interrogated by the SBT. It represented an aspiration, and the peaking year was arbitrarily chosen (data source: Interview). Interviewees variously described the RBS as "just science", "South Africa playing its part", a "scientific exercise based on political assumptions", and as something that was "unachievable for us".

The 'Growth Without Constraints' (GWC) modelled scenario presents the emissions from an economy and society where the patterns and dynamics that typified South Africa at the time would continue to 2050 (SBT, 2007). The GWC scenario was adjusted for mitigation-relevant policies already in place to provide the 'Current Development Plans' scenario.

'Start Now' is a trajectory made up of economically sensible, high co-benefit, state-led mitigation options which are implemented through state action (Scenario Building Team, 2007). 'Scale Up' expands the set of 'Start Now' options, with implementation still state-led. The final option, 'Use the Market', employs a different methodology, that of administering a rising carbon price and economic incentives to the GWC scenario. Finally, a Computable General Equilibrium (CGE) model was utilised to assess the social implications of the various scenarios, in the form of GDP, job creation and poverty reduction.

A key finding of the LTMS process were the unveiling of a four-fold increase in emissions by 2050 under the GWC trajectory. This was found as likely to be unacceptable to the international community and a 'high risk approach on other grounds, such as rising oil prices, carbon constraints in trade, and advancing impacts' (Scenario Building Team, 2007, p. 25). The final

LTMS report further reported that the SBT ‘concluded unanimously that Growth Without Constraints is neither robust nor plausible in a world that has come to grips with climate change’, and thus left ‘Required by Science as the more robust and compelling scenario’ (Scenario Building Team, 2007, p. 12). The SBT also concluded that achieving the RBS trajectory would require a massive effort, including regulatory and economic instruments, coupled with an escalating tax and a range of further actions that needed immediate exploration, ranging from future technologies to behaviour change. They emphasised the need for ‘strong, committed and engaged South African leadership in government, business and civil society, coupled with international alignment and active support’ (Scenario Building Team, 2007, p. 25).

The report included further implications in terms of cost and multilateral negotiations, as well as recommendations for next steps. It was suggested the next step was to move towards a development path consistent with one of the two scenarios presented (RBS or GWC). If RBS was the path chosen, the LTMS report suggested the steps to follow to advance implementation, mainly in relation to the few largest mitigation interventions. It further advocated the finalisation of a long-term climate policy for the country via a more formal policy process, on the basis of which government would choose a strategy (Scenario Building Team, 2007).

4.2 Core components

The LTMS was described by interviewees, and indeed was specifically designed (Winkler, 2010; Raubenheimer, 2011), as consisting of two core elements. Articulated, grouped and weighted differently by different interviewees, these could be roughly categorised as a process component and a technical component. ‘We wanted an ‘emergent’ exploration by multiple stakeholders of various future mitigation pathways, backed up by strong research’ (Raubenheimer, 2011, p. 18). A few interviewees referred to the structured combination of both in one process: One stakeholder suggested that the LTMS process both interpreted science and developed a scientifically robust evidence base in a collaborative and accessible way for policy-makers, while another suggested it was an approach that enabled discussions about things that are typically only discussed at an ideological level.

A number of interviewees noted that aspects of the core elements made the LTMS uniquely applicable to South Africa, and that this was important for ownership to occur. South Africa has a rich tradition of using scenarios to tackle complex problems (Segal, 2007) and at the time of the LTMS there was a lot of scenario work happening in the country (data source: Interview). Following from the negotiated settlement that ushered in South Africa’s democracy in 1994, participation and consultation have been important bases for establishing policy legitimacy (Booyesen, 2006; Venter & Landsberg, 2011). The facilitated stakeholder process also fits well with SA’s “Indaba”¹ tradition (data source: Interview), something which is not necessarily prevalent in other countries (Personal Communication Rudnick, 2015).

¹ An Indaba is an important conference held by the izinDuna (principal men) of the Zulu or Xhosa peoples of South Africa. The term comes from a Zulu language word, meaning "business" or "matter". Currently, the term has found widespread use throughout Southern Africa and often simply means gathering or meeting.



4.2.1. Process component

The process component was described variously by interviewees as a dialogue, a visionary space, participatory, bringing together strategic thinkers from different sectors and perspectives willing to talk to each other, and as outreach work. Stakeholder consultation formed a core element at the outset, prior to climate mitigation even having been clearly articulated as a policy problem.

The facilitation, led by Stefan Raubenheimer, an experienced facilitator with deep knowledge of climate mitigation issues, was seen as key to effectively manage this process (data source: Interviews). Interviewees regarded facilitation as being crucial for its mediation function, creating an environment of trust and ensuring an inclusive process. It was also regarded key for its role in translating complex and technical discussions into more accessible language. The process aspect was found by interviewees to be important to capacitate stakeholders, particularly government, to engage with a cross-silo issue, and to create interesting relationships.

SBT members participated in the LTMS for different reasons and had differing expectations. Therefore the role of the process was crucial in creating a common space. Some members, including government participants and practitioners, were personally passionate about the environment and climate change mitigation. Others found it an interesting intellectual space, with many opportunities to learn. Other members were told to participate as part of their job and their level of engagement varied, often depending on their previous knowledge on energy and climate issues. Interviewees considered their expectations to have been met to a large extent by the end of the process, some suggested that expectations were actually exceeded with only one interviewee finding their expectations were only met to a limited extent.

4.2.2. Technical component

The technical component of the LTMS comprised data, assumptions, mitigation wedges, modelled trajectories and scenarios. An existing MARKAL energy model of the South African economy was used as a basis from which to project emissions scenarios to 2050, with assumptions about South Africa's economic and population growth agreed by the SBT (data source: Interview). The SBT further agreed to a range of mitigation technologies, which were researched by teams based at the ERC. The technical detail is extensively captured in a technical report (Energy Research Centre, 2007). The mitigation technologies were then bundled together to derive the strategic options 'Start Now' and 'Scale Up' in MARKAL. These possible futures ended up as 'scenarios re-engineered' with modelled, evidence-based scenarios considered against context-driven scenario (Raubenheimer, 2011). A dynamic CGE model was run with the results from the MARKAL model to indicate the social and economic impacts of the various scenarios and strategic options

The LTMS technical component for the first time identified the sources of emissions in the South African economy (data source: Interview), together with the costs of mitigation and the social impacts (Scenario Building Team, 2007, Interview 13). The LTMS was agnostic in terms of the mitigation technologies it included (data source: Interview) which was seen both as a strength of the process and a source of contention (Hallows, 2008, data source: Interview).

The rigour of the technical component and its scientific approach were seen as being key to the credibility of the results. It allowed for a data-based discussion about themes that "otherwise you have ideological discussions about" and produced a sound basis for future work. Still, interviewees found that the emphasis was never on accurate numbers, rather overall ranking, vision, and scenario development.



4.3 The LTMS and the policy stages model

The concept of public policy development stages is well established in the literature as the 'stages model' or 'policy cycle' (initially developed by (Lasswell, 1951), with its evolution summarised in Hill, 2009)). The initial stages of the cycle are those of agenda-setting, or 'deciding where we want to go'. Then follows the policy formulation stage 'deciding how to get there', and finally the implementation phase of 'going there' (Hill, 2009). Hill cautions however that there is often little sequencing and lots of iteration in real life policy, and that the stages model is most usefully understood as a research tool to impose some degree of order to the policy research process.

The LTMS fits very clearly into the agenda-setting phase of the cycle. Climate mitigation was a new domestic policy issue in 2005, with policy initiatives such as the Climate Change Response Strategy (Department of Environmental Affairs and Tourism, 2004) and 2005 National Climate Change Conference (Department of Environmental Affairs and Tourism, 2005) scoping and exploratory in nature. Howlett et al (2009, p. 92) cite Baumgartner and Jones' description of agenda-setting as being 'about the recognition of some subject as a problem requiring further government attention'. They also caution that 'this does not in any way guarantee that the problem will ultimately be addressed or resolved, by further government activity' (2009, p. 93).

The LTMS was an early example (in South Africa) of evidence-based policy making. The evidence-based approach only became more common in the country later on (South African Presidency, 2011). Evidence-based policy making is a particular contemporary approach to policy-making internationally which aspires to problem solving unsullied by politics (Hill, 2009). The attainableness of this is a significant issue, to which we will return later.

5. HOW DID THE LTMS GET ONTO THE AGENDA?

The first sign of the LTMS in the public arena was when the 2005 National Climate Change Conference agreed, amongst other activities, to 'initiate a detailed scenario building process to map out how South Africa can meet its Article 2 commitment to greenhouse gas stabilisation whilst ensuring its focus on poverty alleviation and job creation; and initiate a participatory climate change policy development process' (Department of Environmental Affairs and Tourism, 2005). Subsequently, Cabinet mandated DEAT to do this, under the auspices of the National Climate Change Committee (NCCC). This enabled DEAT officials to further develop the LTMS concept with process and research designers, Stefan Raubenheimer and Harald Winkler. In 2006 the first meetings of the SBT were convened (Winkler, 2010).

