# The South African National Climate Change Response Policy – an evidence-based policy-making case study

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## Abstract

South Africa's National Climate Change Response Policy was published as a White Paper in October 2011. Although the policy development process is often cited as an example of evidence-based policymaking due to the science-policy partnerships and engagements that underpinned the entire development process, the process has not been fully documented. This paper attempts to document the entire process and analyse it as an example of evidence-based policy-making.

## Key words:

Evidence-based policy-making; climate change; policy; participatory policy-making; policy cocreation; South Africa

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## **1** INTRODUCTION

South Africa's National Climate Change Response Policy was published as a White Paper in October 2011 (RSA, 2011). The development of the policy was effectively initiated at a national climate change conference held in Midrand from 17 to 20 October 2005. Its initiation and development is often cited as an example of evidence-based policy-making due to the participatory processes and the science-policy partnerships and engagements that underpinned the entire policy development process.

As detailed in Lukey and Hall (2020), evidence-based policy-making is one of the most important recent developments in policy-making. According to Marais and Matebesi (2013), the concept of evidence-based policy-making has risen to prominence internationally and involves making policy that is antiideological or ideologically free, pragmatic, scientific, forward-looking, strategic and responsive with a view to policy outcomes that are effective, efficient, and deliver quality services.

As noted in Lukey and Hall (2020), the South African Government's Department of Planning Monitoring and Evaluation (DPME) in the Presidency is a vocal advocate of evidence-based policy-making and offer courses on the concept to senior government officials as key policy-shapers. DPME (DPME & UCT, 2014) believes that evidence-based policy-making helps policy makers and providers of services make better decisions, and achieve better outcomes, by drawing upon the best available

evidence from research and evaluation and other sources. This includes decisions about: the nature, size and dynamics of the problem at hand; policy options that might be considered to address the problem; effective and ineffective interventions to solve the problem; the likely positive and negative consequences of the proposed policy option; the intended and unintended consequences of the proposed policy option; effective and ineffective modes of delivery and implementation; how long the policy will have to run before positive results will be achieved; the resources that will be required to implement the policy; the costs and benefits of the proposed policy, and on whom will these costs and benefits fall; the sustainability of the policy economically, socially, and environmentally. With this, DPME believes that evidence-based policy-making is about making decisions based on knowing with an estimated degree of certainty of what works, at achieving which outcomes, for which groups of people, under what conditions, over what time span, and at what costs (DPME & UCT, 2014).

According to Strydom, Funke, Nienaber, Nortje and Steyn (2010), evidence is made up of a range of components – not only scientific – and is never used in isolation. Scientific evidence typically includes research/surveys, quantitative/statistical data, qualitative data, and the analysis thereof. However, Strydom et al. (2010) note that evidence also includes economic, attitudinal, behavioural and anecdotal evidence, together with knowledge and expertise of experts, as well as lay persons, propaganda, judgements, insight/experience, history, analogies, local knowledge and culture.

With this, and despite reservations around how policymakers often source information with a particular agenda in mind, Strydom et al. (2010) still believe that policies based on evidence are more likely to be better informed, more effective and less expensive than policies formulated through ordinary time-constrained and politically constrained processes without evidence input. They believe that policy based on evidence is also likely to give policymakers confidence in the decisions that they take and that scientific evidence exposes policymaking to a wider range of validated concepts and experiences, enables policies to be formulated based on solid technical bases and can open up a range of policy options for policymakers to consider.

In their systematic review of barriers to and facilitators of the use of evidence by policymakers, Oliver et al. (2014) identify the following as the top ten reported facilitators of evidence use: (i) the availability and access to research and/or improved dissemination of research; (ii) collaboration; (iii) the clarity, relevance, and/or reliability of research findings; (iv) the relationship with policymakers; (v) the relationship with researchers or information management staff; (vi) the contact with researchers or information management staff; (vii) the format of research findings; (ix) timing and/or opportunity; and (x) the policymakers' research skills.

Cvitanovic et al. (2015), propose four strategies for improving knowledge exchange including: (1) knowledge co-production – which they note as the most widely advocated approach, where managers actively participate in scientific research programs from the onset, collaborating with researchers throughout every aspect of the study including design, implementation and analysis; (2) embedding – which involves permanently embedding research scientists within organisations dominated by decisions-makers which improves the likelihood that priority knowledge gaps are answered and information being quickly spread among decision-makers via social networks; (3) knowledge brokers – typically embedded within research teams or institutions and acting as intermediaries that develop relationships and networks with, among, and between producers and users of knowledge, to facilitate the exchange of knowledge among this network; and (4) boundary organisations – like knowledge brokers of stakeholders that are not embedded within research teams of organisations but are established as a separate entity representing both sides across the boundary (i.e.- science and decision-making) while maintaining credibility through independence.

Von der Heyden, Lukey, Celliers, Prochazka and Lombard (2016) briefly describe the 'co-creation' approach to policy-making in which the broad policy issue is shared and discussed with key stakeholders and a policy development plan is agreed that includes elements of how science will inform policy through focussed new research activities, research synthesis and/or other forms of science–policy

engagements. Von der Heyden et al. (2016) believe that the policy co-creation approach is facilitative of the science-based component of evidence-based policy-making by providing a two-way dialogue to not only inform policy, but also the focus of research making research findings more policy relevant.

Many of the facilitators of, and strategies for, improving evidence use in policy-making listed above ( (Cvitanovic, et al., 2015); (Oliver, Innvar, Lorenc, Woodman, & Thomas, 2014); (Von der Heyden, Lukey, Celliers, Prochazka, & Lombard, 2016)) were employed in the climate change policy development process by design or accident.

Although parts of the policy development process, especially the Long-Term Mitigation Scenarios (LTMS) process, have been documented (see, for example, Tyler and Gunfaus (2015)), there is no published description of the National Climate Change Response Policy development process as a whole. This paper attempts to document the entire process and analyse it as an example of evidence-based policy-making.

## 2 BACKGROUND

In 1994, the first year of democracy in South Africa, the South African Department of Environmental Affairs and Tourism established the National Climate Change Committee (NCCC) in response to growing international concerns around climate change. The NCCC was established to act as an advisory body to the Minister of Environmental Affairs and Tourism and comprised representatives from affected government departments, business, industry, mining, organised labour, community based organisations and non-governmental organisations. The NCCC is still in existence making it one of South Africa's longest-lived multi-stakeholder forums aimed at discussing and informing South African policy.

In August 1997, South Africa ratified the United Nations Framework Convention on Climate Change (UNFCCC) (United Nations, 1992). The fundamental objective of the UNFCCC is to achieve stabilisation of the concentrations of the greenhouse gases in the atmosphere at a level that prevents dangerous anthropogenic interference with the climate system. Government designated the Department of Environmental Affairs and Tourism to be the lead department responsible for the coordination and the implementation of South Africa's commitments and related matters in terms of the Convention.

