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- 393 Draft National Strategy on Sustainable Development and Action Plan 2010-2014: Invitation for written representations or comments

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GENERAL NOTICE

NOTICE 393 OF 2010

DEPARTMENT OF ENVIRONMENTAL AFFAIRS

DRAFT NATIONAL STRATEGY ON SUSTAINABLE DEVELOPMENT AND ACTION PLAN 2010 - 2014

I, Buyelwa Patience Sonjica, Minister of Water and Environmental Affairs, hereby publish a draft national strategy on sustainable development and action plan that will operate between the years 2010 and 2014, in the schedule below.

Members of the public are invited to submit to the Minister, within 30 days of the publication of the notice in the Gazette, written representations or comments to the draft national strategy and action plan to the following addresses:

By post to: The Director-General: Department of Environmental Affairs
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By fax to: (012) 320-5890, and e-mail to dnteo@deat.gov.za

Comments received after the closing date may not be considered.



BUYELWA SONJICA
MINISTER OF WATER AND ENVIRONMENTAL AFFAIRS

NATIONAL STRATEGY AND ACTION PLAN FOR SUSTAINABLE DEVELOPMENT

DRAFT 1: 23 February 2010

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LIST OF ACRONYMS

AG	Auditor General
APP	Annual Performance Plan
CBO	Community Based Organisations
CEC	Committee for Environmental Coordination
COGTA	Department of Cooperative Governance and Traditional Affairs
DEA	Department of Environmental Affairs
DPSA	Department of Public Service and Administration
FMPPi	Framework for Managing Programme Performance Information
FOSAD	Forum of South African Heads of Departments
GDP	Gross Domestic Product
IDP	Integrated Development Plan
JPOI	Johannesburg Plan of Implementation
JSE	Johannesburg Securities Exchange
MTSF	Medium Term Strategic Framework
NFSD	National Framework for Sustainable Development
NGO	Non Governmental Organisation
NPC	National Planning Commission
NSSD	National Strategy for Sustainable Development
PCC	Presidential Coordinating Committee
PGDS	Provincial Growth and Development Strategy
PPP	Public Private Partnerships
PSC	Public Service Commission
RDP	Reconstruction and Development Programme
SAEOR	South Africa Environmental Outlook Report
SALGA	South African Local Government Association
SoNA	State of the Nation Address
SoPA	State of the Province Address
STATS-SA	Statistic South Africa
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environmental Programme

1 INTRODUCTION AND BACKGROUND

Sustainable development has gained increasing recognition world wide as a conceptual framework for development that recognizes the interdependencies between economic growth, social equity and environmental integrity. Although definitions vary, an internationally accepted definition emphasizes the need for a long term planning horizon, and the adoption of a development path that improves the quality of life of current generations, while leaving future generations with at least the same capacity and options for development; the importance of enhancing horizontal linkages and promoting co-ordination across sectors, and in particular for recognizing synergies and tensions across sectors; the importance of vertical spatial linkages, so that local, provincial, national and global development efforts and governance are mutually supportive; and the role of partnership between government, business, non-government and community and voluntary organizations.

"Our biggest challenge in this new century is to take an idea that seems abstract -- sustainable development -- and turn it into a reality for the entire world's people."

Kofi Annan, Secretary General of the United Nations March 2001.

1.1 Sustainability and Sustainable Development

While the concept of sustainable development has been on the international agenda since the UN Conference on the Human Environment in Stockholm in 1972, the terms sustainability and sustainable development have been used and interpreted in widely different ways. In developing a strategy for sustainable development, it is therefore critical to have a clear statement of the meaning of the term in a South African context.

In the first instance, **sustainability** (or a sustainable society) is seen as the overall goal of the NSSD, while **sustainable development** is the process by which we move towards that goal. Further, sustainability in this context, implies **ecological sustainability**, which recognises firstly, that the maintenance of healthy ecosystems and natural resources are preconditions for human wellbeing, and secondly, that there are limits to the goods and services which they can provide. In other words, ecological sustainability acknowledges that human beings are part of nature and not separate from it. Sustainable development, then, implies the selection and implementation of a development option which allows for the achievement of appropriate and justifiable social and economic goals (based on meeting basic needs and equity) without compromising the natural system on which it is based.

1.2 From Vision to Action: The NSSD Process

The process of developing the NSSD is being undertaken in phases, as follows:

Phase I: 2003 - 2008

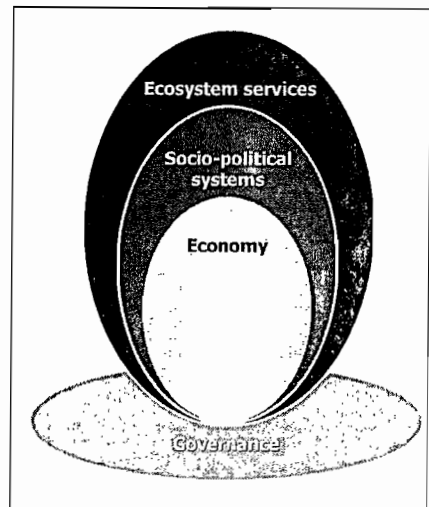
An analysis of long-term economic, social and environmental trends and related policy initiatives was undertaken in this phase. This informed the vision, goals and strategic priorities for sustainable development. Phase 1 culminated in the NFSD which was adopted by the Cabinet in June 2008.

Phase II: 2009 - 2010

The current phase involves the formulation of a strategy and action plan for the period 2010 – 2014 to facilitate the implementation of the vision, goals and strategic priorities as outlined in the NFSD. It includes proposals for an institutional framework to drive sustainable development and for a process of monitoring and evaluation of progress towards that end.

Phase III: 2010 – 2014

Although many relevant activities are already being implemented, formal implementation of the action plan will commence in 2010. Implementation will be accompanied by ongoing monitoring and evaluation of progress towards a sustainable society which also then provides feedback for a system of adaptive management.



1.3 The South African Vision as outlined in the NFSD

The World Summit on Sustainable Development held in South Africa in 2002 was tasked with reinvigorating the global commitment to sustainable development and delivered a number of key outcomes including a political declaration, the Johannesburg Plan of Implementation (JPOI), and a range of partnership initiatives. Paragraph 162 (b) of the JPOI requires that: "States should take immediate steps to make progress in the formulation and elaboration of national strategies for sustainable development and begin their implementation by 2005." Following the World Summit, the Departments of Environmental Affairs and Tourism and Foreign Affairs were mandated by Cabinet to formulate a National Strategy for Sustainable Development. The first phase of this process culminated in the adoption by the Cabinet in June, 2008 of the National Framework on Sustainable Development (NFSD).

Amongst other things, the NFSD spells out South Africa's vision of a **sustainable society** as follows: "*South Africa aspires to be a sustainable, economically prosperous and self-reliant nation state that safeguards its democracy by meeting the fundamental human needs of its people, by managing its limited ecological resources responsibly for current and future generations, and by advancing efficient and effective integrated planning and governance through national, regional and global collaboration.*"

This vision is underpinned by a number of principles:

Fundamental principles: these are related to the fundamental human rights guaranteed in the Constitution, namely:

- Human dignity and social equity;
- Justice and fairness; and
- Democratic governance.

Substantive principles: these are based on sustainable development principles already enshrined in South Africa law and underscoring a systems approach to achieving sustainable development:

- Efficient and sustainable use of natural resources;
- Socio-economic systems are embedded within, and dependant on, eco-systems; and
- Basic human needs must be met to ensure resources necessary for long-term survival are not destroyed for short term gain.

Process principles: these apply to the implementation of the NFSD, namely:

- Integration and innovation;
- Consultation and participation; and
- Implementation in a phased manner.

The National Framework provides a valuable step in defining key sustainable development principles for the country, while being mindful of global challenges and growth ideals. Due to the complex development considerations, that include the worrying increase in the gap between the rich and poor populations in the country, a simple "triple bottom line" approach to sustainable development is insufficient. This realisation led to the broader definition of

sustainable development. The country's approach accepts that social, economic and ecosystem factors are embedded within each other, and are underpinned by systems of governance..