By the mid-2000s in South Africa post-Apartheid, policy making had moved predominantly into the sphere of implementation. Therefore, the focus of policy making efforts in the country was incremental changes to existing policy issues (Booyesen, 2006). It is interesting then that such an innovative pre-policy process got onto the agenda in an emerging policy area. There appear to be a number of mutually supportive explanations for this.



5.1 The International Climate Change Negotiation Process

At the time, the international climate change negotiating process was evolving. The interviewees found that Kyoto² was becoming politically unsellable and members of South Africa's "progressive" negotiating delegation foresaw a time in the not-too-distant future where developing countries would be under pressure to "do something" with regard to mitigation. The fear of having an undesirable choice imposed upon the country because of lack of preparation as well as the promise of funding for mitigation technologies under the UNFCCC process provided a further incentive to South Africa to adopt a proactive approach (data source: Interviews).

Further, it may be that this delegation, drawn from across society and working together in high pressure situations, had developed a degree of unification (data source: Interview) and maybe even of ideological cohesion (Dunleavy, 1981 in Hill, 2009), creating an 'advocacy coalition' (Sabatier and Jenkins-Smith, 1993 in Hill, 2009) for promoting mitigation policy which could then be extended to the domestic policy environment to ensure a policy outcome. John (2001 as cited by Hill, 2009, p. 256) supports this, noting that 'public decisions rest less within hierarchically organized bureaucracies, but take place more in long-term relationships between key individuals located in a diverse set of organisations'.

5.2 A Policy Window

According to Kingdon's 1995 streams approach to policy, changes occur when streams of problems, policy proposals and politics are joined (Hill, 2009). A policy window is described as an opportunity to set or shape a policy agenda, usually involving policy entrepreneurs who according to Crenson and Ginsberg are 'people who invest resources in hopes of a future return in the form of policies they favour' (Farley et al., 2007, p. 346)). The entrepreneurs take advantage of the ability to link solutions to problems, and to situate these within a favourable political environment (Howlett, M. Ramesh, M. Perl, 2009, p. 104). Birkland in Hill (2009) similarly describes focus events which can catalyse policy action if interest groups are around to exploit them. These events can bring the problems, solutions and favourable political forces together to force an issue onto the formal policy agenda (Farley et al., 2007).

Kingdon theorises that policy windows can be predictable or unpredictable, and do not stay open long. A number of focus events may have created the window for domestic climate change mitigation policy in South Africa at the time of the LTMS. Developments in the UNFCCC process described in the previous section were one. Internationally a "perfect storm" had developed in the years during which the LTMS was being conducted. There was the publication in 2006 of Nicolas Stern's review of the Economics of Climate Change, Al Gore's documentary 'An Inconvenient Truth' released in the same year, and the IPCC's Fourth Assessment Report in 2007. The period 2005-8 has been described as 'watershed years for climate science' (Raubenheimer, 2011, p. 5). The problem of climate change mitigation was articulated from a number of perspectives, with political forces appearing favourable given that climate change was on the agenda at all G8 events within that period (data source: Interview). In South Africa, Stern's tour of the country to promote his review, heightened awareness of the issue around the time of the LTMS, particularly within National Treasury (data source: Interview). Climate change was under the spotlight, raising the profile and prioritisation of the LTMS process.

Simultaneously, the private sector had been drawn into the issue of climate mitigation through the National Business Initiative's Business and Energy working group. This group worked towards drafting a compact with government around

² The Kyoto Protocol was adopted in Kyoto, Japan, on 11 December 1997 and entered into force on 16 February 2005. It is an international agreement linked to the UNFCCC, which commits its Parties by setting internationally binding emission reduction targets under the principle of common but differentiated responsibilities.



energy efficiency which was finalised in 2005. Through the process they realised how little was known of business' carbon footprint. These on-going discussions fed into the work on DEAT's Climate Change Response Strategy of 2004, and are argued to have led directly to the LTMS (data source: Interview).

With reference to Kingdon's streams approach touched upon above, it would appear that policy entrepreneurs were able to combine the problem and politics stream in particular to force climate mitigation onto the formal policy agenda through the LTMS in 2006-2008. Farley et al propose that how the issue is strategically represented during the policy window is important, and 'may allow entirely different problem definitions and policies to dominate the political agenda' going forward (2007, p. 344). This issue may warrant further investigation as climate mitigation policy unfolds both in South Africa and internationally (see Tyler, n.d.), and we return to it briefly later. In addition, for the LTMS, it is less clear how actual policy proposals were linked to the LTMS analysis, and again this is an issue to which we return later in the paper when examining the role of the LTMS in the ongoing development of climate mitigation policy in South Africa.

5.3 Policy champions

The interviewees identified a number of people who were critical and visible in enabling the LTMS to happen as it did. Analysis in 'The Policy Circle' (n.d.) considers such people as policy champions, and describes them as highly influential in whether a particular policy initiative succeeds or fails. They are individuals committed to a particular policy or policy reform, can come from any stakeholder group, but critically, have access to high-level policy decision makers. From this perspective, the LTMS had a number of such policy champions within different stakeholder groups.

Within government a number of policy champions resided in DEAT. The role of Minister Van Schalkwyk as head of the ministry was clear. High-level support within government is crucial for policy change to occur (The Policy Project, 2006) and Marthinus van Schalkwyk was a competent and well-respected Minister (data source: Interview), whose advisor Shaun Vorster "really got it [the climate mitigation issue]". Van Schalkwyk drove the process strongly politically, and together with Joanne Yawitch (DEAT Deputy Director: General Environmental Quality and Protection at the time) presented an important centre of control (data source: Interviews). Yawitch was also credited with seeing the importance of the LTMS early on and for its shaping as a mandated stakeholder participation process (data source: Interviews). Trust in Joanne and her international negotiations counterpart Alf Wills (DEAT Deputy Director: General Environmental Affairs, Chief Negotiator Climate Change at the time) was described as a reason for participation by some of the key stakeholders and Peter Lukey (DEAT Chief Director: Air Quality Management & Climate Change at the time) was reported as having a firm grasp of the intellectual aspects (data source: Interviews). Many interviewees recalled that the South African climate change negotiating team was particularly strong, and its footprint in the domestic policy environment enabled it to act as an interest group to exploit the focus events, translating the policy window into the domestic context.

Beyond government, Harald Winkler was seen as the intellectual driving force, who managed the science very competently, and importantly had the trust of the Minister (data source: Interviews). Stefan Raubenheimer stood out as a strong facilitator, holding the process together (data source: Interviews).

Some of these interviewees saw that a "letting go of control" by government (to the LTMS designers and SBT participants) was a key ingredient in enabling the LTMS to be successful. We wonder whether some of the reasons for these different perspectives may have been due to the different roles government champions did, and could, have played in the LTMS, including achieving the Cabinet mandate, driving the actual process and research, and ensuring the uptake of results across government. Further, it may be that the nature of the policy champions and network at the time may



have influenced the nature of the LTMS itself. Hill (2009) asks whether there is perhaps more space for rational and hence evidence-based policy making in instances where the politicians and civil servants work closely together, and where consensus is prized.

5.4 Mandate

The LTMS enjoyed strong support and a mandate from a number of key areas. The official Cabinet mandate given to DEAT after the 2005 National Climate Conference provided it with convening power. Whilst at the time the mandate seemed of lesser relevance, in retrospect it played a large role (data source: Interview). Support for the LTMS process was through regular updates to Cabinet, briefs to the President and using the Inter Ministerial Committee on Climate Change as a sounding board (data source: Interviews). However the social mandate achieved at the Conference was also identified by interviewees as crucial. Hill (2009) reflects that a social mandate is particularly important in the case of policy making in a democratic developing country, as collective interest must override individual interests due to the impact this would have on employment. Climate mitigation and the LTMS also had support from the ruling party, at Congress and branch level (African National Congress, 2007; data source: Interviews).

6. DID THE LTMS ACHIEVE ITS OBJECTIVES?

The official objectives of the LTMS as articulated in the brochure sent to the SBT participants introducing them to the process were that:

- ‘South African (SA) stakeholders understand and are focused on a range of ambitious but realistic scenarios of future climate action both for themselves and for the country, based on best available information, notably long-term emissions scenarios and their cost implications;
- The SA delegation is well-prepared with clear positions for post-2012 dialogue; and
- Cabinet can approve (a) a long-term climate policy and b) positions for the dialogue under the United Nations Framework Convention on Climate Change Cabinet;
- Cabinet policy based on the scenarios will assist future work to build public awareness and support for government initiatives.’ (Department of Environmental Affairs and Tourism, 2006, p. 4).