By October 2000, South Africa had started compiling its Initial National Communication on Climate Change that had been prepared in accordance with Article 12 of the Convention (RSA, 2003). The Communication was intended to report on: South Africa's national circumstances; the national inventories of greenhouse gases for 1990 and 1994; South Africa's vulnerability to climate change and its potential to adapt; the systematic observation and research undertaken in this field; education, training and public awareness programmes required; projections and policies made and measures taken; mitigation options and possibilities for adaptation; and a preliminary needs assessment.

In 2001, the 3rd Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) (Intergovernmental Panel on Climate Change, 2001) gave further scientific certainty that climate change was largely caused by human activity and provided impetus for the further development and operationalization of the Kyoto Protocol that committed State Parties to reducing greenhouse gases emissions. The Kyoto Protocol finally came into force in 2005.

At the same time, South Africa's own research on climate change and its implications was also becoming more established. For example, Davidson and Tyani (2001) published their paper entitled "Climate Change and Sustainable Development: Future Perspectives for South Africa" at this time and this was quickly followed by a further paper on the subject (Davidson, Tyani, & Afrane-Okese, Climate change, sustainable development and energy: Future Perspectives for South Africa, 2002).

In 2002, climate change significantly moved up the South African political agenda when the Heads of State of over 180 countries met at the World Summit on Sustainable Development in Johannesburg. In July 2002, South African acceded to the Kyoto Protocol (United Nations, 1997).

In 2003, South Africa concluded its Climate Change 'country studies' and its 1990 and 1994 greenhouse gas inventories and submitted these in the form of its Initial Communication to the UNFCCC Secretariat (RSA, 2003). In compiling and finalising the national communication, it became clear that, not only would South Africa be severely impacted by climate change, but was also a significant contributor to the cause of climate change as a major greenhouse gas (GHG) emitter. This difficult position of both climate change victim and perpetrator resulted in South Africa's negotiation efforts rising considerably. Furthermore, the IPPC's 3<sup>rd</sup> Assessment Report made it clear that South Africa, along with other more advanced developing countries like China, India, Brazil, Mexico, South Korea and Saudi Arabia, would have to seriously start considering its responsibility for climate change. As a fossil-fuel-powered nation, this would have important policy and policy development implications.

In 2004, Government compiled and published "A National Climate Change Response Strategy for South Africa" (Department of Environmental Affairs and Tourism, 2004) based on the Initial National Communication, country studies and the IPPC's 3<sup>rd</sup> Assessment Report.

However, notwithstanding the increased attention being given to climate change by government and the relatively small group of NCCC members and their interested constituents, the general public was largely oblivious of climate change, or if not, was generally sceptical about its causes and possible impacts. Indeed, by early 2005 there was a general sense that, as in the United States where, so-called, 'balanced reporting' created an informational bias where a small group of global warming sceptics had their views amplified through popular media (Boykoff & Boykoff, 2004), climate change denialists were receiving more coverage in popular South African media than were the scientists involved in the IPCC.

# **3** THE EVIDENCE BASE<sup>2</sup>

Global change science has a considerable history in South and southern Africa. This field of science is multi-disciplinary, inherently diverse, and ranges from the study of physical atmospheric processes, through biological and ecological responses and feedbacks, to interactions with human society and economic activities. South African scientists have played an important role in raising awareness of this field of study, and its importance for developing regional, national and local responses to the threat of climate change.

By 2004, a series of scientific conferences had been held on this topic, beginning with a national workshop in 1987 ("Long term data series relating to South Africa's renewable resources"), followed by several national scientific conferences and co-ordinated research activities. In 1989 the national conference on "Geosphere-Biosphere Change in Southern Africa" was held at the University of Cape Town, and in 1995 the International Geosphere-Biosphere Program (IGBP) supported a regional conference "Global environmental change: Implications for southern Africa" at the Council for Scientific and Industrial Research (CSIR) in Pretoria. In the late 1990s, many South African scientists contributed to the SA Country Study on Climate Change (Kiker, 2000), and in 2003 the conference "Global change and regional sustainability" was held at Kirstenbosch in Cape Town.

These activities, together with ambitious regional multi-national scientific studies, such as the SAFARI and SAFARI 2000 studies of regional atmospheric impacts of natural and human-caused fires in southern Africa<sup>3</sup>, raised awareness of global environmental change.

<sup>&</sup>lt;sup>2</sup> This section is largely taken from a media release prior to the 2005 Climate Change Conference (Department of Environmental Affairs and Tourism, 2005c).

<sup>&</sup>lt;sup>3</sup> See, for example, Special Issue: SAFARI 2000-Southern African Regional Science Initiative. *Journal of Geophysical Research*, VOL. 108, NO. D13, 2003.

# 4 THE 2004 STRATEGY WITHOUT AN ASSOCIATED POLICY

A policy clarifies positions and objectives or desired outcomes. A strategy defines and communicates the unique choice of how resources, skills, and competencies are combined to meet an objective (Porter, 1996). Thus, strategy is often linked to policy or, as a bare minimum, it is linked to an objective or set of objectives. However, the 2004 National Climate Change Response Strategy for South Africa was not associated with a specific climate change policy.

In this regard, the strategy notes that the need for a national climate change policy was identified as an urgent requirement during the preparations for South Africa's ratification of the UNFCCC in 1997. A process to develop a policy was subsequently initiated under the auspices of the NCCC and a discussion document was compiled and workshopped with stakeholders to obtain input to the policy formulation process. However, according to the response strategy (Department of Environmental Affairs and Tourism, 2004), the need to produce an action-oriented response strategy document was clearly identified at this workshop, rather than a specific policy White Paper on climate change, as had originally been envisaged.

Although the National Climate Change Response Strategy was government's first formal provision of policy direction for national climate change responses, this strategy was developed in the context of the policies in place at the time and not within the context of a specific climate change policy. Indeed, the stated objective of the strategy was 'to support the policies and principles laid out in the Government White Paper on Integrated Pollution and Waste Management, as well as other national policies including those relating to energy, agriculture and water' (Department of Environmental Affairs and Tourism, 2004).

## 5 OBTAINING A PUBLIC MANDATE - THE 2005 "CLIMATE ACTION NOW" CONFERENCE

Despite the decision to have an "action-oriented response strategy document …rather than a specific policy white paper on climate change" (Department of Environmental Affairs and Tourism, 2004), by 2005 it was clear that the, somewhat guarded and conservative, 2004 strategy was rapidly being overtaken by events that required urgent and clear policy responses including: the entry into force of the Kyoto Protocol on 16 February 2005 and the subsequent first Meeting of the Parties to the protocol (MOP1)<sup>4</sup>; 2005 being assessed as the warmest year globally since 1880 coupled with extreme weather events like Hurricane Katrina and Mumbai, India, recording its highest ever daily rainfall with a deluge of just under 100cm that flooded the city in July of 2005.

To this end, and in keeping with government's commitment to participatory process around climate change manifested in the long-lived NCCC, the National Climate Change Conference was held in Midrand, Johannesburg, in October 2005.