The approach presents a systems approach to sustainability where the economic system, socio-political system and ecosystem are embedded within each other, and then integrated through the governance system that holds all the other systems together within a legitimate regulatory framework. Sustainability implies the continuous and mutually compatible integration of these systems over time; sustainable development means making sure that these systems remain mutually compatible as the key development challenges are met through specific actions and interventions to eradicate poverty and severe inequalities.

2 A NATIONAL STRATEGY FOR SUSTAINABLE DEVELOPMENT

South Africa is an emerging economy and while significant progress has been made over the past 15 years, there are still significant development challenges that need to be addressed in a sustainable development manner. According to official figures¹ released in 2009 these include:

- High levels of poverty, inequality and unemployment (23.5% in March, 2009);
- Around 24% of households still live in informal settlements or traditional structures;
- 8% of people do not have access to potable water;
- 23% do not have access to sanitation;
- 27% do not have access to electricity (2008 figure);
- Increasing maternal deaths (probably a consequence of the prevalence of HIV-AIDS); and
- Adult illiteracy of 25.9% (2007 figure).

On the other hand, the South African economy has common characteristics with those of a number of developed countries, i.e. it is highly energy-intensive and its per capita carbon emissions rank amongst the highest in the world. Moreover, the trends analysis which informed the NFSD revealed that the natural resource base is under severe pressure, that many ecosystems are already seriously degraded, and that South Africa is likely to be significantly affected by climate change – all of which point to the fact that the country is currently on a development path which is unsustainable.

Subsequent to the adoption of the NFSD, South Africa, along with most other countries, has been in an economic recession as a consequence of the global financial crisis. This has exacerbated many of the socio-economic problems. For example, there has been a significant increase in unemployment, with reports of up to 1 million jobs lost in South Africa. In addition:

- Prices of many staple foods nearly doubled between 2005 and 2007 and spiked in early 2008;²
- Oil prices increased to almost US\$ 150/barrel in 2008³ and oil scarcity is likely to become a significant issue over the next decade;⁴
- Water scarcity is a growing problem, and "Up to 1.2 billion people in Asia, 250 million Africans and 81 million Latin Americans will be exposed to increased water stress by 2020";⁵
- Global carbon emissions have risen by 40% since 1990⁶ and the resulting climate change is likely to further exacerbate particularly food and water security; and
- South Africa is experiencing an electricity crisis, with demand exceeding supply.

These concerns pose a threat not only to the achievement of a sustainable society in the longer term, but also to the ability of government to meet their short-term socio-economic objectives and

¹ 2009 Development Indicators published by the Presidency

² OECD.(2008) Rising Food Prices: Causes and Consequences.

³ UNEP (March, 2009): Global Green New Deal – A Policy Brief

⁴ Jackson, T. (2009) Prosperity without growth: The transition to a sustainable economy. Sustainable Development Commission, UK pp.122

⁵ Dr. R.K. Pachauri (Chair of IGPPC) quoted in Science Daily (Oct. 6, 2009)

⁶ Jackson, T. (2009) Prosperity without growth: The transition to a sustainable economy. Sustainable Development Commission, UK pp.122

deliver on the Millennium Development Goals. A high-level analysis of the links between these threats and socio-economic variables is presented in the form of a matrix in Annex A. Climate change, for example, is expected to reduce crop yields and alter rainfall patterns, thereby impacting on the achievement of food and water security. Similarly, pollution exacerbates water scarcity and has serious impacts on people's health.

In the face of the multiple international crises, UNEP has proposed a "Global Green New Deal" which recommends that countries view the financial crisis as an opportunity to shift their economies towards ecological sustainability. This should be achieved by implementing a "green" stimulus package aimed at reviving the economy, promoting the achievement of the Millennium Development Goals, and reducing carbon dependency and ecosystem degradation. It should include investment in energy-efficient buildings, sustainable transport and renewable energy. Other priorities for developing countries should also include investment in improving agricultural productivity, freshwater management and sanitation. Such investments need to be supported by changes to domestic and international policies.

In an update to the G20 Summit in September 2009, UNEP reported on progress in the inclusion of green elements into the stimulus packages of seven G20 countries⁷. The Green Stimulus Ranking as a % of the Total Stimulus ranged from 10% for Mexico, to 35% for China and 79% for the Republic of Korea suggesting growing recognition of the benefits of a sustainable economy. Global investment in renewable energy grew by more than 60% year on year between 2004 and 2007, and by 200% in solar energy. Even during the financial crisis in 2008, investment in renewable energy grew by 16% and in solar by 73%.⁸

It is clear from the foregoing discussion that there is an urgent need for a sustainable development strategy that will provide an enabling tool for South Africa to meet the country's socio-economic objectives without compromising the environment – in other words to achieve the vision of sustainability as stated in the NFSD. The longer this is delayed, the more difficult and costly this will be.

2.1 Purpose of the Strategy and Action Plan

The NFSD formed the first step of the NSSD process. This document provides the Strategy and Action Plan to support the implementation of the NFSD. It therefore provides the roadmap for the development path that needs to be followed in South Africa if we are to achieve the vision of a sustainable society. It is intended to provide guidance to public and private sector organisations in their own long-term planning and to the development of sector- or subject-specific strategies and action plans, which must all be consistent with the NSSD.

- The Strategy sets out what is needed to shift South Africa onto a new development path. Three key elements have been identified in this regard, which are discussed in Section 2.2. One of the elements of the Strategy involves a restructuring of the governance system and possible options for institutional arrangements are discussed in Section 4.
- The Action Plan (Section 3) has been formulated in the context of the aforementioned strategy and sets out the strategic goals and interventions required in respect of the strategic priorities identified in the NFSD. This Action Plan has been formulated in the context of the aforementioned Strategy. The strategic priorities given in the NFSD are:
 - *Priority 1:* Enhancing systems for integrated planning and implementation;
 - *Priority 2:* Sustaining our ecosystems and using natural resources efficiently;
 - *Priority 3:* Economic development via investing in sustainable infrastructure;
 - *Priority 4:* Creating sustainable human settlements; and
 - *Priority 5:* Responding appropriately to emerging human development, economic and environmental challenges (including climate change, rising oil prices, globalisation and trade)

⁷ UNEP (September, 2009): Global Green New Deal – An Update for the G20 Pittsburgh Summit.

⁸ EGS Forum (Oct. 2009) Draft IPAP for the EGS Sector.

2.2 The Strategy

In developing a strategy to give effect to the NFSD, cognisance needs to be taken of the threats described earlier - and detailed in Table 2.1 - as well as the opportunities that have been highlighted by the UNEP "Green New Deal." The elements of the strategy are therefore as follows:

- Directing the development path towards sustainability;
- Changing behaviour, values and attitudes; and
- Restructuring the governance system and building capacity.

Contextual information and strategic goals are provided for each of these elements in the sub-sections below. It should be noted that these strategic goals are overarching in nature and therefore relevant to all of the NFSD strategic priorities. It should also be noted that, while it is not specifically mentioned in each set of interventions, it is acknowledged that gender mainstreaming is central to poverty eradication and sustainable development, and should therefore be considered as implicit in all of the proposed interventions.

2.2.1 Directing the development path towards sustainability

South Africa's current economic development path is based primarily on maximising economic growth as measured by the gross domestic product (GDP), particularly through mining, manufacturing and agricultural activities. As indicated above, this has resulted in an energy-intensive economy and an erosion of the resource base, a situation which is clearly unsustainable.

Historically, most of South Africa's towns and cities have been characterised by urban sprawl, with the predominant housing model being of detached, single family houses. Moreover, largely as a consequence of apartheid policies, communities are not integrated, with low-income housing and informal settlements generally located on the outskirts of urban areas, far removed from job opportunities and community services, while, at the same time, safe and efficient public transport is generally lacking. There are also massive inequalities between the lifestyles of those living in informal settlements – where there are limited or no basic services – and the high levels of consumption which characterise the wealthy suburbs. This lack of access to modern services often forces the poor to engage in practices which are detrimental to both their health and the environment – for example, the indoor burning of solid fuels for cooking. Again, this situation is not consistent with a sustainable society.