In general, all interviewees felt that the LTMS achieved its objectives at the time. However, when we interrogate the objectives a little more closely, together with the way in which they were achieved, we find that things get less clear, and more contested. We will take each of these official objectives in turn, dividing the first objective into a stakeholder focus element and then the scenarios themselves for analytical purposes, and leaving the final objective for a more generalised discussion in section 7, as it speaks to how (and whether) the LTMS enabled the policy work that followed.

6.1 Building understanding and focus amongst stakeholders

“South African stakeholders understand and are focused on a range of ambitious but realistic scenarios...”

The LTMS achieved a broad level of stakeholder participation, including government, business, civil society, labour and academia. Many interviewees noted an increase in stakeholder understanding and awareness; describing the LTMS as



“opening people’s eyes” to what the IPCC Fourth Assessment Report actually meant for South Africa and making them aware of mitigation options. The LTMS space was described as positive and open, where “people came to learn”.

The extent to which these stakeholders were ‘focused on the range of scenarios’ is not clear from the interview data. Certainly a contingent was, and an interviewee noted that the LTMS could be said to have created a key group of people working on policy in the lead up to the 17th UNFCCC Conference of the Parties (COP) hosted by South Africa in Durban, including the Green and White National Climate Change Response Papers, a rare ‘policy community’ (Hill, 2009). The LTMS also created relationships that have endured between people with very different perspectives (data source: Interviews).

The interviews revealed significantly differing views on the nature and extent of the buy-in that the LTMS achieved. On the one hand, some interviewees considered the consensus achieved “remarkable”, and enabling a key group of strategic thinkers with deep sectoral knowledge to put aside their agendas to some extent, and to look to what was most important for the country. Wang et al also identified this as a strong asset of the LTMS (2008). Further, interviewees found that government was capacitated and gained confidence to follow policy trajectories, the process developed champions in other stakeholder institutions, and achieved a key group of thinkers who understood what was needed with regard to energy. Finally it developed awareness and capacity amongst the media (data source: interview).

On the other hand, interviewees expressed that the depth of participation and consensus achieved was perhaps not all that it initially seemed, and recalled that there was never a degree of consensus around where we [as a country] needed to go, and that there was a glossing over of this in the final documentation where some personal agendas got overly represented. Mandy Rhambaros of the utility Eskom noted in Raubenheimer (2011, p. 100) that ‘when it comes to the level of ambition this [where we need to go] requires, the costs, the actual steps, this is where we are not yet on the same page’. Government buy-in was uneven across departments, and labour didn’t participate meaningfully (data source: interviews), and buy-in of the results by some in civil society and the private sector decreased during the process. One interviewee reflected that at the end stakeholders remained fairly separate, with lack of clarity as to the next steps. Another suggested that supporting work outside of the formal process could have been done better, to achieve conviction amongst those in the SBT.

In the end general support was achieved; a tacit endorsement of the outcomes and a sense of engagement of the people who were holding different views, but also unhappiness that the concerns of the stakeholders were not sufficiently taken into account for a process that ended up as policy prescriptive (data source: interviews). An interviewee commented that there was trust among individuals, but mistrust of the agenda of the organisations represented. Further, it is not clear that there was always a good understanding of the modelling, although others spoke of a trust that developed between the stakeholders and the modelling (data source: interviews).

Public policy and administration theory provides a further perspective on what the process aspect of the LTMS achieved. Policy actors are held to have different ‘discursive frames’; ‘different histories, traditions, attitudes and beliefs’, from which they define policy challenges (Jenson, 1991 as cited in (Howlett, M. Ramesh, M. Perl, 2009, p. 98)). This means that the agenda-setting process ‘very often features a clash of frames and a struggle among policy actors over the ‘naming’ of problems, the ‘blaming’ of conditions and actors for their existence, and the ‘claiming’ of specific vantage points or perspectives for their resolution’ (Felstiner et al and Bleich in (Howlett, M. Ramesh, M. Perl, 2009, p. 98)). Therefore an extent of misalignment amongst stakeholders may be expected, and the extent to which the LTMS avoided much of this in its agenda-setting function is significant.



6.2 Developing robust, realistic, ambitious scenarios for climate action in South Africa

“...a range of ambitious but realistic scenarios of future climate action both for themselves and for the country, based on best available information, notably long-term emissions scenarios and their cost implications”

Interviewees were unanimous in their commendation of the LTMS process as being essentially robust, and as raising ambition for climate action in the country at the time. Its significant documentation (in the Technical and Process Reports) and peer review by the World Bank which praised the process as being ‘a pioneering effort to provide high-quality information for decision making on climate change response strategies in South Africa’ and ‘consistent with international best practice’ (Wang et al., 2008, p. 1) applied in a developing context (data source: interview) were evidence of this. It was held to have achieved an “overview”, putting the “reality on the table” and showing that despite South Africa being coal based it could take action on climate change (refuting what had come out of the 2005 National Climate Change Conference) (data source: interviews). It set the fundamental principles and assumptions about what the country could do, which are held to remain correct today (data source: interview). It also showed what aspects would be easy, what was required in terms of international assistance and how difficult mitigation would be for the country in very tangible terms (data source: interviews). The process was acknowledged as being “quick and dirty”, quite “coarse” work, and done in a context of limited data availability and under time pressure (data source: interviews). But working within these constraints, an interviewee noted that effort was put into making the scenarios plausible and realistic.

Data availability was an issue throughout the process, as the LTMS was being done at a time where no-one was paying particular attention to data (data source: interview). Interviewees noted that the LTMS used the greenhouse gas inventory for 1994 which had gaps and that in some instances this lack of data determined aspects of the modelling, such as the nature of the energy demand curve. The limitations of this were acknowledged at the time and the participatory process managed to gather local data where it existed. The electricity utility Eskom, which generated much of the data used, seconded an employee to the LTMS modelling team to ensure the use of local data (data source: interviews). But the data was held by interviewees as being adequate to give a sufficiently accurate big picture. In fact, an interviewee commented the LTMS was seen successful to a large extent for its potential to address the lack of data, and that this unlocked some policy action at the time. It also drew the issue of data scarcity to policy-makers’ attention.

However, there were real issues in the detail of the modelling results which were raised at the time of the LTMS and remained unresolved at the end of the process (data source: interviews). These included aspects that were considered to understate the emissions associated with the BAU trajectory³, and overstate the potential for mitigation technologies⁴. Some participants felt the modelling was a black box, and that few really understood the data issues (data source: interviews). In particular an interviewee held the view that data for the period beyond 2030 was not robust. Others felt

³ 1) The two new planned coal-fired power stations Kusile and Medupi, presenting 60Mt CO₂e were not included in the BAU trajectory (Interview 1). Further, it was not assumed that existing coal-fired power stations would be extended for their full 60 year life (which would buy time for the adoption of new technologies (Interview 17)). 2) There was a problem with how Coal to Liquid and Gas to Liquid were treated, and whether another plant would be built or not. Business was of the view that these planned investments should be included in the baseline (Interview 1).

⁴ The potential from Carbon Capture and Storage was double counted, making the deviation from baseline appear easier than it will be by around 3% or so (Interview 1). Energy efficiency was equated to a reduction in GHG emissions which is not the correct treatment for energy efficiency (Interview 1).



there was a lack of transparency regarding the data, with limited access to the modelling spreadsheets, some of which were only made publicly available in 2010.

Some SBT participants were particularly unhappy with the 'Use the Market' trajectory, believing that it was incomparable to 'Start Now' and 'Scale Up', as it modelled economic instruments (incentives and taxes), as opposed to emission reductions themselves (data source: interviews). In addition the macro-economic policy work was not held to be a strong point of the LTMS (data source: interview).

6.3 Informing the international process

"The SA delegation is well-prepared with clear positions for post-2012 dialogue"

The LTMS certainly prepared South Africa for the post-2012 dialogue. Interviewees found that it enabled the country to know what to say internationally, including what to ask for in terms of international finance and technology transfer. Further, an interviewee held that the process had enabled strategic planning and scoping.

In terms of providing 'clear positions for the post-2012 dialogue', this is less easily assessed given the complexity of the international negotiating process. The most visible test of whether the LTMS provided clear positions was at the 2009 COP 15 in Copenhagen. This event has been described as a "policy window" itself due to the presence of many heads of state and a high sense of expectation both politically and by the public (data source: interview). On the eve of the COP the South African President (Zuma) announced the country's commitment to deviate from Business as Usual with a 34% reduction in emissions by 2020 and 42% by 2025 by which time emissions will have peaked, subject to international assistance. He stated that South Africa would follow a Peak, Plateau and Decline (PPD) emissions trajectory. The PPD trajectory had already been articulated in the Vision, Strategic Direction and Framework for Climate Policy in South Africa developed by Cabinet in response to the LTMS (Van Schalkwyk, 2008). Both the numbers and the trajectory are very closely aligned to, and certainly based on the LTMS work (Department of Environmental Affairs and Tourism, 2008; Department of Environmental Affairs, 2011). However, the announcement came as a surprise to most, including those in the delegation (data source: interviews). Therefore whether the LTMS provided clear positions for the delegation was mediated by an opaque political process.