According to the conference statement issued at the end of the conference (Department of Environmental Affairs and Tourism, 2005b),



from 17 to 20 October 2005, under the banner of "Climate Action Now", South Africans from all spheres of life came together in Midrand to address the growing challenge of climate change and to prepare for its implications. Over 600 representatives from government, business, the scientific and academic communities, and civil society considered the science relating to climate change and key

<sup>&</sup>lt;sup>4</sup> MOP1 took place between November 28 and December 9, 2005, in Montreal, Canada

responses to the potential social and economic impacts associated with the compelling scientific evidence of climate change.

The resulting conference statement opened with two significant points of direct relevance to evidencebased policy-making, namely: that the conference unanimously agreed that climate change was a reality, effectively marginalising the few, but vocal, denialist commentators that had confused and confounded the public debate up to this point; and secondly, that "...the gathering was broadly considered a reflection of Government's commitment and determination to act on climate change and to shape policy informed by the best-available science" (Department of Environmental Affairs and Tourism, 2005b).

The conference also compiled and published a number of "statements of intent" by the key constituencies present at the conference in what it called "an attempt to demonstrate the common resolve to action and the mainstreaming of climate change considerations in all their respective spheres of activity".

One of the key intentions in government's statement of intent was that government would initiate "a participatory climate change policy development process" – effectively confirming a strong public mandate for the development of the national Climate Change Response Policy.

### 5.1 Government's Statement of Intent – the 2005 Midrand Plan of Action

The published undertakings by government describing a number of activities regarded as constituting the foundation of an action plan<sup>5</sup> which was meant to lead the country's climate change programme into the future. Activities having direct relevance to evidence-based policy-making included:

- Initiating a detailed scenario building process to map out how South Africa could meet its UNFCCC Article 2 commitment to greenhouse gas stabilisation whilst ensuring its focus on poverty alleviation and job creation;
- Initiating a participatory climate change policy development process;
- Initiating a participatory national climate change research and development strategy development process that would coordinate and focus current research in a manner that delivers the critical mass of multi-disciplinary knowledge in focus areas while creating the opportunity to develop and retain human capital and research infrastructure;
- Driving increased research and innovation for the hydrogen economy using the research chairs programme and providing early demonstration of technologies for 2010;
- Strengthening the South African Environmental Observation Network (SAEON) to facilitate long term climate research and establishing a coordinating mechanism for South Africa's investment in earth observation as well as providing an interface with the Global Earth Observation System of Systems (GEOSS);
- Establishing the South African National Energy Research Institute (SANERI);

### 5.2 The 2005 Climate Action Conference initiates the evidence-based policy-making process

Cvitanovic et al. (2015) identify 'co-production' as an approach to increasing knowledge exchange among scientists and decision-makers. In this approach, managers actively participate in scientific research programs from the onset, collaborating with researchers throughout every aspect of the study including design, implementation and analysis. Cvitanovic et al. (2015) argue that "...including decision-makers in research programs in this manner ensures that they develop a strong understanding of the research content, as well as developing a strong sense of ownership in the research, which they can then communicate more broadly within their organisation..." (Cvitanovic, et al., 2015).

<sup>&</sup>lt;sup>5</sup> The so-called Midrand Plan of Action.

Although the development of South Africa's national climate change response policy may be regarded as a product of co-production, the approach differed from that described by Cvitanovic et al. (2015) in that it was the scientists who were actively engaged in the policy development process from the onset, collaborating with policy-makers throughout the policy-making process.

As noted above, the mandate for the initiation of a dedicated climate change response policy development process came from the 2005 National Climate Change Conference.

In what was regarded as a ground-breaking approach to evidence-based policy-making at the time, the conference consisted of two parallel and overlapping events.

From 17 to 19 October 2005, the Climate Change and Science Conference brought together eminent African and international scientists to share research findings and advance scientific methodologies relating to climate change in Africa (Department of Environmental Affairs and Tourism, 2005a). Many mainstream national and international scientists who had published their work in high impact journals such as *Nature* and *Science* were included in the program. Although it was not possible to include every affected scientist in this exercise, the aim was to provide a window on the developing science of global change and its uncertainties, specifically with reference to Africa, and through this to test this approach for future deliberations (Department of Environmental Affairs and Tourism, 2005c).

From 18 to 20 October the National Consultative Conference on Climate Change was held to test and inform South Africa's policies, strategies and action plans; direct South Africa's international negotiations on climate change; chart the way forward on future commitments; generate inputs for the second National Communication on climate change; revise policies to take into account new scientific developments; and more closely coordinate South Africa's environmental approach with the national energy strategy (Department of Environmental Affairs. 2005a).

Both conferences were held at the same conference facility in adjoining venues which allowed delegates to interact and network in the common exhibition, dining and refreshment areas. Conference programmes were also aligned to maximise the possible interaction time between scientists and policy makers and policy shapers.

Every day the Consultative Conference started with a briefing from the Science Conference based on their previous day's proceedings and this briefing informed and directed the policy discussions of that day.

The twinned science-policy events had a number of unspoken objectives. Firstly, because of the relative 'newness' of climate change science, the exponential growth in new climate change science and the disproportionate coverage popular media was giving to climate change denialists (Boykoff & Boykoff, 2004), many climate change policy discussions were being confused and confounded by claims of scientific uncertainty. Hence, one of the unspoken objectives of the conference was to ensure that attempts to stymie progress in policy discussions through claims of uncertainty would be immediately addressed by having the top scientists 'right next door'.

Another unspoken objective was to encourage policy-relevant climate change research by practically demonstrating the priority given to this issue by politicians. As it turned out, the conference was opened by the Deputy President and had the active involvement of the Ministers of: Environmental Affairs and Tourism; Agriculture and Land Affairs; Water Affairs and Forestry; Science and Technology; and Minerals and Energy.

## 6 POLICY-FOCUSSED RESEARCH – THE LONG-TERM MITIGATION SCENARIOS (LTMS)

In March 2006, in response to the "initiating a detailed scenario building process..." and "initiating a participatory climate change policy development process" activities of the 2005 Midrand Plan of Action (see 5.1), Cabinet mandated a national process of building scenarios of possible greenhouse gas emission futures, informed by the best available research and information, to define not only South

Africa's position on future commitments under international treaties, but also to shape the nation's climate change policy for the longer-term future. In line with the Cabinet mandate, the Long-Term Mitigation Scenario (LTMS) process was launched in mid-2006.

The focus of the LTMS process, as the name suggests, was mitigation (i.e. reducing emissions of greenhouse gases). The then Department of Environmental Affairs and Tourism, as the focal point for climate change in South Africa, convened and managed the process, which was overseen by an Inter-Ministerial Committee on Climate Change. The department appointed the Energy Research Centre at the University of Cape Town to project manage the entire process and they, in turn, convened and contracted the process specialists and set up the personnel for four focussed Research Support Units. The LTMS Scenario Building Team was established in late 2006 to carry out the technical aspects of the process. The Scenario Building Team was made up of individual stakeholders from government, industry, labour, civil society, as well as other relevant players. The products of the LTMS were signed-off by the Scenario Building Team in November 2007.

At the time, the LTMS process and its products were well received by most stakeholders and were regarded as being robust and broadly supported. There was also consensus that the results had been achieved through a sound technical methodology and extensive stakeholder involvement.