The need to put in place new socio-economic objectives, particularly around issues of equity, is clearly central to the policies of the democratic government. More recently, there has been some recognition of the need for a more radical redefinition of our development path. The policy document outlining South Africa's response to the financial crisis⁹, for example, notes the need to emphasise the opportunities presented by greening the economy and the UNEP report assigns the country a Green Stimulus Ranking of 11% based on a stimulus package of US\$ 7.5 billion for the period 2009 – 2011 which includes the construction of railways, energy efficient buildings, and water and waste management.

The Minister of Finance has also recognised that the cost of inaction towards sustainable development will far exceed the cost of moving towards a low carbon economy.¹⁰ Moreover, in his Medium Term Budget Policy Statement ¹¹ speech he identified innovation, especially around climate change challenges, as a priority, and stated: "We must prepare to do extraordinary things - the ordinary will not deliver the jobs that are sought by young school-leavers, shelter for those who are homeless, training for those who need skills, new opportunities for businesses in difficulty, or an environmentally responsible development path."

⁹ Framework for South Africa's response to the international economic crisis, Department of Trade and Industry (2009)

¹⁰ Minister of Finance, speaking at the United Nations Environment Programme Finance Initiative (UNEP FI) Global Roundtable, 22 October 2009.

¹¹ Medium Term Budget Policy Statement Speech, 27 October 2009.

In this context, the following are suggested as strategic goals:

- To reduce resource use as well as the carbon intensity of the economy;
- To provide equal access to resources and a decent quality of life for all citizens; and
- To ensure effective integration of sustainability concerns into all policies, planning and decision-making at national, provincial and local levels;

2.2.2 Changing values and behaviour

The purpose of human development is to improve human well-being and quality of life. Unfortunately, the predominant current view of well-being is that it is synonymous with the accumulation of physical goods and money which is at the heart of our consumerist society. However, only a relatively small percentage of the population – globally and nationally – has achieved such prosperity while the majority still live in poverty. Thus, one of the major obstacles to building a sustainable society lies in the current beliefs, values and long-established practices of our society, many of which promote unsustainable patterns of production and consumption. These include the perspective that human beings are separate from, and superior to, nature, and the beliefs that human wellbeing can best be enhanced by acquiring more physical goods or money, and that conspicuous consumption is the best measure of success.

A key component of moving towards a sustainable society is therefore to change people's perceptions of what constitutes "well-being" and, based on this, to develop new social goals. In support of this, efforts should also be made to increase awareness and understanding of the value of ecosystems and natural resources to human wellbeing, and to introduce incentives/disincentives to encourage environmentally responsible behaviour. The current structure of society often prevents people from behaving in a manner which is sustainable, even when they would like to – for example, the lack of safe and efficient public transport, the shortage of recycling facilities etc. Attempts to change behaviour must therefore be supported by the provision of appropriate opportunities. Changing values and behaviour is likely to be a significant challenge and will require a wide range of initiatives from regulatory mechanisms to educational and awareness-raising campaigns involving government, business and a wide variety of civil society organisations.

Proposed strategic goals include:

- To develop and promote new social and economic goals based on sustainability;
- To promote environmentally responsible behaviour through incentives and disincentives;
- To build a culture that recognises that socio-economic systems are dependent on and embedded within ecosystems; and
- To increase awareness and understanding of the value of natural resources (ecosystem services) to human wellbeing.

The development of a long-term national vision and development strategy as envisaged in the Green Paper on National Strategic Planning offers an ideal opportunity to redefine South Africa's social goals. Preliminary thoughts on a Vision 2025 include a statement that: "*The country's natural wealth and its human resources are harnessed to ensure a growing economy which benefits all, and which uses natural resources and modern technology in a beneficial and sustainable manner.*" The challenge is to ensure that this reference to sustainability is interpreted as "ecological sustainability" and that it is not limited to a specific component of the Vision, but that it becomes an underlying principle of the Vision as a whole.

Such a shift would imply, for example, that human wellbeing and ecological sustainability indicators replace GDP growth as the primary development indicator. In terms of human wellbeing, a possible indicator could be the UNDP's Human Development Index which combines:

- Life expectancy at birth, as an index of population health and longevity;
- Knowledge and education, as measured by the adult literacy rate and the combined primary, secondary, and tertiary gross enrolment ratio; and
- Standard of living, as measured by the natural logarithm of gross domestic product per capita at purchasing power parity.

Another alternative is the Human Scale Development model¹², which recognises human needs in a broader context than the Human Development Index. The factors that have been taken into account in this model cover subsistence, protection, affection, understanding, participation, leisure, creation, identity and freedom. Suffice to say that there are a wide variety of environmental indicators (see Tables 3.1 – 3.4 and other sources) which could provide the basis for an “Ecological Sustainability Index”. The further development of this concept should be considered a priority (see Table 3.5 and Section 4.3)

Obtaining support for new social goals based on sustainability will require a significant change in the mindset of the majority of the population. Two main categories of interventions are proposed to support this objective, namely:

- The introduction of incentives/disincentives and fiscal measures; and
- Educational and awareness-raising programmes which foster a better understanding of the relationship between human wellbeing, biodiversity and ecosystems.

Incentives/disincentives and fiscal measures can be used to promote more environmentally responsible behaviour in the following areas, amongst others:

- Increasing energy efficiency;
- Decreasing the use of fossil fuels;
- Increase the use of renewable energy;
- Decreasing pollution;
- Decreasing the generation of waste; and
- Re-localising production as far as reasonably possible to strengthen local economies and reduce energy consumption and transportation costs.

To achieve the level of awareness required to support a change in the goals of society will require the enlisting of a wide variety of non-governmental organisations, from churches to youth groups, the unions and cultural organisations, and it is recommended that a massive outreach programme is developed to popularise this strategy.

2.2.3 Restructuring the governance system and building capacity

To date, sustainable development initiatives in South Africa have been driven by the Department of Environmental Affairs

9deal, previously The Department of Environmental Affairs and Tourism (DEAT). While these efforts have had a significant impact on natural resource-based sectors, the location of the issue within DEA is seen as contributing to the fact that certain stakeholders still sees sustainable development as an environmental issue and something which happens in parallel with development initiatives in other sectors. In order to shift the country to a more sustainable development trajectory, which will ensure the achievement of a sustainable society vision, there needs to be a single national vision for development which incorporates the principles of sustainability, and with which all other policies – and associated legislation – must be aligned and consistent.

¹² Developed by Max Neef and others - Manfred A. Max-Neef with Antonio Elizalde, Martin Hopenhayn. (1991). Human scale development: conception, application and further reflections. New York: Apex. Chpt. 2. “Development and Human Needs”, p. 18.

There are already a number of sectors which have, to a greater or lesser extent, incorporated sustainability criteria into some or all of their policies, legislation, strategies and action plans. In many cases, however, implementation does not seem to be effective due to a number of reasons that includes lack of political will, inadequate resources as well as lack of management and technical capacity. There is, therefore, a need to establish an institutional framework that will ensure that there is effective coordination, planning and monitoring/evaluation of the implementation of the NSSD. To this end, possible options for institutional arrangements are presented in Section 4. Section 4 also contains recommendations on planning, monitoring, reporting and evaluation as well as on financing.

In terms of capacity, initiatives need to be linked to clear institutional mandates for ensuring the incorporation of sustainability principles into policies, legislation, strategies and action plans of government, including the need to ensure effective monitoring and evaluation of progress towards a sustainable future. The contributions of the private sector and civil society to sustainable development also need to be managed.

In light of these shortcomings, the following strategic goals are proposed:

- To ensure effective integration and collaboration across all functions and sectors within government;
- To demonstrate commitment in changing the development focus to one based on sustainable programmes;
- To adopt a long-term view to development planning and implementation that takes cognisance of intergenerational equity;
- To adhere to and exercise principles of good and ethical governance; and
- To monitor, evaluate and report performance and progress in respect of sustainability goals.