6.4 Long-term climate policy

"Cabinet can approve (a) a long-term climate policy and b) positions for the dialogue under the United Nations Framework Convention on Climate Change"

Read literally, this objective could be taken to imply that the LTMS would prescribe domestic policy. However all government interviewees maintained that the LTMS was only "policy relevant", "policy-directed", and "advisory". The final LTMS report went to Cabinet directly after the high-level process was concluded, together with a number of other climate change documents, with a request for "policy direction" (data source: interview). It was mandated as a non-prescriptive, advisory process in DEAT's presentation on government's Vision, Strategic Direction and Framework for Climate Policy where the department described the feedback from the LTMS high-level process, taken with Cabinet's direction and policy alignment analysis, as having been *translated* into six broad policy direction themes (DEAT, 2008, authors' italics), which tends to point to policy relevance.

With hindsight, some non-government interviewees argued that this translation was too literal to be just 'informing' of policy (Interview 1). The Earthlife critique is vague on this issue, arguing that 'the LTMS is represented as a research process that has produced a set of ideas for mitigation distinct from a policy process.



This is both true and untrue... the LTMS most certainly is a pre-policy process and sets the terms of debate in what is officially designated as the policy process' (Harrow, 2008).

What a policy vision, direction and framework is, as compared to 'long-term climate policy' as envisaged by the LTMS' official objectives may be a moot point. Policy terminology can be intentionally vague to achieve buy-in from a range of stakeholders and to provide flexibility (Howlett, M. Ramesh, M. Perl, 2009) and it would appear likely that the resulting Cabinet policy direction would have met the intended 'in-spirit' objective relating to domestic policy captured in the brochure at the time. However, the vagueness of language in the brochure does provide an opening to the deeper issue of how the LTMS was used, to which we will return in the next section.

At the time when it was undertaken, the LTMS did not have a specific policy context, nor a parallel policy process. In this case, as one interviewee reflected, the LTMS gave a body of relevant data for policymaking going forward.

7. NATIONAL CLIMATE MITIGATION POLICY IN SOUTH AFRICA POST THE LTMS

This section presents a description of some aspects of the post-LTMS period, enabling us to consider the contribution of the LTMS to climate mitigation policy more generally in Section 8.

7.1 National climate policy evolution in South Africa 2005 – 2015: A chronology

The LTMS was completed in 2007. In mid 2008, Cabinet released the 'Vision, Strategic Direction and Framework for Climate Change Response Policy' (Van Schalkwyk, 2008). In December 2009 the President announced South Africa's Copenhagen Pledge which was formally submitted under the Copenhagen Accord the following year (Wills, 2010). Domestically, there was a National Climate Change Response Policy Summit held by the Department of Environmental Affairs (DEA, now split from Tourism) in March 2009, where a pre-policy discussion document was presented for consultation. This document referred in detail to the LTMS, and confirmed that South Africa would follow a peak, plateau and decline emissions trajectory (South African government, 2009).

In 2010 a Green Paper was finalised, and National Treasury released a carbon tax policy document. 2011 represented a focal point for South African climate initiatives given that the COP was held in Durban at the year's end. Just in time for the COP, the current National Climate Change Response White Paper was finalised. A 'Mitigation Potential Analysis' study was conducted in 2013, and in the same year a second carbon tax policy paper was released. A National Greenhouse Gas inventory for the period 2000-2010 was developed in 2014. At the time of writing, work is on-going, led by DEA, to implement the White Paper including a real-time greenhouse gas inventory, monitoring and evaluation procedures, identification of Desired Emission Reduction Outcomes (DEROs) at a sector and company level, and support for a set of Flagship Programmes. National Treasury is also working towards implementing the carbon tax, with a 2016 start date identified. It could be argued that climate mitigation at the time of writing this document is moving from a formulation phase into an implementation phase.



In direct and superficial terms, the LTMS was used first as a basis for Cabinet’s Vision, Strategic Direction and Framework, secondly as the basis for the Copenhagen numbers and conditional commitment, and thirdly as the basis for DEA’s policy documentation process.

7.2 A loss of momentum: The two years after the LTMS

There was an expectation, and a strong call from the SBT, that there should be immediate work following on from the LTMS, consisting perhaps of “deep dives into the sectoral analysis”, and a political economy discussion (data source: interviews). The formal recommendations called for the completion of a long-term climate policy for the country, on the basis of the parameters presented in the LTMS via a more formal policy process (Scenario Building Team, 2007). Thereafter, it was assumed that government would choose a strategy (data source: interview). But the two years following the LTMS were relatively quiet from the perspective of South Africa’s domestic climate policy.

Interviewees have given two main reasons for this. The first was that DEAT officials were exhausted by the LTMS push, and there was a general lack of capacity in the department. There was also a change of staff and leadership, with key players involved in the LTMS moving out of the department or to different positions. The single-minded focus of the executive that had characterised the LTMS period was lost. More broadly, attention was diverted by the major political upheaval which resulted from the African National Congress’ 52nd National Conference in Polokwane in 2007 (Raubenheimer, 2011), the beginning of the era of electricity crisis in the country, and a “lack of leadership”.

The second reason given was that the international process moved far more quickly than expected. Copenhagen provided a policy window on the international level in 2009, and “South Africa got caught up, we lost three to four years [on the development of domestic policy]”. This inattention to domestic policy was compounded by the country hosting the 17th COP in Durban in 2011. “Things moved too fast internationally and too slowly domestically” (data source: interviews).

7.3 The LTMS pushback (2010)

From 2010 a pushback to both the LTMS and its subsequent use in mitigation policy occurred, led by business, predominantly Business Unity South Africa (BUSA), the Chemical and Allied Industries Association (CAIA), and Sasol (Marquard, 2013). An interviewee reflected that there was a time when one could hardly mention the LTMS even within parts of DEA due to lobbying by business. The pushback centred on the data issues in the LTMS analysis itself, and also on the lack of updating of the LTMS despite there being greater data availability (data source: interview).

This perceived attack by business was considered to be undermining of the LTMS, as it questioned both the data used and the quality of the work (data source: interview). However some interviewees wondered whether this may actually have been an indication of its impact (and Marquard, 2013), whilst others considered that the pushback was inevitable and not a bad thing in that it demonstrated that there was something to push back against, a commitment. However an interviewee also considered it to be threatening of the on-going policy process and the state of the country’s climate mitigation database.



8. THE CONTRIBUTION OF THE LTMS TOWARDS CLIMATE MITIGATION POLICY IN SOUTH AFRICA

Public policy and administration literature assists us in understanding the LTMS as a process that occurred in the agenda-setting phase of the policy cycle model. As such, the LTMS' contribution would have been primarily to insert climate change mitigation onto the formal policy agenda (Howlett, M. Ramesh, M. Perl, 2009). Noting that the way this is done is relevant to how (Farley et al., 2007) and how successfully the formulation and implementation phases proceed: 'What happens at this early stage of the policy process [agenda-setting] has a decisive impact on the entire subsequent policy cycle and its outcomes' (Howlett, M. Ramesh, M. Perl, 2009, p. 92). The questions of who bears the cost of the policy, and how it is implemented are left for the formulation policy cycle phase where 'the technical and political constraints on state action' are recognised, uncovering 'what is infeasible, and by implication, what is feasible' (Howlett, M. Ramesh, M. Perl, 2009, p. 112).

Unanimous amongst interviewees was that the LTMS was seminal to the level of South Africa's climate change mitigation ambition internationally and domestically. It was also one which largely achieved its official objectives of developing scenarios of future climate action and capacitating and focusing stakeholders on these (data source: interviews). Further to the official objectives, and as an agenda-setting exercise, the LTMS moved the domestic climate mitigation discussion forward from denialism that South Africa's coal based economy could change to a 'we can do something' attitude (Marquard, 2013) provided the country has international assistance (data source: interview). Interviewees posited that the LTMS also: mapped the domestic climate mitigation constituency, and interpreted the international mitigation effort in a domestic context, a first for a developing country; that the president took the climate mitigation issue seriously forced others in government to; the results informed the ruling party's upcoming election manifesto and raised awareness about climate change in the country generally; the scientific basis of the LTMS placed the mitigation discussion on top of a sound technical basis; and enabled the country to identify an emissions trajectory and build a plan.