#### 6.1 LTMS – the epitome of evidence-based policy-making?

According to Tyler and Gunfaus (2015), the LTMS was an early example of evidence-based policymaking in South Africa. They conclude that their interviews and analysis suggests that the LTMS was a 'significant, unique and remarkable policy relevant exercise' that accomplished the agenda-setting phase of the policy cycle and moved the policy process forward towards policy formulation (Tyler & Gunfaus, 2015).

An aspect of the LTMS process that is often overlooked is the significance of the 'process specialists' referred to above. In this regard, the use of such specialists is akin to what Cvitanovic et al. (2015) refer to as the 'boundary organisation' approach to increasing knowledge exchange among scientists and decision-makers. Boundary organisations facilitate communication and knowledge exchange among diverse networks of stakeholders by representing both the science and decision-making parties while maintaining credibility through independence. In this way, boundary organisations unite groups that may otherwise have strained relationships to enhance evidence-based decision-making.

Tyler and Gunfaus (2015) noted that their interviewees regarded the work of the process specialists as being crucial for mediation and creating an environment of trust and inclusivity. Furthermore, these specialists were also seen to play a key role in translating complex and technical discussions into more accessible language.

Another aspect of the LTMS that is often overlooked is that the scientific team was headed by a researcher who was a good public speaker who was able to translate often complex science into a language that could be easily understood by a lay audience. Not surprisingly, these skills were exploited and honed by him being part of South Africa's climate change negotiating team for many years.

In this regard, one of the Tyler and Gunfaus (2015) interviewees suggested that the LTMS process both interpreted science and developed a scientifically robust evidence base in a collaborative and accessible way for policy-makers. Another of their interviewees suggested it was an approach that enabled discussions about things that are typically only discussed at an ideological level.

According to Tyler and Gunfaus (2015), a decade later the LTMS is acknowledged as being the "foundation" of South African climate mitigation policy, both domestically and internationally and that the process provided the inspiration for the Mitigation Action Plans and Scenarios (MAPS) Programme which runs similar processes in Chile, Colombia, Peru and Brazil.

## 7 GOVERNMENT'S 2008 POLICY DIRECTIONS

Following the release of the suite of reports that made up the Long Term Mitigation Scenarios in October 2007 (Scenario Building Team, 2007)<sup>6</sup>, the department compiled a detailed submission to Cabinet requesting Cabinet's approval of a draft plan for a proposed participatory climate change policy development process. This submission included the LTMS and other documents dealing with climate change, including a brief summary of the available science relating to predicted climate change impacts.

In July 2008, Cabinet approved a climate change policy development process and associated development timeframes and also provided 6 broad policy themes to focus the development of the policy. In this regard, Cabinet acknowledged that the challenge of climate change could only be addressed through active and coordinated interventions by all spheres of government, industry and civil society and that a fully participatory policy development process was required.

In summary, the policy development plan required a high-profile launch of the process, the production and publication of a Green Paper by mid-2010 and a final draft policy to be submitted by the end of 2010.

The 6 broad policy themes included: GHG emission reductions and limits; building on, strengthening and/or scaling up current initiatives; implementing a "business unusual" call for action; preparing for the future; vulnerability and adaptation; and alignment, coordination and cooperation.

# 8 THE 2<sup>ND</sup> NATIONAL COMMUNICATION - CEMENTING THE SCIENCE-POLICY DIALOGUE

As noted above, in accordance with the commitments of Parties to the UNFCCC, South Africa has to periodically compile and submit a report known as its National Communication. This report must provide a national greenhouse gas inventory in a standard format; a general description of steps taken or envisaged by the Party to implement the Convention; and any other information that the Party considers relevant to the achievement of the objective of the Convention and suitable for inclusion in its communication, including, if feasible, material relevant for calculations of global emission trends.

Having secured UN funding for the development of South Africa's 2<sup>nd</sup> National Communication (SNC) in 2007, there was general agreement among NCCC members that the SNC should take full advantage of these donor resources by compiling a report that would provide a current, complete, accurate and high quality overview of South Africa's climate change science. To this end the department engaged the South African National Biodiversity Institute to drive and manage a compilation process involving a large team of the best available South African scientists.

From the outset, the SNC development process was linked to the policy development process with a view to the evolving SNC being a 'technical reference document' for the evolving policy.

In this, the department decided to reinforce the strong science-policy dialogue that had been initiated through the 2005 conference by making the same official responsible for the management of the policy development process also the 'client' for the compilation of the SNC. This may be seen as being akin to what Cvitanovic et al. (2015) refer to as the 'embedding' approach to increasing knowledge exchange among scientists and decision-makers. This approach improves collaboration and knowledge exchange among scientists and decision-makers through the use of knowledge brokers. According to Cvitanovic et al. (2015), while the exact role and function of knowledge brokers are conceptualized and operationalised differently in various sectors and settings, the key feature of such a role is to facilitate the exchange of knowledge between and among various stakeholders, including researchers, practitioners, and policy makers. To achieve this, knowledge brokers are typically embedded within research teams or institutions and act as intermediaries that develop relationships and networks with,

<sup>&</sup>lt;sup>6</sup> The LTMS reports included: A Long Term Mitigation Scenarios for South Africa; B Technical Summary; C Technical Report; C.1 Technical Appendix; and D Process Report.

among, and between producers and users of knowledge, to facilitate the exchange of knowledge among this network. When implemented effectively, knowledge brokers are believed to have the ability to facilitate organisational change by removing barriers to evidence-based decision-making, and promoting a culture that values the use of the best available science in policy and practice (Cvitanovic, et al., 2015).

Finally, as in the LTMS process, the SNC scientific team was also headed by a researcher who was an excellent public speaker who was able to translate complex science into a language that could be easily understood by a lay audience. As with the LTMS lead scientist, these skills were also exploited and honed by him being part of South Africa's climate change negotiating team for many years.

## 9 COMPILING THE EVIDENCE BASE

In order to provide easy access to key facts and figures on climate change from a South African perspective for use in the policy discussions necessary to inform the Climate Change Green and White Papers, the Department of Environment compiled and circulated a document entitled "National Climate Change Response Policy : Discussion Document for the 2009 National Climate Change Response Policy development Summit" (RSA, 2009).

This document was divided into three parts. The first part provided a general background and introduction and dealt with the latest science on climate change and its causes, international negotiations and the climate change implications for Africa.

The second part provided a summary of the available science relating to South Africa drawn from the information being collected for the SNC and dealt with climate vulnerabilities, impacts and adaptation in terms of observations and trends, projected scenarios, water resources and hydrology, agriculture, forestry, biodiversity and ecosystems, human health, rural livelihoods, and the urban environment. It then went on to provide information on South Africa's greenhouse gas emissions and the findings of the LTMS.

Finally, part three dealt with the policy choices and focussed largely on Cabinet's policy themes (see 7).

Once again this document demonstrated the commitment to an evidence-based policy-making approach by providing stakeholders with the most up to date summary aggregation of climate change science relating to South Africa available at the time.