3 THE ACTION PLAN AND NFSD STRATEGIC PRIORITIES

In developing the Action Plan in relation to the strategic priorities identified in the NFSD, cognisance has been taken of recent developments, namely the financial crisis, the international focus on climate change and the emphasis on the "green economy" (e.g. UNEP "Global Green New Deal"). Accordingly, these priorities have been re-formulated as follows:

1. Responding appropriately to climate change: this is linked to Priority 5 in the NFSD on emerging challenges, but is limited to climate change in part because of the current focus on climate change, but also because most of the other issues are dealt with elsewhere;
2. Towards a Green Economy: this is based on Priority 3 in the NFSD, but has been broadened beyond the original focus on sustainable infrastructure;
3. Creating sustainable human settlements (Priority 4 in the NFSD);
4. Sustaining our ecosystems and using natural resources efficiently (Priority 2 in the NFSD); and
5. Enhancing governance systems and capacity: this is linked to Priority 1 in the NFSD, but has been broadened to include a specific focus on the institutional arrangements and to address capacity issues.

These strategic priorities are discussed in the following subsections, with strategic goals being proposed for each. Key interventions, targets and indicators for each are outlined in the tabulated Action Plan. It should be noted that the indicators included in these tables are merely preliminary ideas at this point, but could provide a starting point for the proposed development of a set of national sustainability indicators (see Table 3.4 and Section 4.3). Most of them have been drawn from the National Development Indicator Report, The DEA website and proposals by WWF.

A more detailed overview of the issues around the NFSD priorities and relevant national government initiatives, can be found in Annex A.

3.1 Responding effectively to Climate Change (Priority 5 - NFSD document)

Climate change is considered to be amongst, if not the, most serious threats to humanity with adverse impacts expected on food and water security, economic activity, human health, physical infrastructure and natural resources. These impacts will seriously undermine efforts to achieve sustainable development and the Millennium Development Goals particularly in developing countries which are both the most vulnerable, and the least equipped to deal with climate change. Conversely, addressing climate change by mitigating greenhouse gas emissions and building resilient communities will make a major contribution towards achieving a sustainable society. Since terrestrial and marine ecosystems play a significant role in the carbon cycle, climate change mitigation and adaptation must include ecosystem-based solutions. The protection of natural habitats is particularly important as the poorest people, who depend directly on natural systems are also the most vulnerable to the effects of climate change.

The development and implementation of an effective climate change response strategy must therefore be a priority for South Africa, both in the short and longer-terms. Activities should include continued participation in the international climate change negotiations with a view to concluding an equitable, but ambitious climate change agreement for the post-2012 period. However, given the broader benefits of mitigation and related activities, the national programme on climate change should be vigorously pursued regardless of delays in the international arena.

The goals of the national climate change response strategy include:¹³

- Decreasing greenhouse gas emissions to levels required by science / in line with Cabinet approved targets – with particular emphasis on the energy sector which accounts for over 70% of South Africa's emissions;
- Reducing dependency on fossil fuels and enhancing security of electricity supply;
- Building resilience to climate change in communities; and
- Ensuring that ecosystem resilience is not disrupted.

More specific government interventions, targets and indicators are summarised in Table 3.1 below, with additional detail provided in Section 2 of Annex A.

These are being supplemented by a variety of non-governmental and private sector initiatives including:

- The Climate Action Partnership (www.cap.org.za)
- The Wildlands Conservation Trust (www.wildlands.co.za)
- The Endangered Wildlife Trust (www.thegreenconnection.org.za)
- WWF-SA Climate Change Programme (www.wwf.org.za/climate)
- Sustainable Energy and Climate Change Project: Earthlife Africa (www.earthlife.org.za)
- Sustainable Energy Africa (SEA) (www.sustainable.org.za)
- The Green Buildings Council (www.gbcsa.org.za)
- ICLEI Africa (www.iclei.org/africa)
- National Business Initiative (www.nbi.org.za)

¹³ To be confirmed once Draft Zero of the Strategy is available.

TABLE 3.1 – ACTION PLAN: RESPONDING EFFECTIVELY TO CLIMATE CHANGE (Priority 5 - NFSD Document)

1. RESPONDING EFFECTIVELY TO CLIMATE CHANGE		
Goals: <ul style="list-style-type: none"> ➤ Decreasing greenhouse gas (GHG) emissions to levels required by science ➤ Reducing dependency on fossil fuels and enhance security of energy supply ➤ Improving climate resilience in communities 		
INTERVENTIONS	TARGETS	INDICATORS
1. Mitigation <ul style="list-style-type: none"> • Introduction of an escalating CO₂ tax • Improve incentives/subsidies for renewable energy sources/ technologies • Introduction of incentives/ regulations / mandatory standards to promote energy efficiency & conservation (eg. building standards) • Extension of REFIT and Working for Energy • Review Biofuels strategy based on sustainability principles • Investment in public transport systems • Shift private transport to low carbon options • Investment in the EGS sector, including building a local solar water heater industry • Investment in R & D/innovation • Development of carbon capture & storage techniques & CCS Centre • Speed up processing of CDM projects • Sectoral strategy for protection of biodiversity & ecosystems (Refer Section 3.4) 	<p>International: to keep the average global temperature increase below 2°C compared to pre-industrial levels</p> <p>National:</p> <ul style="list-style-type: none"> • GHG emissions to peak between 2020-2025 and decline from 2035 • Green house gas intensity of electricity needs to be 150Mt CO₂ equivalent p/MW hour • Reduction of CO₂ emissions from the residential sector by 265,000 Gg by 2025 through pricing structure • Demand reduction of 12% by 2015 (efficiency) • 15% of electricity from renewable sources by 2020¹⁴ • Zero-carbon electricity by 2050 • 50% reduction in rural people without access to energy by 2020 through decentralised renewable energy generation • Biofuels to contribute 2% of roads liquid transport fuel by 2013. • City-wide public transport systems by 2020 • Growth in the EGS sector of between 10 – 12% from 2009 figures • 5% of emissions mitigated by CCS (?) • Over 50% of NPAES implemented by 2020 to build ecosystem resilience & reduce risk of natural disasters 	<ul style="list-style-type: none"> ○ Greenhouse gas emissions (Mt CO₂ – eq) ○ Greenhouse gas intensity of electricity/ transport (MtCO₂e/MWh) ○ Renewable energy as % of total ○ % energy supply from fossil fuels ○ Number of registered vehicles¹⁵ ○ Number of commuters using public transport ○ Contribution of EGS sector to GDP

¹⁴ Targets for renewable energy currently being reviewed.

¹⁵ Proposed as a proxy indicator of air pollution, but could possibly be used as an indicator of public/private transport (eg. #/capita?)

1. RESPONDING EFFECTIVELY TO CLIMATE CHANGE

Goals:

- Decreasing greenhouse gas (GHG) emissions to levels required by science
- Reducing dependency on fossil fuels and enhance security of energy supply
- Improving climate resilience in communities

INTERVENTIONS	TARGETS	INDICATORS
2. Adaptation <ul style="list-style-type: none"> • Further research on trends & vulnerabilities • Development of Risk & Vulnerability Atlas • Sectoral adaptation strategies for agriculture, forestry & fisheries • Sectoral adaptation strategy for water resource management • Sectoral strategy for protection of biodiversity & ecosystems (Refer Section 3.4) • Introduce restrictions on development in coastal, floodprone and other vulnerable areas • Maintain ecosystems that offer protection and act as safety barriers against natural disasters • Improve disaster management system • Green building standards • Health sector - development of contingency plans to deal with disease expansions • City/local level adaptation plans • Build capacity in rural communities to adapt 	<ul style="list-style-type: none"> • Robust scenarios in place • Over 50% of NPAES implemented by 2020 to build ecosystem resilience & reduce risk of natural disasters <p>Note: Table to be completed once Green Paper on Climate Change Response Policy process is completed (May 2010) And once draft climate change mitigation and adaptation sector plans become available</p>	

3.2 Towards a Green Economy (Priority 3 - NFSD Document)

While the South African economy, as measured by standard economic indicators, is considered to be relatively stable, there are a number of concerns from an ecological sustainability perspective:

- The economy is highly energy intensive and includes a significant mining sector (7.7% of GDP in 2006 and 6% of the labour force in 2008¹⁶);
- There is a strong emphasis on growth in gross domestic product which promotes unsustainable patterns of production and consumption;
- The natural resource base is under severe pressure;
- There is a national crisis in terms of electricity supply, and
- There is widespread poverty, unemployment and inequality.