Significantly, the LTMS, particularly its process component, and the resulting Copenhagen numbers enabled a carbon constraint to be incorporated into South Africa's 2010 Integrated Resource Plan (IRP) for the electricity sector, a sector which is responsible for the majority of the country's emissions. The constraint of 275Mt of CO₂ was adopted directly from the PPD and Copenhagen numbers (data source: interviews). This was the first time emissions were quantitatively considered in energy planning, and the emissions constraint signalled a shift in South African energy policy. The Renewable Energy Independent Power Producer Procurement Programme (REIPPPP) which has been a significant success from the perspective of attracting investment in renewable energy into the country was enabled through the IRP 2010 (data source: interview). Having Eskom and the electricity users in the SBT contributed directly towards this, with Eskom "steamrolling" National Treasury and the Department of Public Enterprise to accept the LTMS as relevant to energy policy (data source: interviews). The LTMS' scientific basis together with the consensus forged during the LTMS process, were cited by interviewees as the reason why the constraint could be incorporated with confidence,. An interviewee speculated that the LTMS' participatory approach may have influenced the greater (than previous) inclusion of participation in the IRP process. The methodology of adjusting an initial version of the IRP for policy considerations (resulting in the final 'policy adjusted' IRP) further strengthened what an interviewee considered was an appropriate use of data and scenario planning for policy purposes (implying that the LTMS was not) (data source: interview).



Overall, the LTMS enabled the interpretation of international climate mitigation policy into domestic policy, through a domestic policy process. The development of a policy network and policy champions helps to explain the diffusion of the LTMS into energy policy.

However, a decade on South Africa is only just starting to move on from the policy formulation phase into the implementation phase. The PPD trajectory, arguably the mainstay of climate mitigation policy in the country, is deeply contested by Business whilst others are disappointed it has not been translated into action (data source: interviews). Measuring progress on mitigation action is difficult and beyond the scope of this paper, but many interviewees indicated disappointment with the pace and depth of policy development and particularly implementation. Boyd and Coetzee (Boyd & Coetzee, 2013) found very few instances of climate mitigation implementation in South Africa (together with Brazil, Chile, Peru and Colombia).

From this perspective then, we deepen our consideration of the role of the LTMS as an agenda-setting policy initiative. We attempt to understand if there was anything about the LTMS or its context that may have constrained, or be constraining, faster and more effective progress in the formulation and implementation of national South African climate policy. We structure this analysis around five themes: The lack of immediate follow-up work, the breakdown in trust due to the way in which government used the LTMS findings, the dominance of the international climate change negotiations driver, insufficient consideration of political economy and policy integration, and poor consideration of implementation challenges.

8.1 The post- LTMS vacuum

The LTMS was undertaken in a formal policy vacuum, given that it was a new policy issue entering through an agenda-setting exercise. However, there was no follow up or clear policy process to take the work of the LTMS forward (data source: interview) and to contain and productively transform the data and address the remaining technical and process 'seeds of discontent' that were present in the LTMS itself.

Some interviewees felt that the LTMS rapidly moved into a government black box, leaving stakeholders behind. In retrospect this was held to be a key missed opportunity (data source: interviews). The data concerns held by the stakeholders grew in this vacuum, exacerbated by the use of the data for both international (Copenhagen) and domestic (White Paper) policy, and lack of consultation in the White Paper process (data source: interview). At that point, an interviewee pointed out that stakeholders took the time to get into position, realising their exposure to policy developments. The Interviews revealed a current level of polarisation between stakeholders in the present, largely focused on data, which is hampering progress on policy formulation and hence implementation.

A number of interviewees from the private sector held the view that "freezing" the LTMS numbers into the PPD (and subsequently the DERO process) introduced rigidity into the policy development process at the cost of what will "actually be implementable". It was also found by an interviewee to engender resistance from stakeholders to the on-going policy formulation process. What South Africa can do in terms of mitigation is now considered by some to be overstated in the PPD (data source: interview). Updates to GDP growth, electricity demand, greenhouse gas inventory numbers and local emissions factors could make the PPD more realistic, with an interviewee arguing that "a lot of goodwill could be bought [by government] by revisiting these". The PPD is currently stated in the White Paper as 'the initial benchmark against which the efficacy of mitigation actions will be measured' (Republic of South Africa, 2011, p. 27), with provision to review it 'in the light of monitoring and evaluation results, technological advances, or new science, evidence and



information' (Republic of South Africa, 2011, p. 27).

Interviewees suggested that a parallel and on-going policy process was required immediately after the LTMS to maintain the policy community created and to move to the phase of policy formulation and ultimately implementation. "We needed to look more carefully at embedding the process, and what needed to be happening around it, there was no embedding of outcomes", no thought given to "and then what?". The "social capital" built by the LTMS was not maintained, despite this needing constant replenishing; a shared vision and common agenda doesn't last forever (data source: interviews). That this didn't occur "significantly constrained the impact/outcomes that LTMS could have had" Policy literature acknowledges this potential outcome, where a set of policies made for a certain purpose can end up actually inhibiting progress going forward (Skocpol, 1994, in Hill, 2009).

8.2 Policy prescriptive or policy relevant: The breakdown of trust

Public policy is by its nature political, defined as 'anything a government chooses to do or not to do' (Dye, 1972 as cited in (Howlett, M. Ramesh, M. Perl, 2009, p. 4)). Whilst South Africa has a strong tradition of engagement and participation, government is not bound to take this into account when making policy. But many interviewees spoke of an important distinction between something that is policy prescriptive and something that is policy relevant, and held strong positions on what the LTMS was intended to be and what it turned out to be. Raubenheimer (2011) recalled an underlying nervousness during the LTMS process about where and how the work would be used. This may be most usefully understood as an issue of trust: The way in which the LTMS findings were used after the LTMS appears to have breached the trust built during the LTMS process, thereby continuing to undermine policy development going forward.

We have seen, in hindsight, that the official LTMS documentation is ambiguous as to whether the LTMS was intended to be policy prescriptive or policy relevant. It was expressed by interviewees that Business in particular did not engage particularly seriously with the LTMS and the data at the time, because government had constantly assured them that it would not be policy prescriptive. Had they known the destination of the outcomes, they would have insisted on a far more detailed discussion about the data and modelling assumptions, even methodology. "If you use data for policy, you must know that the data is correct" and "scenario building exercises are by their nature imprecise and therefore should not have been translated into policy without discussion and interrogation of the data".

Given the lack of an on-going policy process as described in the previous sub-section, the ambiguity of whether the LTMS was a policy prescriptive or policy relevant initiative was exacerbated. Prior to the Copenhagen COP, the LTMS was described by an interviewee as "just a study with some findings". However, the transformation of the LTMS numbers into the Copenhagen numbers with no process transparency was reported as a "shock" or surprise to almost all the interviewees. Business felt that this action by government reneged on its promise that the LTMS would not be policy prescriptive (data source: interview). In the policy vacuum following the LTMS, it was considered to have replaced actual policy, and this was described by an interviewee as the root of the LTMS pushback and current contestation. An interviewee reflected that processes such as the LTMS should focus on research and doing robust work: "The clearer you can be around this border between robust work and policy process, the better outcomes you will have on both sides, regardless whether you have got the same people in both rooms".

But a different perspective was also contained in the interviews; that of a balance of maintaining openness versus shutting down the discussion through identifying a very clear policy context, and destination for the outputs upfront. At the time of the LTMS, government did not know how the international process would evolve. That the LTMS was



a non-prescriptive, advisory process made it easier to adopt domestically, and enabled it to “do what it did” from an agenda-setting perspective.

8.3 The impact of International Climate Mitigation Policy

Climate change as a policy problem is particularly complex in that climate impacts are not prescribed by where greenhouse gas emissions occur. Global action is required, amongst nations of uneven historical responsibility for the global warming problem and current capabilities for mitigation, in order to avoid climate change impacts. There is thus necessarily an important interplay between what happens in the international policy process and what happens domestically. As one interviewee put it: “how things work internationally and domestically have huge implications, and these need to be joined up”.

Developments in the international process, coupled with a receptive group of policy entrepreneurs within DEAT in South Africa were reported as key drivers and champions for initiating the LTMS. Howlett et al find that ‘the manner and form in which problems are recognized, if they are recognized at all, are important determinants of whether, and how, they will ultimately be addressed by policy-makers’ ((2009, p. 92). The influence of the international process meant that the problem of climate mitigation arose within an environmental framing: Emission reductions were its ultimate focus (data source: interviews). An interviewee suggested that the initial result of this was a “deep understanding of emissions”, but an under emphasis on development which in turn allowed for a level of mitigation ambition that did not reflect the development reality. A second implication of the environmental framing was that institutionally the policy issue arose from, and is still championed by DEAT. This has significant political implications which are addressed in the following sub-section.