## 10 THE 2009 CLIMATE CHANGE SUMMIT

From 3 to 6 March 2009, in accordance with Cabinet's mandate, South Africans from all spheres of life again came together in Midrand to initiate a consultative process to develop the South African Climate Change Response Policy. The, live-streamed, "Climate Change Summit 2009" involved 900 representatives from government, business, the scientific and academic communities, and civil society and over 150 "virtual participants" linked through the Internet.

Although the Climate Change Summit 2009 did not repeat the dual science-policy events of the 2005



conference, it was noticeably co-hosted by the departments of environment and science and technology and the conference was kicked off with a review of the latest science. In this regard, the over 1000 participants were given an update on the Intergovernmental Panel on Climate Change's 4<sup>th</sup> Assessment Report and more recent international and local science relating to climate change. The outcomes of research work carried out since the 2005 National Climate Change Conference was also presented and discussed, including the Long-Term Mitigation Scenarios (LTMS), the Department of Science and Technology's Climate Change Research and Development Strategy and Technology Needs Assessment, the 2000 greenhouse gas inventory and the initiation of the 2<sup>nd</sup> National Communication.

As noted in the conference statement (RSA, 2009), following active and vigorous discussions and debates around South Africa's policy response to climate change, there was widespread consensus on many issues, including "pursuing what was required by science, consistent with the lowest stabilisation levels assessed by IPCC" and "the maintenance of a strong science-policy interface".

The summit also identified conflicting policy positions in respect to: the nature of the country's energy mix; concerns around transparency in the decision-making process, especially energy planning; and the use of economic instruments, especially carbon trading and carbon tax.

At the time, many commentators expressed the opinion that the high level of consensus around such a complex issue was due to the ease of access to the up to date summary climate change science provided in the Summit discussion document (see 9).

Finally, the Summit agreed that the National Climate Change Response Policy would be developed through a participatory, multi-stakeholder, consultative and iterative process.

## 11 THE 2010 CLIMATE CHANGE POLICY ROUND TABLE

Following a period of on-going policy discussion after the 2009 Climate Change Summit, interrupted only by the UNFCCC COP 15 in Copenhagen, government hosted a Climate Change Policy Round Table on 17 May 2010 with the purpose of providing key climate change response stakeholders with an update on the National Climate Change Response Policy development process and to provide a platform to respond to, and discuss, the most recent Climate Change Policy Discussion Document. During the round table discussions it was reconfirmed that a national Climate Change Response Green paper would be published for public comment in mid-2010 and that the final draft policy would be submitted to Cabinet by the end of 2010.

# 12 THE NATIONAL CLIMATE CHANGE RESPONSE GREEN PAPER, NOVEMBER 2010

The months following the 2009 Climate Change Summit was also a time of intensive engagements with other sector departments affected by climate change or climate change response. These included the departments responsible for energy, mining, trade and industry, agriculture, water, forestry, health, transport, rural development, etc. At the end of June 2010, the department held an internal "Green Paper drafting retreat" with a view to weaving the numerous sectoral policy inputs into an integrated and coherent framework policy<sup>7</sup>. The product of this drafting retreat was the first working draft of the National Climate Change Response Green Paper.

The basic structure of this working draft Green Paper was presented to government's Intergovernmental Climate Change Committee (IGCCC) in July 2010 and, following further detailed comments and inputs from key national departments and a series of extensive edits, a final draft Green Paper was compiled and circulated again in September 2010.

By the end of October 2010, there was a general belief amongst the Green Paper development team that the Draft Green Paper had sufficient content and was of sufficient quality for publication for public comment and for use in more detailed and focussed policy consultations. Thus, the Draft Green Paper was submitted to Cabinet for approval for publication for public comment.

<sup>&</sup>lt;sup>7</sup> The initial product of the drafting retreat was referred to as the "Frankenstein Draft" by the drafting team due to the differing styles and fonts of the various inputs stitched together to form the first working document.

Following Cabinet's approval to publish for public comment, the National Climate Change Response Green Paper was published in the Government Gazette, departmental web site and in hard copy on 27 November 2010 (RSA, 2010).

## **13 THE FORMAL PUBLIC COMMENT PROCESS**

Following the publication of the National Climate Change Response Green Paper for public comment in November 2010, the department led a five month engagement process with all South Africans to secure inputs to inform and shape the evolving policy (see Annexure A for some participation/engagement facts and figures).

To this end a Green Paper web site was established to facilitate access to all the relevant documentation, provide updates on the process and to provide an electronic means for submitting comments.

In order to encourage broad-based inputs into the policy process whilst attempting to build public awareness around this issue, the department held public workshops on the Green Paper in each of South Africa's nine provinces. In order to demonstrate the evidence base for the Green Paper, presentations on the Green Paper were always preceded by a presentation on the key scientific findings emerging from the SNC compilation process.

On more contentious issues, the department held a series of focussed stakeholder workshops on specific policy themes identified during the policy development process including: adaptation; mitigation; governance; energy; local government and public awareness; and human resources and technology.

The department also formally engaged on the policy within the National Economic Development and Labour Council (NEDLAC), conducted many bilateral engagements and made numerous policy presentations at various forums, seminars and conferences.

Finally, Parliament hosted a public hearing process on the draft policy stretching over three weeks of stakeholder presentations and robust discussions and debates.

The inputs during this period numbered over 4,000 individual comments on the Green Paper and these were captured by the department in a detailed comment/response database.

## 14 GAP-FILLING RESEARCH

Although the science-policy link between the evolving SNC and policy was maintained from 2008 until the final joint submission of these draft documents to Cabinet, a final focussed evidence-based policy-making intervention was implemented in the conversion of the Green Paper to a White Paper.

As noted above, during the policy development process initiated at the Summit, certain specific issues appeared to be raised again and again in various stakeholder engagements. These recurring areas of concern and/or uncertainty included: climate finance; human resources and technology; adaptation; mitigation; and governance.

In keeping with the Summit decisions and with a view to informing and enriching the debates around these issues, the Department of Environmental Affairs commissioned focussed research into these focus areas and used the findings of this research to focus and inform discussions in key stakeholder workshops on each of the topics in February and March 2011.

Although the independent research and findings contained in the resultant publications did not necessarily represent the views, opinions and/or position of Government, the department believed that the research was an important addition to the evolving climate change discourse and, hence, made this work publicly available and accessible.

The department was able to conduct this final evidence-based policy-making intervention due to support from the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety partners and their local agent, the Deutsche Gessellshaft für Internationale Zusammenarbeit (GIZ).

## **15 THE FINALISATION OF THE WHITE PAPER**

The over 4,000 individual comments on the Green Paper were analysed and, from this, a working draft of the White paper was compiled, circulated and presented to the IGCCC in March 2011. Comments from the IGCCC on the working draft were considered at a drafting team meeting held on 27 June 2011 and a fully revised draft was compiled on 21 July 2011 and used as the basis for the final round of high-level interactions aimed at finalising the drafting process.