The recent recession, combined with growing national and international awareness about climate change and the need to shift to alternative energy sources, offers a unique opportunity to kick-start the transition to a "greener" or sustainable economy. This implies moving towards a stable, steady-state economy "supplemented by conditions that ensure distributional equity, establish sustainable levels of resource throughput and emissions, and provide for the protection of critical natural capital."¹⁷

Strategic goals should include:

- Increasing the contribution of the Environmental Goods and Services Sector to employment and the GDP;
- Reducing the resource intensity of the economy (including energy and carbon);
- Promoting cleaner technologies and investing in sustainable infrastructure; and
- Promoting sustainable livelihoods and building local economies.

Cognizance must be given to the fact that since mineral resources are finite, the mining industry is inherently unsustainable. Nevertheless, mining can contribute to sustainable development provided that environmentally responsible practices are adopted and, more importantly, that provision is made for the development of alternative, sustainable livelihoods to replace those lost when mines close. Consideration must also be given optimizing the rates of extraction and using mineral resources efficiently through re-use, recycling and the implementation of improved extraction and treatment technologies. Furthermore, increased beneficiation may prove to be more environmentally efficient than the current situation where minerals are mainly exported and finished products are imported.

More specific interventions, targets and indicators related to greening the economy are summarised in Table 3.2 below, with additional detail provided in Section 3 of Annex A. These are being supplemented by a variety of non-governmental and private sector initiatives including:

- The Institute for Zero Waste in Africa (www.izwa.org.za)
- Green Choice Alliance (WWF and Conservation International (www.wwf.org.za))
- The EGS Forum
- The National Business Initiative (www.nbi.org.za/)
- Mining and Minerals Sustainable Development Project.

¹⁶ Statistics South Africa (2008): National Accounts: Minerals Accounts for South Africa,; Discussion Document D)405.2.

¹⁷ Jackson, T. (2009) Prosperity without growth: The transition to a sustainable economy. Sustainable Development Commission, UK pp.122

TABLE 3.2: – ACTION PLAN: TOWARDS A GREEN ECONOMY (Priority 3 - NFSD Document)

2. GREENING THE ECONOMY		
Goals: <ul style="list-style-type: none"> ➤ Increasing the contribution of the Environmental Goods & Services Sector to employment & the GDP ➤ Reducing the resource intensity of the economy and promoting cleaner technologies ➤ Investing in sustainable infrastructure ➤ Promoting sustainable livelihoods and building local economies 		
INTERVENTIONS	TARGETS	INDICATORS
1. Create an enabling environment for the EGS Sector <ul style="list-style-type: none"> • Develop a clear policy framework & incorporate into IPAP with a sector desk at DTI • Provide incentives/ subsidies to support development of the sector • Establish the EGS Forum as an industry association • Include environmental criteria in public procurement specifications • Facilitate funding through the CDM. 	<ul style="list-style-type: none"> • Growth in the EGS sector of between 10 – 12% from 2009 figures for 5 years (?) 	<ul style="list-style-type: none"> ○ % contribution of the sector to GDP ○ # of people employed in the sector
2. Reducing resource intensity of the economy <ul style="list-style-type: none"> • Revise industrial policy to favour sectors using low energy and/or materials per unit of economic output and technologies that address mitigation of GHGs and adaptation to climate change • Increase the use of recycled materials • Determine the environmental costs & benefits of beneficiation <p>Note: see also mitigation interventions in Table 3.1</p>	<ul style="list-style-type: none"> • Overall energy demand reduction of 12% by 2015 • 15% reduction by 2015 of energy use in industry and mining • 9% reduction by 2015 of energy used for transport. • Reduction of water use by ? • Reduction of industrial and mining waste 	<ul style="list-style-type: none"> ○ Carbon emissions (metric tonnes) per capita ○ Energy consumption/GDP ○ R/MWh ○ Volume of industrial and mining waste that is re-used or disposed
3. Cleaner production <ul style="list-style-type: none"> • Substitution of hazardous raw materials • Improved processes and housekeeping 	<ul style="list-style-type: none"> • Reduction in volumes of hazardous waste generated • Maximise use of recycled materials • Reduction of water use 	<ul style="list-style-type: none"> ○ Metric tonnes of hazardous waste generated ○ Tonnage of selected materials recycled
4. Sustainable infrastructure <ul style="list-style-type: none"> • Minimum standards/ sustainability criteria for new buildings & construction practices • Retrofitting of old buildings • Introduction of a green procurement framework/rating system for public buildings 	<ul style="list-style-type: none"> • 15% reduction by 2015 of energy use in commercial and public building sector • 10% reduction by 2015 of energy use by the residential sector • % new buildings that incorporate sustainable design principles • % reduction in water use in commercial and public building sector 	<ul style="list-style-type: none"> ○ Proportion of new buildings with green building ratings

2. GREENING THE ECONOMY

Goals:

- Increasing the contribution of the Environmental Goods & Services Sector to employment & the GDP
- Reducing the resource intensity of the economy and promoting cleaner technologies
- Investing in sustainable infrastructure
- Promoting sustainable livelihoods and building local economies

INTERVENTIONS	TARGETS	INDICATORS
5. Sustainable livelihoods & local economies <ul style="list-style-type: none"> • Facilitate the development of opportunities for self-employment and/or self-reliance – especially in rural areas – based on sustainable use of natural resources eg. <ul style="list-style-type: none"> - eco-tourism - small-scale organic farming - aquaculture - wildlife management - renewable energy generation - ecosystem rehabilitation • Further expansion of Public Works Programme into the environmental sector (including Working for Energy Programme)¹⁸ • Promote access to the internet • Building local economies – see Table 3.3. • Include jobs related to conservation and ecosystem restoration in the Community Work's Programme of the Deputy President's Office • Implement the Environment and Culture sector of the Expanded Public Works Programme 	<ul style="list-style-type: none"> • 4 million job opportunities by 2014 • % no of people self employed • % contribution to GDP of the informal sector • No of people with access to internet 	○

¹⁸ While the jobs provided by the EPWP are not sustainable, they provide individuals with an opportunity for skills development while earning a modest income and at the same time, contribute to environmental rehabilitation.

3.3 Building sustainable communities (Priority 4 - NFSD document)

To be sustainable, human settlements must meet the diverse needs of their residents – including housing, basic services, community facilities, transport and livelihood/job opportunities – while at the same time, being sensitive to the surrounding ecosystems and natural resources. Given the large number of mainly poverty-stricken people still living in informal settlements in South Africa, building such communities is a priority and for the past few years has been guided by the policy “Breaking New Ground”. However, there have been significant problems with housing and service delivery, with the pressure of meeting quantitative targets meaning that this has been done at the expense of quality and durability to the extent that currently, thousands of RDP houses are being demolished and rebuilt¹⁹. The limit of the available housing subsidy has also for the most part precluded the installation of eco-technologies – such as solar water heaters – which generally have higher up-front costs. Moreover, the lack of long-term planning means that in many areas there is insufficient infrastructure (eg. wastewater treatment plants) to meet the needs of the rapidly growing urban population. In addition, insufficient attention has been given to the environmental constraints – and opportunities – of particular locations.

While the overall goal is to reduce poverty and provide a decent quality of life for all, the following more specific strategic goals are proposed:

- Enhancing spatial planning to promote social cohesion and integration between communities as well as between communities and the natural environment;
- Ensuring universal access to basic and community services;
- Improving the standard / quality of housing and other structures to optimise resource (energy, water, building materials etc.) efficiency; and
- Promoting self-sufficiency, food security and equitable access to natural resources that support livelihoods.
- Improving equity, security and social cohesion

More specific government interventions, targets and indicators are summarised in Table 3.3 below, with additional detail provided in Section 4 of Annex A.