Nevertheless, there was a strong desire at the time that the LTMS address development issues, within a development context (data source: interview). The LTMS policy champions had significant exposure to the international climate mitigation policy environment, where the concept of equity in mitigation effort is (appropriately) of fundamental concern for developing countries. This particular framing of development, and of what is ‘nationally appropriate’ with regards to mitigation in developing countries is not always useful for progressing domestic climate mitigation policy in these countries (Dubash, 2009; Tyler, Boyd, Coetzee, Torres Gunfaus, & Winkler, 2014).

Interviewees represented a broad range of understandings of the term ‘development’, and the extent to which the LTMS addressed developmental issues. Some interviewees contended that “development was the context, the question [of the LTMS] was around emission reductions in the context of sustainable development”. Others held that development aspects were addressed through the outputs of the CGE modelling alone, yet others thought that development was incorporated into assumptions around the cost of technologies, in technology learning curves, and in how the final LTMS document was written and the results discussed in the text. A further perspective was that the development context was achieved through the stakeholder process “a stakeholder process is truly ‘nationally determined’”. Conversely an interviewee proposed that the “development context of mitigation was not understood at the time of the LTMS and is still not understood. We don’t understand the impact of climate change nor how to approach it. We also don’t understand all of our options”.

Currently both the international community as a whole and developing countries individually are grappling with the challenge of initiating and supporting authentic and effective mitigation policy approaches in a development context (see by way of example (E. Boyd, Grist, Juhola, & Nelson, 2009; Dubash, 2009; Forti, 2013; Tyler et al., 2014)). At the time of the LTMS the relationship between climate and development was only just being articulated, and was largely poorly understood (data source: interview). To illustrate this fairly conceptual issue, it might be interesting to



consider whether a climate mitigation policy approach initiated by, for example, the perspective of competitiveness/jobs or inequality or regional energy security might have more easily sustained into the policy formulation and implementation phases.

One final comment on the international climate change policy environment as driver relates to timing. An interviewee suggested that the timing of the LTMS was premature from a domestic perspective, and that this is a key reason why it met with resistance later on.

8.4 Political economy and policy integration

The dominance of the environmental framing of the LTMS and its institutionalisation in DEAT has both political and policy integration implications. There was a general perception from the interviews that integration of climate policy with other domestic policy areas didn't happen well. The LTMS is seen as environmental policy created by a small group of custodians for environment in government, and not as confronting the very politically charged broader policy focus within the Departments of Trade and Industry, Mineral Resources and Energy on beneficiation, and energy intensive industry (data source: interview). Further, "as the conversation has gone on we've lost the bigger picture. We haven't drawn the links across government departments, or even within the mitigation agenda" (data source: interview, and Tyler and Trollip, 2009). Whilst the LTMS has fed into the National Development Plan, there is a schism between its Chapter 3 (on economy and employment) and 5 (on environmental sustainability) (data source: interviews). Another interviewee expressed that "the economic cluster departments are trailing behind DEA and do not buy into the mitigation agenda, feeling disempowered and helpless on the mitigation issue".

The interviewees proposed many reasons for this disempowerment. A number held that the non-DEAT government stakeholders, particularly the Department of Minerals and Energy (DME) and Department of Trade and Industry were not engaged during the process, partly because of a lack of political will at departmental head level, and under-resourcing. "There was formal buy-in from government departments achieved, but not practical buy-in". Further, the DME which has huge influence and resources never felt bound by the LTMS (data source: interview). The extent of this is demonstrated by the view of one interviewee who reflected that government was "caught by surprise" with the LTMS, that the process was not strongly driven from government, but rather by academia with ERC as the "owner" of the LTMS, holding its intellectual property until after the UNFCCC's 15th Conference of the Parties in Copenhagen. Ideally the process needed to be more aligned to energy policy planning (data source: interview). And despite the LTMS having been constituted from the NCCC, an inter-departmental body, there was no feedback into the NCCC and its deliberations (data source: interview).

Second, interviewees considered DEAT's relative leadership and capacity weakness in the years following the LTMS to mean that DEAT did not effectively own the LTMS, nor integrate it across other departments. Others thought the department too timid to take on its more politically powerful counterparts.

Third, the LTMS is positioned as environmental policy, but not economic policy (data source: interviews), where it could have been more politically powerful. An interviewee had the sense that the climate mitigation problem has been contained for industry to continue with business as usual growth regardless of the mitigation issue for the next decade. South Africa needs strength at the top and an overarching co-ordination of development paths in order to deal with the potential for policy fragmentation (data source: interview), which it does currently have. The policy misalignment within government generally does not help integration of climate mitigation policy into other policy areas (data source: interview).



Political economy considerations are important in the challenge of transitioning to a low carbon economy and society in South Africa. As one interviewee put it “...we still haven’t had a conversation around how difficult this [low carbon] transition will be. We have had 100 years of building up or fossil-fuel centred economy, and now we are asking to change it completely”.. We have seen how evidence-based policy-making aspires that policy making be unsullied by politics (Hill, 2009). But the realism of this, particularly in the context of pursuing a climate mitigation agenda in a developing economy still dominated by a Minerals-Energy Complex (Tyler, 2010) is unclear. The Earthlife critique of the LTMS (2008, p. 1) articulates this question succinctly: ‘The mere fact that the process took place in a political economy dominated by centralised, energy intensive and dirty industries, is an achievement. But will decision makers on industrial and energy policy accept its implications?’. The LTMS implies significant losers in the shift from BAU to any of the mitigation trajectories, but didn’t explicitly engage with these (data source: interviews). Some interviewees considered the LTMS to have had a strong “political component”, referring to the government and CEO sherpas present. However another cautioned that participation by itself is not sufficient for implementation. “It is a mistake to fetishize participation without understanding power relations; where the authority lies, what can undermine implementation.... Political economy is a rather ugly thing”. An interviewee felt that the LTMS did not address the political economy issue head on.

Interviewees gave some suggestions as to how the political economy aspect could have been approached differently: One said the LTMS’ implications should have impacted the powers that are ruling, namely Cabinet, the ruling Party, state administration and its machinery, businesses, investors, Treasury. Another noted there should have been less time spent on the models and data, and more on the political / legal and regulatory environment. Were it to have been driven out of an economic department, with champions in the political elite, perhaps it might have been easier to achieve deep buy-in? Or would the questions of who bears the costs inherent in the policy formulation and implementation stages have surfaced with the same level of intractability in any framing? Beland in Hill (2009) theorises that ideas have an impact upon political decisions in three ways. First, as ‘cognitive locks’ that help reproduce existing institutions and policies over time, without challenging the dominant policy paradigm. Second as ‘policy blueprints’ that provide political actors with a model for reform; and finally as ‘powerful ideological weapons’ that allow actors to challenge existing policies (in Hill, 2009, p.125). It may appear to some that the framing of the LTMS falls into the first category, and is now perhaps a constraint on implementation (data source: interview).

And yet whether and how the issues of political economy are best addressed in the agenda-setting phase is unclear. Perhaps the LTMS was successful in enabling the progression to the next two stages of policy formulation and implementation because of how it framed the mitigation problem, particularly the way in which it clarified different stakeholders’ interests (Marquard, 2013). Or perhaps the slow progress towards implementation may have the LTMS framing as an underlying cause.

8.5 Moving from targets to implementation

An interviewee pointed out that a process is only as good as its ability to terminate with implementation. In South Africa the LTMS didn’t get embedded in government in terms of “how to do the solutions”. Where the LTMS has arguably come closest to influencing implementation is through the emissions constraint in the IRP, and therefore the REIPPPP.

The general view amongst interviewees was that implementation wasn’t specifically discussed at the LTMS; that it was pre-policy (data source: interview), a ‘strategy in that [it] focus[ed] on analyzing and discussing a pathway toward a low carbon future, but [did] not elaborate plans’ (Dubash, 2009, p. 1). However one interviewee noted that there was a discussion on impediments to implementation, raised particularly by Business. This evoked strongly divergent



opinions on whether these impediments were matters of realism (absolute constraints) or of assumptions (barriers that could be overcome). Because consensus could not be reached on the matter, it was set aside for the initial scoping and analysis work (data source: interviewee). Avoiding a detailed discussion of barriers to implementation contributed to the dissipation of much of the accumulating value of the LTMS (data source: interviewee).

In South African policy more broadly, there was not much experience with implementation at the time (data source: interview; Booysen, 2006). But the challenge of moving from the LTMS scenarios and targets to implementation was identified by an interviewee as being substantial. Other interviewees noted that targets themselves are not a plan, one needs to be able to show the pros and cons of going down different future roads, and that targets need a strong link to policies which convey how to implement the solutions. Otherwise, and as has often been the case in South Africa, we “delay, delay, delay and then say we can’t meet them [the targets]”. “Dreaming about beautiful plans that will be implemented can only happen in a few countries, those with mature democracies, and that are well organized and well-resourced”.