On Wednesday 12 October 2011, the South African Cabinet approved Government's National Climate Change Response Policy and the policy was published as a White Paper in the Government Gazette (Gazette No. 34695, Notice No. 757 of Wednesday 19 October 2011).

The fact that the policy and 2<sup>nd</sup> National Communication were approved for publication at the same Cabinet meeting in October 2011 is evidence of how these science and policy processes were closely linked from start to finish.

## 16 THE IMPACT OF THE WHITE PAPER

Although it is very difficult to measure the actual impact of policy, there is a general sense that South Africa measurably scaled up climate change related responses during the last stages of the policy development process and immediately thereafter. Apart from massively increased investments in state-of-the-art public transport systems like the Gautrain and bus rapid transit (BRT) systems, Tyler and Gunfaus (2015) believe that the LTMS enabled a carbon constraint to be incorporated into South Africa's 2010 Integrated Resource Plan (IRP) for the electricity sector. They note that this was the first time emissions were quantitatively considered in energy planning, and the emissions constraint signalled a shift in South African energy policy. Furthermore, they conclude that the Renewable Energy Independent Power Producer Procurement Programme (REI4P) which has been a significant success from the perspective of attracting investment in renewable energy into the country was enabled through the IRP 2010.

## **17 CONCLUSION**

In their paper on 'science to policy', Von der Heyden et al. (2016) describe 5 policymaking strategies used in South Africa and the opportunities for evidence-based policymaking associated with each strategy. Amongst these is policy 'co-creation' - a strategy where: the broad policy issue is shared and discussed with key stakeholders; a policy development plan is agreed that includes elements of how science will inform policy through focussed new research activities, research synthesis and/or other forms of science–policy engagements, and; a process that provides two-way dialogue to not only inform policy, but also the focus of research which then makes the research findings more policy relevant. Von der Heyden et al. (2016), suggest that the development of South Africa's Climate Change Response Policy is an example of this co-creation strategy and the above analysis appears to support this conclusion.

It is also clear that many of what Oliver et al. (2014) refer to as facilitators of evidence use were apparent in South Africa's National Climate Change Response Policy development process.

In terms of the top facilitator, namely availability and access to research and/or improved dissemination of research, the initiation of the policy development process through a joint science-policy event and the linking of the policy-making process to the science synthesis process meant readily available and accessible research findings and analysis that was widely disseminated to policy makers and policy shapers.

In terms of collaboration, the process was clearly a collaborative effort between scientists and policy makers.

Using the IPCC departure point of the science being 'policy relevant, not policy prescriptive' the science-policy collaboration throughout the policy-making process ensured the clarity, relevance and

reliability of the research findings to the process. Furthermore commissioning specific research projects to address policy uncertainty guaranteed the relevance of this research.

Twinning events and ensuring that every formal policy discussion started with an update on the most recent science built a close and trusting relationship between scientists, policymakers, researchers and information management staff. In order to maintain this relationship, on-going contact, interaction and engagement between scientists, policymakers, researchers and information management staff was also essential.

Ensuring that every formal policy discussion started with an update on the most recent science required research findings to be formatted and presented in a way that policy makers and shapers found interesting, understandable, empowering and policy relevant.

Linking the policy-making process to the science synthesis process meant that the timing between research findings and policy responses was fully aligned and this alignment was reinforced through frequent science-policy engagement opportunities.

Finally, the on-going science-policy dialogue throughout the process meant that policy-makers better understood the scientific process and science culture and were better equipped to translate policy questions into research questions.

In terms of the Cvitanovic et al. (2015) strategies for improving knowledge exchange, all four of these strategies can be identified to a greater or lesser extent in the South Africa's National Climate Change Response Policy development process.

Firstly, linking the policy-making process to the science synthesis process clearly demonstrates knowledge co-production.

Secondly, although not formally embedding a policymaker in the most active research organisations, having the policy development manager also acting as the client for the policy-related research effectively ensured that priority knowledge gaps were answered and information was quickly spread among decision-makers.

Thirdly the lead scientists for the LTMS and SNC processes easily fit the description of knowledge brokers as they were embedded within the research teams and acted as intermediaries that developed relationships and networks with, among, and between producers and users of knowledge, to facilitate the exchange of knowledge among this network.

Finally, although less obvious, the independent facilitator in the LTMS process may be considered to be the use of a boundary organisation that facilitated communication and knowledge exchange among diverse networks of stakeholders without being embedded within the research teams but working as a separate entity representing both sides across the boundary (i.e. science and decision-making) while maintaining credibility through independence.

In conclusion, although a six year policy development process may be considered excessive by some, this period was not as a result of the intensive science-policy dialogue but due to extended stakeholder consultation processes around a complex issue of very high social, economic and environmental significance and impact. Indeed, there is an argument to be made that without the use of evidence in this policy-making process, the policy would have lacked any real substance, especially with respect to mitigation, or would have taken far longer to complete due the use of the common 'scientific uncertainty' tactic used by vested interests to slow and delay the development of progressive policies.

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# ANNEXURE A: PARTICIPATION / ENGAGEMENT FACTS AND FIGURES

#### Parliament

The following table provides summary information on some of the key parliamentary meetings that informed and shaped the National Climate Change Response Policy.

Date	Convenor	Venue	Focus
2009/08/26	Parliamentary Portfolio	Parliament	Discussion on the policy development process
	Environmental Affairs		
2009/09/16	Parliamentary Portfolio Committee on Water and Environmental Affairs	Parliament	Update on the policy development process
2009/11/17- 18	Parliamentary Portfolio Committee on Water and Environmental Affairs	Parliament	Discussion on the evolving policy at the public hearing on climate change
2010/08/24	Parliamentary Portfolio Committee on Water and Environmental Affairs	Parliament	A briefing and update on the Green Paper development process
2011/03/29	Parliamentary Portfolio Committee on Water and Environmental Affairs	Parliament	Discussion on defining South Africa's Desired Greenhouse Gas Mitigation Outcomes – Research, concerns, issues and proposals

#### The NCCC

The following table provides summary information on some of the key National Climate Change Committee (NCCC) (and NCCC +) meetings that informed and shaped the National Climate Change Response Policy.

Date	Venue	Focus
2010/02/15		The 56 <sup>th</sup> NCCC meeting mainly discussed the outcome of the 15 <sup>th</sup> Conference of the Parties to the United Nations Framework Convention on
		Climate Change held in Copenhagen in December 2009.
2010/05/17	Sandton Convention Centre	NCCC + Climate Change Policy Development Round Table
2011/04/01	Gallagher Convention Centre, Midrand	Minister initiated the Public Climate Change Outreach and Mobilisation Programme at this NCCC + meeting
2011/06/30	Burgers Park Hotel, Pretoria	The 59th NCCC meeting mostly dealt with the policy development process and COP 17

#### **High-level stakeholder meetings**

The following table provides summary information on some of the key non-government meetings that informed and shaped the National Climate Change Response Policy.