These are being supplemented by non-governmental and other initiatives including:

- Institute for Zero Waste in Africa (www.izwa.org.za)
- Green Choice Alliance (WWF and Conservation International) (www.wwf.org.za)
- Sustaining the Wild Coast (www.swc.org.za)
- ICLEI Africa (www.iclei.org/africa)
- The Sustainability Institute (www.sustainabilityinstitute.net)
- Masifundise Development Trust (www.masifundise.org.za)

¹⁹ www.timeslive.co.za/news/article197029.ece

TABLE 3.3 – ACTION PLAN: BUILDING SUSTAINABLE COMMUNITIES (Priority 4 - NFSD document)

3. BUILDING SUSTAINABLE COMMUNITIES		
Goals: <ul style="list-style-type: none"> ➤ Enhancing spatial planning ➤ Ensuring universal access to basic (water, energy, sanitation) and community services (health care, education)²⁰ ➤ Improving the quality of housing and other structures to optimise resource efficiency ➤ Promoting self sufficiency, food security and equitable access to natural resources that support livelihoods ➤ Improving equity, security and social cohesion 		
INTERVENTIONS	TARGETS	INDICATORS
1. Improved spatial planning <ul style="list-style-type: none"> • Develop national spatial planning guidelines • Strengthen sustainability principles in land-use planning and growth & development strategies and plans at all levels 	<ul style="list-style-type: none"> • Reduction in average commuting distance? • Retention of high potential agricultural land in peri-urban areas • Reduction in the ecological footprint of urban areas • Densification 	<ul style="list-style-type: none"> ○ Ecological footprint? ○ Measure of social integration?
2. Access to basic services, health care, education etc <ul style="list-style-type: none"> • Integration of service provision requirements – including bulk infrastructure - into development planning process. • Provision of free minimum services to be combined with demand management for water and electricity 	<ul style="list-style-type: none"> • All people to have access to potable water²¹, sanitation and electricity by 2014 • Increase immunisation to 90% (?) by 2013 • Reduce the prevalence of HIV • Halve incidence of TB between 1990 and 2015 • Reduce malaria morbidity and mortality by 10% annually • Education? 	<ul style="list-style-type: none"> ○ % of households with access to water infrastructure, sanitation and electricity ○ Household fuel combustion ? ○ Reduction in consumption in the higher tariff range.

²⁰ Issues related to housing standards are covered in Table 3.2 under infrastructure.

²¹ Access is defined as a minimum quantity of 25 litres of potable water per person per day within 200m of the household which should not be interrupted for more than 7 days in any year.

3. BUILDING SUSTAINABLE COMMUNITIES		
Goals: <ul style="list-style-type: none"> ➤ Enhancing spatial planning ➤ Ensuring universal access to basic (water, energy, sanitation) and community services (health care, education)²² ➤ Improving the quality of housing and other structures to optimise resource efficiency ➤ Promoting self sufficiency, food security and equitable access to natural resources that support livelihoods ➤ Improving equity, security and social cohesion 		
INTERVENTIONS	TARGETS	INDICATORS
3. Local economic development (LED) & sustainable livelihoods <ul style="list-style-type: none"> • Promote land stewardship & food growing programmes (urban & rural) • Implement local tourism projects • Implement sustainable production of traditional medicines • Implement local waste collection/recycling initiatives • Strengthen the People's Housing Process • Implement recommendations of Fishing Harbour Study • Support the Decent Work Agenda • Introduce government procurement programmes that support LED • Support alternative business models such as co-operatives and community associations Note: see also Sustainable livelihoods in Table 3.2	<ul style="list-style-type: none"> • 16 million employed by 2014 • Maximum of 14% unemployed by 2014 	<ul style="list-style-type: none"> ○ Number of people in employment in relevant sectors ○ Poverty headcount index ○ Human Development Index

²² Issues related to housing standards are covered in Table 3.2 under infrastructure.

3. BUILDING SUSTAINABLE COMMUNITIES

Goals:

- Enhancing spatial planning
- Ensuring universal access to basic (water, energy, sanitation) and community services (health care, education)²³
- Improving the quality of housing and other structures to optimise resource efficiency
- Promoting self sufficiency, food security and equitable access to natural resources that support livelihoods
- Improving equity, security and social cohesion

INTERVENTIONS	TARGETS	INDICATORS
4. Food security and land & agrarian reform <ul style="list-style-type: none"> Develop & implement climate adaptation strategies for water and agricultural sectors Promote conservation farming, perma-culture & organic farming Increase support to urban good growing initiatives Introduce schemes that enable the very poor to access sufficient nutritional food to support quality of life Strengthen financial support & extension services through Landcare Programme to land claim beneficiaries, small scale women farmers & African farmers unions eg. NAFU Incorporate sustainable land use and agriculture principles into land claim projects in rural areas Encompass conservation opportunities (as an alternative economic opportunity) into the land reform programme, particularly where agriculture is marginal. 	<ul style="list-style-type: none"> Make South Africa self-sufficient in terms of basic foods All citizens have access to sufficient nutritional food Settlement of all land claims by 2011 30% of agricultural land redistributed by 2015 ??% of land reform project are conservation economy based. 	<ul style="list-style-type: none"> SA a net exporter of food Reduction in soil erosion/loss? Fertilizer use per hectare of arable land Food basket price % of people working the land in rural areas or % land being worked in rural areas % organic production % of land claims settled % of land redistributed % of land redistributed is used for community-based conservation
5. Equity, security and social cohesion <ul style="list-style-type: none"> BEEE programmes & gender mainstreaming 	<ul style="list-style-type: none"> Reducing inequality Improving security 	<ul style="list-style-type: none"> GINI coefficient (income inequality) Living standards measure # of crimes Various indicators of social cohesion in NDIR

²³ Issues related to housing standards are covered in Table 3.2 under infrastructure.

3.4 Sustaining our ecosystems and using natural resources efficiently (Priority 2 - NFSD document)

Natural resources (e.g. water, soil, biodiversity) are the basis of life, economic activity and human well-being. Functioning ecosystems generate goods (natural products e.g. water, timber, flowers, food and medicines) and services (e.g. recycling of wastes, purification of water and air, flood attenuation, recreational opportunities and carbon sequestration). The depletion or wasteful use of natural resources, and/or degradation of ecosystems, pose a threat to the attainment of socio-economic objectives (Refer to Table 2.1 in Section 2). As has been noted elsewhere in this document, the analysis undertaken during the development of the NFSD concluded that the natural resource base in South Africa is under severe pressure and that many of our ecosystems are degraded to a point which already constitutes a threat to our well-being. This is of particular concern given the important role of natural systems in climate change and adaptation, particularly for the most vulnerable communities. Key trends in respect of the state of our natural resources are:

- South Africa has a relatively low annual rainfall, and water is abstracted from most of our 22 major rivers to supply the growing numbers of domestic, agricultural and industrial users. It is estimated that by 2025, national water requirements will exceed availability. This is exacerbated by the fact that water quality has been seriously compromised in many areas;
- There is limited agricultural land in South Africa. Of the 122 million hectares total land surface of the country, it is estimated that 16 million hectares can be used for crop production (7.5%). Soil erosion and degradation of agricultural land through over-exploitation, inappropriate and unsustainable farming methods all pose a threat to food security. There are many issues affecting agricultural production, soil quality and erosion as well as lack of infrastructure, but water is considered one of the most important.²⁴
- 34% of our terrestrial ecosystems, 82% of our rivers, 65% of marine biozones are threatened, 50% of our wetlands have already been destroyed and living marine resources are either maximally or over-exploited; and
- There are elevated levels of a variety of pollutants in the atmosphere which, amongst other things, are leading to a growing incidence of respiratory problems.