Institutional factors were proposed by interviewees to be highly relevant: “So while the LTMS moved the country to a whole different level of climate mitigation ambition, this has yet come to little in terms of implementation, because of the institutional arrangements of climate policy”. The climate mitigation challenge involves a whole societal vision, and to implement this, more is needed than a top-down, government-only approach, otherwise “aspects of it are taken to pieces by each Ministry, interpreted as they want, to align it to their political priorities” (data source: interviews).

It may have been that it was not the LTMS’ role to consider implementation. There is very little literature even today on the implementation of climate mitigation activities (Boyd & Coetzee, 2013). But perhaps if implementation had been considered to a greater extent during the LTMS, there might have been greater engagement with political economy issues and development priorities. Kingdon does emphasize that problems, politics *and policies (solutions)* need to combine in order to take advantage of a policy window or focus event. Certainly, Boyd and Coetzee (2013) propose that considering risks or impediments to implementation earlier in the planning process may result in greater implementation.

9. A CONCLUSION

The Interviewees reflections and exploratory analysis suggests that the LTMS was a significant, unique and remarkable policy relevant exercise. It was sufficient to accomplish the agenda-setting phase of the policy cycle and move the policy process forward towards policy formulation, engaging with the question of who bears the cost. Contrasting perspectives emerged in the literature and interviews about who owned the process, the role of the SBT, and the level of engagement of particular participants. There was also an interesting and self-orientated differentiation of emphasis amongst interviewees on how the LTMS was initiated!

However, almost a decade on, it appears to interviewees that South Africa has not yet made the transition towards policy implementation, and there is significant contestation between stakeholders on current policy formulation. Ascertaining whether and how much of this can be attributed to the nature and framing of the LTMS and / or aspects of the years following the process is highly complex and unlikely to be a particularly useful exercise. What is clear however is that issues of context, timing, trust, international policy pressures, framing, policy integration, political economy, and implementation are critical.



One final reflection: The analysis has been critical of aspects of the LTMS and what occurred subsequently. What we haven't been able to dwell on in this paper is the myriad of external constraints under which both the LTMS and the on-going task of progressing climate mitigation policy in South Africa have occurred. It is not clear whether aspects could have been done differently given these external constraints (data source: interview), and hindsight is a perfect science...

9.1 Reflections on the relevance of this review for the MAPS processes and beyond

It is our hope that this research will be relevant to the on-going MAPS processes, and to current climate mitigation policy work in South Africa and other contexts. The following questions may be useful to reflect on:

- *What parallels are there between the Copenhagen policy window that emerged after completing the LTMS and that of the current Intended Nationally Determined Contribution (INDC) window for MAPS Latin American processes?*

The LTMS process was not aware of the impending Copenhagen policy window. Similarly, MAPS Latin American processes did not know about INDCs when they started. The difference is that today, these MAPS processes are now aware of the opening of this policy window, and in fact, have been asked to directly inform the respective decision-makers in this regard. Will this explicit mandate avoid the breakdown of the trust that happened post-LTMS? It is clear that the management of the translation from evidence-base to policy will require careful attention, with policy champions and the leadership of these processes being central to this task. Based on the LTMS experience, we argue that meaningful efforts need to be put in place to ensure clear packaging of the experiences and data, acknowledging the limitations of the process and the information generated. This will involve outreach and capacity building activities as part of a well-thought process designed to manage stakeholders' expectations and concerns.

- *What does the opportunity of an evidence focused and participatory space provide?*

In countries where evidence-based policy making is common, MAPS processes are expected to significantly contribute to advancing policy development. Co-production of knowledge appears to be an indisputable way to provide decision-makers with robust and credible options. Through our review of the LTMS we've learnt that at the very least a participatory evidence production exercise needs a clear mandate to be legitimate and relevant, and in addition that the process needs to be nested into parallel or future policy processes. We have also discovered that once-off participation is not sufficient, but levels of engagement and motivation need to be continuously interrogated. The spaces that MAPS processes create are not just about trust, but also commitment. We have noticed that an approach to link public policy, science and stakeholders participation is emerging. MAPS Latin American processes will provide further evidence to understand the particularities and effectiveness of this method.

- *What would be different if, instead of a policy agenda-setting process like we understood the LTMS to be, the on-going MAPS processes were about policy formulation?*

The different national circumstances among MAPS Latin American countries will lead to different interpretations of the policy cycle model with regard to climate mitigation. Chilean and Brazilian Governments already had economy-wide mitigation commitments for the period up to 2020 by the time their respective processes, MAPS Chile and IES-Brasil, had started. The Colombian process considered implementation to a much greater extent, adopting a sectoral focus from the start, to be translated into action plans. Now in Colombia the



process moves from a 'what if' scenario building process towards a 'how to'. Whereas it is outside the scope of this paper to determine the role of each of these processes, we encourage each of the country teams to take this reflection further. Some differences may lie in the importance of the role of awareness raising and capacity building, the level of detailed (sectoral) analysis, the need to assess policy instruments and allocation of costs and the importance of the integration with other clusters or stakeholders.

- *What is still required for implementation?*

The LTMS paid no attention to implementation, but we have learnt from public policy and administration literature that the policy cycle is in fact, endless and iterative, and that addressing implementation may be important at any part of the policy cycle. However this paper did not explore how this is best achieved in the agenda-setting phase. Is evidence-based scenario building an appropriate tool to directly inform implementation, and what is the actual information base needed? Participation by itself is not sufficient to guarantee implementation. It is clear that MAPS processes will need to understand power relations and authorities to have a chance of effecting implementation based on the knowledge produced. Last, we argue that more research is needed to further understand how public policy theory and experts can assist in incorporating implementation considerations in the earlier phases of the policy cycle, and generally in MAPS processes.



10. BIBLIOGRAPHY

- Booyesen, S. (2006). Public Policy Making in South Africa. In A. Venter & C. Landsberg (Eds.), *Government and Politics in the New South Africa* (Third Edit, pp. 163–201). Pretoria, South Africa: Van Schaik Publishers.
- Boyd, A., & Coetzee, K. (2013). *Mitigation action implementation Towards an understanding of the variables that affect implementation of mitigation actions* (No. 10). Cape Town, South Africa.
- Boyd, E., Grist, N., Juhola, S., & Nelson, V. (2009). *Exploring development futures in a changing climate: Frontiers for development policy and practice*. *Development Policy Review*, 27(July 2008), 659–674. doi:10.1111/j.1467-7679.2009.00464.x
- Department of Environmental Affairs. (2011). *Defining South Africa's Peak, Plateau and Decline Greenhouse Gas Emission Trajectory*. Pretoria, South Africa.
- Department of Environmental Affairs and Tourism. (2004). *South African National Climate Change Response Strategy. Response*.
- Department of Environmental Affairs and Tourism. (2005). *Action for Climate Change: 2005 Conference Statement*. Pretoria, South Africa.
- Department of Environmental Affairs and Tourism. (2006). *Developing Long Term Mitigation Scenarios for South Africa 2006 to 2007*. Pretoria, South Africa: Government of South Africa.
- Department of Environmental Affairs and Tourism. (2008). *Government's Vision, Strategic Direction and Framework for Climate Policy*.
- Dubash, N. K. (2009). *Will low carbon growth plans help or hurt low carbon growth? CPR Climate Brief*. New Delhi.
- Energy Research Centre. (2007). *Long Term Mitigation Scenarios, Technical Report*. Pretoria.
- Farley, J., Baker, D., Batker, D., Koliba, C., Matteson, R., Mills, R., & Pittman, J. (2007). Opening the policy window for ecological economics: Katrina as a focusing event. *Ecological Economics*, 63, 344–354. doi:10.1016/j.ecolecon.2006.07.029
- Forti, C. (2013). *Change Development Not Climate! Analysis of the sustainable development approach in South Africa in dealing with climate change and development issues*. University of Amsterdam.
- Hallowes, D. (2008). *A Critical Appraisal of the LTMS: Sustainable Energy and Climate Change Project*. Johannesburg.
- Hill, M. (2009). *The Public Policy Process*. United Kingdom. Pearson Longman.
- Howlett, M. Ramesh, M. Perl, A. (2009). *Studying Public Policy: Policy cycles and policy sub-systems* (Third). Ontario: Oxford University Press.
- Lasswell, H. D. (1951). The Policy Orientation. In D. Lerner & H. D. Lasswell (Eds.), *The Policy Sciences: Recent Developments in Scope and Method*. California: Stanford University Press.
- Marquard, A., & Godino, C. (2013). ERC LTMS Review meeting notes. Cape Town, South Africa.
- Raubenheimer, S. (2011). *Facing Climate Change: Building South Africa's Strategy*. Cape Town, South Africa: Unity Press.
- Republic of South Africa. (2011). *NATIONAL CLIMATE CHANGE RESPONSE WHITE PAPER*. Pretoria, South Africa.
- Rudnick, A. (2015). Personal communication
- Scenario Building Team. (2007). *Long Term Mitigation Scenarios Strategic Options for South Africa*. Pretoria, South Africa.
- Segal, N. (2007). *Breaking the Mould. The role of scenarios in shaping South Africa's future*. SunPress, Stellenbosch.
- South African government. (2009). *National Climate Change Response Policy : Discussion Document for the 2009 National Climate Change Response Policy development Summit*.
- South African Presidency. (2011). *Development in South Africa*. Pretoria, South Africa.
- The Policy Circle. (n.d.). The Policy Circle. Retrieved March 10, 2015, from <http://www.policyproject.com/policycircle/content.cfm?a0=3>



Tyler, E. (n.d.). *How do climate mitigation practitioners approach development?* Cape Town, South Africa.