Date	Convenor	Venue	Focus
2009/08/23	IAIA South Africa		Discussion of the policy development process at the annual IAIA conference
2009/09/07	DBSA	DBSA Auditorium	Discussion on the emerging policy at DBSA's Climate Change Dialogue
2009/09/09	COSATU	Parktonian Hotel	Discussion on the emerging policy at COSATU's Climate Change Workshop

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Date	Convenor	Venue	Focus
2009/11/17	Fossil Fuel Foundation	Glenhove Conference Centre, Johannesburg	Discussion on the emerging policy
2010/06/17	Climate Justice Network, Western Cape	ISS Offices, Cape Town	Discussion on the policy development process and emerging policy at the Climate Justice Network, Western Cape's workshop on the national climate change policy.
2010/08/18	Business Unity South Africa (BUSA)		Meeting to discuss, among others, the Copenhagen Accord, its potential impact on the Green Paper in general and on business and industry in particular to discuss, among others, the Copenhagen Accord, its potential impact on the Green Paper in general and on business and industry in particular
2011/02/28	National Planning Commission	Liliesleaf Farm, Johannesburg	Presentation on the emerging policy to the National Planning Commission's High Level Dialogue on a Transition to a low carbon economy, 28 February to 1 March 2011
2011/07/26	COP 17 CEO's Forum		DG led bilateral on the emerging policy

#### **High-level intergovernmental meetings**

The following table provides summary information on some of the high-level DG to DG or DDG to DDG bilateral meetings that informed and shaped the National Climate Change Response Policy.

Date	Department	Focus
2008/11/17	Department of Minerals and Energy	DG to DG bilateral on developing the new climate change
		response policy
2011/06/14	Department of Science and Technology	DG to DG bilateral on the emerging policy
2011/07/07	Department of Minerals and Energy	DG to DG bilateral on the emerging policy
2011/07/12	Department of Transport	DG to DG bilateral on the emerging policy
2011/07/26	Department of Agriculture, Forestry and	DG to DG bilateral on the emerging policy
	Fisheries	
2011/07/26	Department of Finance / National	DDG to DDG bilateral on the emerging policy
	Treasury	
2011/07/26	Department of Rural Development	DG to DG bilateral on the emerging policy
2011/07/26	Department of Water Affairs	DG to DG bilateral on the emerging policy

#### **High-level industry meetings**

The following table provides summary information on some of the high-level bilateral meetings with industry that informed and shaped the National Climate Change Response Policy.

Date	Organisation	Focus
2010/08/16	Sasol	Meeting to discuss, among others, the Copenhagen Accord, its potential impact on the Green Paper in general and on future coal-to-liquid developments in particular
2011/07/28	Eskom	DDG led bilateral on the emerging policy

#### National-provincial governance coordination

The following table provides summary information on some of the key MINMEC and Mintech meetings that informed and shaped the National Climate Change Response Policy.

Date	Meeting	Venue	Focus
2008/11/20	MINMEC:		Discussion on government's vision, strategic direction and
	Environment		framework for a climate change response policy –
			implementation plan
2009/06/02	MINMEC:		Brief MINMEC on the outcomes of the Climate Change Summit
	Environment		2009 and discuss the possible role of province in the national
			Climate Change Response Policy development process and
			beyond.

Date	Meeting	Venue	Focus
2009/09/08	MINMEC:	Zimbali Lodge,	Discussion on the emerging policy
	Environment	KwaZulu-Natal	
2011/02/14	Mintech:	Golden Gate	Discussion on emerging issues from the National Climate
	Environment	Highlands National Park, Free State	Change Response Green paper consultative process at the Annual Mintech Planning Workshop, 14-15 February 2011

#### Inter-Ministerial Committee (IMC) on Climate Change

The following table provides summary information on the IMC meetings that informed and shaped the National Climate Change Response Policy.

Date	Focus
2010/09/14	Briefing and update on the Green Paper development process
2010/10/04	Meeting that, among others, discussed the initial draft Green Paper

#### Forum of South African Directors-General (FOSAD) Economic and Employment Cluster

The following table provides summary information on the FOSAD EE Cluster meetings that informed and shaped the National Climate Change Response Policy.

Date	Venue	Focus	
2008/09/17	Union Buildings	Discussion on government's vision, strategic direction and framework for a climate	
		change response policy	
2008/10/22	Union Buildings	Policy development progress	
2010/10/13	Union Buildings	Discussion on the draft Green Paper	

#### Inter-Governmental Committee on Climate Change (IGCCC)

The following table provides summary information on some of the IGCCC meetings that informed and shaped the National Climate Change Response Policy.

Date	Venue	Focus
2008/08/01	Reserve Bank Conference Centre, Pretoria	(Meeting 1) Reestablishment of the IGCCC following Cabinet's policy directions. The IGCCC was revived as a forum for intergovernmental coordination, communication and alignment around government's response to climate change. It also served as the steering committee for ongoing and planned projects including, among others: the compilation of the 2000 National Greenhouse Gas Inventory; the 2nd National Communication; and the National Climate Change Response Policy Development
2008/09/25	Department of Science and Technology	(Meeting 2) Climate Change Response Policy – Implementation Plan (Feedback from the EE FOSAD Cluster Meeting, 17 September 2008)
2008/11/21		(Meeting 4) Progress reported on the development of the Climate Change Governance Roles and Functions and Readiness Assessment matrix and a request to circulate the matrix to affected departments as a base-line reference for further climate change policy development work
2010/07/07		Meeting that, among others, endorsed the structure of the Green Paper and provided input on content
2010/09/29		Meeting to discuss the initial draft of the Green Paper
2011/03/27		Review of working draft of the White Paper
2011/03/31		Review of working draft of the White Paper
2011/04/13- 15		White Paper drafting retreat
2011/05/31	Burgers Park Hotel, Pretoria	Discussed the White Paper finalisation process
2011/06/30	Burgers Park Hotel, Pretoria	"Serving as the Presidential Outcome Forum in respect of climate change outcomes", discussed the White Paper finalisation process

Date	Venue	Focus
2011/09/19	Manhattan	(Meeting 15) Final policy development update
2011-05-31	Burgers Park Hotel, Pretoria	"Serving as the Presidential Outcome Forum in respect of climate change outcomes", provided brief policy development progress update, but mostly concentrated on international negotiations

#### White Paper development

#### The Provincial Workshops

A series of public workshops on the Green Paper were held in each province (see table below).

PROVINCIAL NATIONAL CLIMATE CHANGE RESPONSE GREEN PAPER CONSULTATION WORKSHOPS			
DATE	PROVINCE	VENUE	
17 January 2011	Western Cape	Cape Town Lodge	
19 January 2011	Eastern Cape	Premier Hotel Regent, East London	
21 January 2011	Northern Cape	Garden Court Southern Sun, Kimberley	
24 January 2011	KwaZulu Natal	Riverside Hotel, Durban	
26 January 2011	Free State	Mont d'Or Hotel, Clarens	
13 February 2011	North-West	Bakubung, Pilanesberg	
31 January 2011	Limpopo	Shangri-La Country Hotel, Modimolle	
02 February 2011	Mpumalanga	Protea Hotel, Witbank	
04 February 2011	Gauteng	Indaba Hotel, Fourways	

#### The Parliamentary Hearings

Parliament hosted a public hearing process on the draft policy stretching over three weeks of stakeholder presentations and robust discussions and debates (see table below).