Tyler, E. (2010). Aligning South African energy and climate change mitigation policy. *Climate Policy*, 10(5), 575–588.

Tyler, E., Boyd, A., Coetzee, K., Torres Gunfaus, M., & Winkler, H. (2014). Developing country perspectives on “mitigation actions”, “NAMAs”, and “LCDS.” *Climate Policy*, 14(3), 770–776. Retrieved from <http://www.tandfonline.com/doi/abs/10.1080/14693062.2013.823334/nhttp://dx.doi.org/10.1080/14693062.2013.823334>

Venter, A., & Landsberg, C. (2011). *Government and politics in South Africa*. (A. Venter & C. Landsberg, Eds.) (Fourth). Pretoria, South Africa: Van Schaik Publishers.

Wang, X., La Rovere, E., Yang, M., & Fedorsky, C. (2008). *South African long-term mitigation scenarios (LTMS), international peer review report*.

Wills, A. (2010). SA Copenhagen Accord pledge. Pretoria, South Africa.

Winkler, H. (2010). *Taking Action on Climate Change Long Term mitigation scenarios for South Africa*. Cape Town, South Africa: UCT Press.



APPENDIX A: GLOSSARY

BAU - Business As Usual

BUSA - Business Unity South Africa

CAIA - Chemical and Allied Industries Association

CEOs - Chief Executive Officers

COP - Conference of the Parties (of the UNFCCC)

DEAT - Department of Environmental Affairs and Tourism

DEROs - Desired Emission Reduction Outcomes

DME - Department of Minerals and Energy

ERC - Energy Research Centre

GDP - Gross Domestic Product

CGE - Computable General Equilibrium

GWC - Growth Without Constraints (scenario)

INDC - Intended Nationally Determined Contribution

IPCC - Intergovernmental Panel on Climate Change

IRP - Integrated Resource Plan

LTMS - Long Term Mitigation Scenario

MAPS - Mitigation Action Plans and Scenarios

NCCC - National Climate Change Committee

PPD - Peak, Plateau and Decline (trajectory)

RBS - Required by Science (scenario)

REIPPPP - Renewable Energy Independent Power Producer Procurement Programme

SA - South Africa

SBT - Scenario Building Team

UNFCCC - United Nations Framework Convention on Climate Change



APPENDIX B: INTERVIEWEE LIST

Interviewee	Researcher	Position at time of LTMS	Current position	Interview Date	Location
Richard Worthington	ET	Earthlife Africa: Manager Sustainable Energy and Climate Change Project	Freelance researcher and activist	21 Aug	Johannesburg
Alan Hirsch	ET, MTG	Deputy Director General Economic Policy, and Deputy Head of the Policy Unit, South African Presidency.	Direct Graduate School of Development Policy and Practice, UCT	15 Sept	Cape Town
Bob Scholes	ET, MTG	Council for Scientific and Industrial Research, Environmentak	Wits University	18 Sept	Cape Town
Shaun Vorster	ET, MTG	Special advisor to the Minister of Environmental Affairs and Tourism	Special advisor to the Minister of Tourism	19 Sept	Cape Town
Peter Lukey	ET	DEAT Chief Director: Air Quality Management & Climate Change	DEA Chief Policy Advisor: Strategic Environmental Intelligence	23 Sept	Johannesburg
Laurraine Lotter	ET	Executive Director of CAIA	Chairperson of the BUSA Environment Committee	23 Sept	Johannesburg
Ian Langridge	ET, MTG	Chairman of the NBIs business and energy working group	Independent	14 Oct	Johannesburg
Mandy Rhambaros	ET, MTG	Eskom Chief adviser on climate policy and strategy	Climate Change and Sustainable Development Manager	14 Oct	Johannesburg



Alf Wills	ET	DEAT Deputy Director General Environmental Affairs, Chief Negotiator Climate Change	DEA Deputy Director General: Environmental Advisory Services	16 Oct	Cape Town
Tony Surridge	ET	DoE, Director Oil and Gas	South African Centre for Carbon Capture and Storage	23 Oct	Johannesburg
Judy Beaumont	ET, MTG	DEAT Chief Director of International Negotiations	DEA Deputy Director General Climate Change and Air Quality	28 Oct	Cape Town
Neva Makgetla	ET	Policy Co-ordinator Cosatu	Department of Economic Development Deputy Director General: Economic Policy	31 Oct	Pretoria
Stefan Raubenheimer	ET, MTG	Thokisa	Director SouthSouthNorth and MAPS	17 Nov	Cape Town
Andrew Borraine	MTG	SA Cities Network	CEO Western Cape Economic Development Partnership	18 Nov	Cape Town
Harald Winkler	ET, MTG	ERC	Director ERC, MAPS	20 Nov	Cape Town
Alison Hughes	ET, MTG	ERC modeller	ERC modeller	24 Nov	Skype
Joanne Yawitch	ET	DEAT Deputy Director General Environmental Quality and Protection	CEO National Business Initiative	26 Nov	Skype



APPENDIX C: INTERVIEWEE BACKGROUND DOCUMENT AND QUESTION PROMPTS

This background document was sent to the majority of the interviewees prior to the interview. Exceptions were due to administrative oversights.

INFORMATION SHEET & CONSENT FORM – MAPS Programme LTMS Review research

August to November 2014

Dear Interviewee,

As discussed via email / telephone, the MAPS Programme is undertaking reflective research into the LTMS process. We want to understand with the benefits of hindsight what role the LTMS played in the development of SA's mitigation policy, with the hope that this may be useful to policymakers both in SA and beyond going forward. I'm leading the research, with Marta Torres Gunfaus (a MAPS Director) co-authoring. I may also use the research to inform my PhD project.

As a key member of the scenario building team, and particularly given your role in the development of the Climate Change Response White Paper, we would greatly value your insights and perspectives as part of the review. The interview will be structured as an open-ended conversation with some 'starter questions', and you would be interviewed strictly in your personal capacity, without attribution.

Starter questions

- (i) What were the objectives and expectations of the LTMS (yours personally and your understanding of the official objectives)?
- (ii) What do you think the LTMS' contribution to CC-mitigation SA policy was, both at the time, and with a longer perspective (7-years after completion), both negative and positive?
- (iii) How did it do this?
- (iv) Retrospectively, what defined the LTMS and what were its core elements?
- (v) How did it relate to South Africa's development agenda?
- (vi) Was implementation discussed and if so how?
- (vii) How did you understand the Required By Science (RBS) trajectory at the time and in retrospect what role did it play? How does this relate to mitigation ambition in South Africa?
- (viii) In retrospect, was a LTMS process necessary for the evolution (positive or negative) of SA climate mitigation policy? And how different might SA mitigation agenda look like today in absence of the LTMS process?
- (ix) What were the LTMS (formal & informal) outcomes, and did it meet objectives and expectations?
- (x) What do you think could have been done differently to (more) effectively contribute to the evolution of SAs climate mitigation policy?

Beyond LTMS (if there is time / appetite):



- Where is SA at in terms of mitigation policy development, and how are we doing?
- Do we have overly high expectations of development policy?
- How do you feel the evolution of mitigation policy in SA relates to SA's

Informed consent component

Whilst we are delighted that you have agreed to be interviewed, please understand that participation is completely voluntary and that you are free to withdraw from the interview at any time with no negative consequences for you or your organisation.

We will always be seeking your personal perspective, as opposed to an organisational view. We will check with you both before and after the interview whether there are any comments you would prefer not to have attributed to you, and we are also happy to respect anonymity within the report if you would prefer.

The interview will be recorded, and notes taken. These will be used for the analysis and writing of the research paper and PhD but will not themselves be made public.

Please feel free to contact me should you have any questions at this point, otherwise we look forward to the interview.

Best wishes,

Emily Tyler / Marta Torres Gunfaus