Date	Venue	Presenter
3 March	Old Assembly	Dr Chris Moseki - Water Research Commission (WRC)
2011	Chamber	Dr Linda Makuleni - South African Weather Services
		Bishop Geoff Davies - South African Faith Communities Environmental Institute
		Mr Keith Vermeulen - South African Council of Churches
4 March	Old Assembly	Dr Achala Chandani - International Institute for Environment and Development
2011	Chamber	Mr Mthobeli Kholisa - SALGA
		Prof. Harald Winkler - Energy Research Centre (UCT)
		Prof. Phillip Lloyd - Energy Institute (CPUT)
		Mr Norman Mabasa - South African Medical Association
8 March	Room 3, 90 Plein	Ms Yvette Abrahams - Commission for Gender Equality
2011	Street	<ul> <li>Ms Lindiwe Ngubese / Ms Nomsa Silibano (Zulu/ Tswana) - Women Energy and Climate Change Forum</li> </ul>
		<ul> <li>Ms Thabisile Mondi / Mr Kabelo Radebe (Zulu/Tswana) - Youth in Climate Change</li> </ul>
		Ms Fariel Adam/ Ms Makoma Lekalakala (Zulu/Tswana) - Earthlife Africa
		Ms Louise Naude - WWF SA
9 March	V226, 2 <sup>nd</sup> Floor,	Mr Woody Aroun - NUMSA
2011	Old Assembly Building	Mr John Mawbey - SAMWU
		Ms Louraine Lotter - BUSA
		Mr Nic Opperman - AGRISA
		Ms Melita Steele - Green Peace
		<ul> <li>Mr Stanford Mwakasondo - ENGEN (Pty) Ltd</li> </ul>

		Mr Stephen Law - Environmental Monitoring Group
15 March V226, 2 <sup>nd</sup> Floor		Ms Peta Wolpe - Sustainable Energy Africa
2011	Old Assembly Building	Dr Ruth Rabinowitz - MAMA Earth Foundation
		Ms Mariam Mayet - African Centre for Biodiversity
		Mr Gary Pienaar - IDASA
		Mr Meshack Mbangula/ Ms Lerato Maragele - Climate Justice Now
16 March	March Committee Room 11 M314, 3 <sup>rd</sup> Floor, Marks Building	Ms Bianca McKelvey - WESSA
2011		Mr Sidwell Ntshingilane - Ekasi Development Project
		Mr John Carter - Nelson Mandela Bay Transition Network Team
		Mr Solomon Tladi/ Ms Fenky Mofiwa - Off the Ground
		Mr Desmond D'sa - South Durban Community Environmental Alliance
		Mr Wally Menne - Timberwatch Coalition
		Ms Dhiraj Rama - Association of Cementitious Material Producers (ACMP)
		Mr Jeremy Acton - Dagga Party/ Iqela lentsango
		Mr Terry Bengis - Individual
		Mr Mziwakhe Nhlapo - NUM

#### The NEDLAC Process

Government tabled the National Climate Change Response Green Paper at NEDLAC on 20 January 2011. A joint Task Team was set-up comprising of members from the Trade and Industry and Development Chamber with the purpose of interrogating and critiquing the Green paper.

The Task Team comprised representatives from Business, Community, Labour and Government from the Trade and Industry Chamber and Development Chamber (see table below).

The Task Team convened meetings on the following dates: 11 February 2011; 11 March 2011; 25 March 2011; and 04 April 2011.

As part of the process of interrogating and critiquing the Green paper, the following documents were submitted –

- The National Climate Change Response Green paper;
- Submission by Community;
- Submission by Labour;
- Submission by Business;
- Introduction submission by Labour;
- Equity Principle submission by Labour;
- GHG Targets presentation by Government;
- Business response to Government's presentation Approach to developing Greenhouse emission goals;
- Labour response to Government's presentation on the LTMS Establishing carbon budget figures;
- Walk-out statement by Community on the process

The process resulted in a detailed report covering both areas of agreement and disagreement which concluded considerations at NEDLAC on the National Climate Change Response Green paper. The Report was then submitted to the Minister of Environmental Affairs and the Minister of Labour in terms of Section 8 of the NEDLAC Act. No 35 of 1994.

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NEDLAC national climate change response green paper task team representatives			
Government	Business	Labour	Community
Faried Adams	Alison von Ketelhodt	Bongani Dlamini	Ferrial Adams
Ivor Sarakinsky	David Katz	Chidi Bosile	Gosiame Chobui
Mokgadi Mathekgana	Henro Kruger	Gretchen Humpries	Richard Worthington
Mark Gordon	Laurraine Lotter	Henry Mushonga	Sven Eaton Patrick
Peter Lukey	Sizwe Gcayi	Jane Barret	Tristen Taylor
Tshenge Demana	Stan Pillay	Jaff Rudin	
Xolile Mabusela		John Mawbey	
Zakhele Mdlalose		Jonas Mosia	
		Sibusiso Gumede	
		Sibusiso Mimi	
		Vuyo Ninzi	
		Woody Aroun	
		Tengo Tengela	

#### Gap-filling research

A series of focussed stakeholder workshops were held on specific policy themes identified during the policy development process including: Climate Finance; Human Resource and Technology; Adaptation; Mitigation; and Governance (see table below).

Thematic national climate change response green paper consultation workshops			
Date	Focus		
28 February 2011	Adaptation		
7 March 2011	Mitigation		
10 March 2011	Governance		
14 March 2011	Energy		
18 March 2011	Local Government and Public Awareness		
23 March 2011	Human Resources and Technology		

In order to focus and inform these workshops, the department commissioned so-called "gap-filing" research on these specific policy themes as summarised below:

Theme	Objectives	Research organisation
Mitigation	This research attempts to synthesize current knowledge and information on	Energy
	national and international climate mitigation policy, with the aim of providing some	Research
	clarity on what options are available to achieve the 'peak, plateau and decline'	Centre
	trajectory outlined by the President at the 2009 Climate Summit.	
Adaptation	To undertake a comprehensive overview of adaptation measures that are	SANBI
	currently being implemented, and identify opportunities and constraints in terms of	
	the scale of specific adaptation measures.	
Finance	The research aimed at achieving the following: Perfect the diagnosis on the	DBSA
	current hurdles which limit the financing of climate change related initiatives;	
	Identify what solutions could be developed to overcome these difficulties to unlock	
	investment in climate change and more broadly, green economy; and Identify an	
	appropriate institutional model suited to South Africa for climate finance flows.	
Human	The objective was to review the current state of affairs related to various	University of
Resource and	environmental and climate related technologies, and to elaborate possible future	Pretoria
Technology	directions and relevant prerequisites to inform the knowledge generation and	
	technology development.	
Governance	The paper seeks to investigate South Africa's governance challenges in relation	DBSA
	to mainstreaming climate change within policy making and implementation	
	processes.	