If we are to achieve the vision of a sustainable society, these trends urgently need to be reversed by working towards the following strategic goals:

- Managing the use of all natural resources to ensure their sustainability;
- Protecting and restoring scarce and degraded natural resources;
- Preventing the pollution of air, water and land resources so that community and ecosystem health is not adversely affected; and
- Avoiding the irreversible loss and degradation of biodiversity (marine, terrestrial, aquatic ecosystems).

More specific government interventions, targets and indicators are summarised in Table 3.4 below, with additional detail provided in Section 5 of Annex A.

These are being supplemented by non-governmental and other initiatives including:

- Sustainable Seafood Initiative (WWF)
- Greenchoice Business & Biodiversity Initiative
- The Wildlands Conservation Trust (www.wildlands.co.za)
- The Endangered Wildlife Trust (www.thegreenconnection.org.za)

²⁴ <http://land.pwv.gov.za/publications/news>

TABLE 3.4 – ACTION PLAN: SUSTAINING OUR ECOSYSTEMS AND USING NATURAL RESOURCES EFFICIENTLY (Priority 2 - NFSD document)

4. SUSTAINING ECOSYSTEMS & USING NATURAL RESOURCES EFFICIENTLY		
Goals: <ul style="list-style-type: none"> ➤ Managing the use of all natural resources to ensure their sustainability ➤ Protecting and restoring scarce and degraded natural resources ➤ Preventing the pollution of air, water and land resources so that community and ecosystem health is not adversely affected ➤ Avoiding the irreversible loss and degradation of biodiversity (marine, terrestrial, aquatic ecosystems) 		
INTERVENTIONS	TARGETS	INDICATORS
1. Water resources <ul style="list-style-type: none"> • Implement water demand management via staggered tariff structure, water loss management & conservation measures (water-wise activities) • Establish & strengthen Catchment Management Agencies • Undertake Reserve determinations for priority rivers & estuaries & incorporate ecological requirements into water resource planning • Determine sustainable use levels for strategic aquifers • Integrate water availability concerns into economic development planning/water allocation reform/water reconciliation strategies for each WMA • Enhance the water resources base by investing in desalination plants & water harvesting where appropriate • Strengthen invasive plant management in catchments • Address the backlog in the issuing of water use licenses. 	<ul style="list-style-type: none"> • Reduce loss in municipal water supply networks to ?% • Water demand should be lower than supply in each Water Management Area • By 2015, the costs of restoring and managing water catchments must be reflected in the price of water • Water demand should not be such that ecological requirements / reserves cannot be achieved. • The backlog in water use licenses is addressed by ???? 	<ul style="list-style-type: none"> ○ Availability of groundwater/surface water ○ Freshwater available per capita ○ Water stress ○ Ecological reserve volume / flow ○ Sustainable abstraction levels for strategic aquifers ○ Water use per capita ○ Water use per area (to indicate equity) ○ Number of rivers where abstraction exceeds / meets ecological reserve requirements ○ Number of strategic aquifers where abstraction exceeds / meets sustainable volumes

4. SUSTAINING ECOSYSTEMS & USING NATURAL RESOURCES EFFICIENTLY

Goals:

- Managing the use of all natural resources to ensure their sustainability
- Protecting and restoring scarce and degraded natural resources
- Preventing the pollution of air, water and land resources so that community and ecosystem health is not adversely affected
- Avoiding the irreversible loss and degradation of biodiversity (marine, terrestrial, aquatic ecosystems).

INTERVENTIONS	TARGETS	INDICATORS
2. Living marine resources <ul style="list-style-type: none"> Implement regulatory framework for rights allocation in Subsistence, Large Pelagics, Recreational & non-consumptive sectors Review performance of rights holders Grow the fisheries sector (implement aquaculture policy; assess potential of new fisheries & non-consumptive sector) Rebuild depleted stocks (abalone, hake & linefish) Implementation of an ecosystem approach to management of seabirds, sharks & selected fisheries Intensification of compliance and enforcement efforts 	<ul style="list-style-type: none"> Increased access to previously disadvantaged fishers Performance of 30% of selected rights holders in key sectors reviewed by 2014 60% of landings in 5 key sectors monitored by 2014 60% of fish processing plants & 35% of vessels in key sectors inspected by 2014 Joint partnerships with 9 law enforcement & conservation agencies in place. 	<ul style="list-style-type: none"> # of registered fishers in each sector Status of selected fish stocks Contribution of mariculture, non-consumptive sector to GDP Trends in transgressions recorded in monitoring & inspection registers
3. Arable land <ul style="list-style-type: none"> Reform agricultural legislation to support sustainable farming practices Strengthen LandCare and other conservation farming programmes Ensure the retention of high potential agricultural land for agricultural purposes, wherever feasible Improve coordination with other government departments / organisations that have jurisdiction over the use of land and other natural resources. 	<ul style="list-style-type: none"> Reduce loss of soil through erosion by ?? % per year Increase the practice of conservation, including organic farming practices by ??ha per year. Have new sustainable agriculture legislation in place by ????? All high potential agricultural land is being used for that purpose wherever feasible. No loss of significant agricultural land Agricultural activities do not result / cause irreversible loss of biodiversity or over exploitation of water resources. 	<ul style="list-style-type: none"> Rates of soil loss / erosion # of farmers participating in LandCare or similar programmes % organic production Extent of organic production areas % of high potential agricultural land being used for agricultural purposes

4. SUSTAINING ECOSYSTEMS & USING NATURAL RESOURCES EFFICIENTLY

Goals:

- Managing the use of all natural resources to ensure their sustainability
- Protecting and restoring scarce and degraded natural resources
- Preventing the pollution of air, water and land resources so that community and ecosystem health is not adversely affected
- Avoiding the irreversible loss and degradation of biodiversity (marine, terrestrial, aquatic ecosystems)

INTERVENTIONS	TARGETS	INDICATORS
4. Air and water quality <ul style="list-style-type: none"> • Reduce household combustion of various fuels by increasing access to electricity and/or renewable resources • Reduce use of fossil fuels for electricity generation • Speed up implementation of air quality legislation through Air Quality Management Plans in priority areas/hotspots • Develop ambient air quality standards and review air pollution permits • Reduce vehicle emissions. • Re-introduce Environmental Courts 	<ul style="list-style-type: none"> • Ambient air quality standards in place for all priority pollutants by ???? • 15% of South Africa's energy being generated from renewable sources by 2020 • No backlog in the issuing of air quality permits • ??% decrease in exceedance of ambient air quality standards of key pollutants • ??% reduction in emissions attributable to vehicles in atmosphere. 	Ambient air quality <ul style="list-style-type: none"> ○ % households with access to electricity ○ Number of non-compliance incidents / directives issued for non-compliance ○ % of permitted facilities that are being monitored ○ % of permitted facilities that comply with permit requirements
5. Water quality (freshwater and coastal) <ul style="list-style-type: none"> • Provision of universal access to sanitation • Installation of clean technology options and re-use of wastewater • Develop & implement catchment management plans • Implement Receiving Water Quality Objectives approach • Eradicate backlogs in the issuing of effluent discharge permits • Implement Programme of Action on Land-based Sources of Marine Pollution in 8 priority areas • Re-introduce Environmental Courts 	<ul style="list-style-type: none"> • Universal access to sanitation by 2014 • Backlog in the issuing of permits is overcome by ???? • Land-based sources of marine pollution reduced by ???% by ???? • Adequate personnel employed for enforcement purposes by ???? • Water quality (fresh & coastal) should meet water quality guidelines for the relevant beneficial use by ?? 	<ul style="list-style-type: none"> ○ % of households with access to sanitation ○ Surface water nutrients ○ Coastal water quality status ○ # of water bodies meeting the applicable Receiving Water Quality Objectives ○ Number of non-compliance incidents / directives for non-compliance issued ○ % of permitted facilities that are being monitored ○ % of permitted facilities that comply with permit requirements. ○ % wastewater being re-used

4. SUSTAINING ECOSYSTEMS & USING NATURAL RESOURCES EFFICIENTLY

Goals:

- Managing the use of all natural resources to ensure their sustainability
- Protecting and restoring scarce and degraded natural resources
- Preventing the pollution of air, water and land resources so that community and ecosystem health is not adversely affected
- Avoiding the irreversible loss and degradation of biodiversity (marine, terrestrial, aquatic ecosystems)

INTERVENTIONS	TARGETS	INDICATORS
6. Waste management <ul style="list-style-type: none"> Implementation of the National Waste Act. Ensure effective implementation of waste management legislation. Implement waste minimisation programmes and provide appropriate facilities and incentives to support these 	<ul style="list-style-type: none"> No backlog in issuing permits Adequate personnel employed for enforcement purposes by ???? ???% reduction in waste being landfilled by ???? No incidents of illegal dumping, especially of hazardous waste 	<ul style="list-style-type: none"> Tonnage of waste going to landfill Generation of hazardous waste Tonnage of materials recycled Number of non-compliance incidents / directives issued for non-compliance % of permitted facilities that are being monitored % of permitted facilities that comply with permit requirements Waste recycled per capita
7. Biodiversity / ecosystems <ul style="list-style-type: none"> Finalise and implement the Protected Area Expansion Strategy to create a network that is representative of South Africa's biodiversity. Implement Integrated Coastal Management Act Mainstream biodiversity into spatial and land-use plans through provincial bioregional spatial plans, bioregional sector plans and bioregional plans Finalise and implement invasive alien species regulations Establish seed banks Develop and implement invasive species management plans for Protected Areas Develop and implement Estuary Management Plans for priority estuaries Re-introduce Environmental Courts. Implement the Framework on Fiscal Incentives for Biodiversity. Implement the provisions of the NEMBA in respect of listing and protection of threatened ecosystems 	<ul style="list-style-type: none"> 8.5% of terrestrial area under formal protection by 2013 and 12% by 2020 20% of marine areas under formal protection by 2013 (21 MPA's with effective management capacity) Threatened/endangered species?? Estuary Management Plans in place for 13 estuaries by 2014 Species on the TOPS list retain or improve their status The irreversible loss of biodiversity is reversed / decreased by ??? and halted by ??? ?? number of Environmental Courts in place Adequate personnel employed for enforcement purposes by ???? 	<ul style="list-style-type: none"> Protection status of threatened ecosystems % of total land areas under protected status Status of priority estuaries Number of critically endangered species Number of endangered species Number of Critical Biodiversity Areas % land surface classified as being a Critical Biodiversity Area Number of landowners participating in conservation farming or land stewardship programmes Number of spatial plans that integrate / mainstream biodiversity issues.

3.5 Enhancing governance systems and capacity (Priority 1 - NFSD document)

Finalising and implementing the NSSD will require an institutional arrangement that facilitates effective, efficient and coordinated planning, execution and monitoring/evaluation of performance and progress against agreed targets. There will also be a need to ensure that capacity for managing development in a sustainable manner is enhanced across all sectors of the South African society, starting with the public sector. As a cross-cutting issue, sustainable development creates a new institutional difficulty, not only because it is challenging governments' capacity to act rapidly, but also mostly because it contradicts the way policies have traditionally been formulated and developed. Therefore it is imperative to ensure that the completed National Strategy on Sustainable Development is accompanied by a sound institutional framework that will ensure full implementation, monitoring and evaluation.

The following are the five immediate goals for the enhancement of institutional systems and capacity for the management of the NSSD.

- Establish a structure that has the power to ensure the integration of sustainability concerns into all policies, planning and decision-making at national, provincial and local levels;
- Ensure that the national vision and strategic plan are based on sustainability principles and are informed by the NSSD;
- Ensure effective collaboration and coordination of planning and implementation;
- Establish a monitoring and evaluation system to facilitate ongoing assessment of progress towards sustainability – including a set of indicators – and which provide appropriate feedback for the adaptation of management interventions as necessary; and
- Build capacity to enhance the effectiveness of government agencies and to empower communities.

More specific government interventions, targets and indicators are summarised in Table 3.5 below, with additional detail on institutional arrangements provided in Section 4 and in Annexes B-D

TABLE 3.5 ACTION PLAN: ENHANCING SYSTEMS FOR INTEGRATED PLANNING AND IMPLEMENTATION
(Priority 1-NFSD document)

5. NFSD STRATEGIC PRIORITIES: ENHANCING SYSTEMS FOR INTEGRATED PLANNING AND IMPLEMENTATION		
Goals: <ul style="list-style-type: none"> ➤ Establish a structure that has the power to ensure the integration of sustainability concerns into all policies, planning and decision-making at national, provincial and local levels; ➤ Ensure that the national vision and strategic plan are based on sustainability principles and are informed by the NSSD; ➤ Ensure effective collaboration and coordination of planning and implementation; ➤ Establish a monitoring and evaluation system to facilitate ongoing assessment of progress towards sustainability – including a set of indicators – and which provide appropriate feedback for the adaptation of management interventions as necessary; and ➤ Build capacity to enhance the effectiveness of government agencies and to empower communities; 		
INTERVENTIONS	TARGETS	INDICATORS
1. Establish a structure <ul style="list-style-type: none"> • Present institutional proposals to FOSAD meeting and get approval • Obtain necessary approvals for the establishment of the structure in line with DPSA's guide on how to design, implement and maintain organisational structures in the public sector • Finalise organisational design, including job analysis and evaluations 	<ul style="list-style-type: none"> • NSSD structure approved by June 2010 • Full staff complement appointed for the NSSD body by June 2011 	<ul style="list-style-type: none"> • Date during which approvals are obtained • # of NSSD staff appointed

5. NFSD STRATEGIC PRIORITIES: ENHANCING SYSTEMS FOR INTEGRATED PLANNING AND IMPLEMENTATION

Goals:

- Establish a structure that has the power to ensure the integration of sustainability concerns into all policies, planning and decision-making at national, provincial and local levels;
- Ensure that the national vision and strategic plan are based on sustainability principles and are informed by the NSSD;
- Ensure effective collaboration and coordination of planning and implementation;
- Establish a monitoring and evaluation system to facilitate ongoing assessment of progress towards sustainability – including a set of indicators – and which provide appropriate feedback for the adaptation of management interventions as necessary; and
- Build capacity to enhance the effectiveness of government agencies and to empower communities.

INTERVENTIONS	TARGETS	INDICATORS
2. Integration into the National vision and strategic plan <ul style="list-style-type: none"> • Meetings with the National Planning Commission to discuss integration of sustainability principles, outcomes and indicators and other NSSD proposals into the national vision and strategic plan • Active participation in processes aimed at developing vision 2025 and strategic plan 	<ul style="list-style-type: none"> • 100% sustainability indicators integrated into the National Strategic Plan 	<ul style="list-style-type: none"> • # of stakeholder meetings to finalise sustainability indicators • # of meetings held with the NPC • # NPC planning sessions attended • % sustainability indicators included in the National Strategic Plan • % sustainability indicators integrated in government wide plans (National/provincial departments, municipalities, public entities)
3. Ensure effective coordination for Sustainable development <ul style="list-style-type: none"> • The NSSD entity participates in horizontal and vertical structures of government coordination (clusters, MINMECS, SALGA etc) 	<ul style="list-style-type: none"> • NSSD structure participates in all key coordinating meetings 	<ul style="list-style-type: none"> • # of coordinating meetings attended

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Goals:

- Establish a structure that has the power to ensure the integration of sustainability concerns into all policies, planning and decision-making at national, provincial and local levels;
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- Build capacity to enhance the effectiveness of government agencies and to empower communities.

INTERVENTIONS	TARGETS	INDICATORS
4. Establish a monitoring and evaluation system <ul style="list-style-type: none"> Develop and adopt a set of national sustainability indicators Tracking and reporting of sustainability indicators by government entities and the private sector Establish an information management system linked to the sustainability indicators. 	<ul style="list-style-type: none"> A database of sustainability indicators available by December 2010 % of government entities reporting against NSSD indicators by 2012??? % of private companies that report against NSSD indicators by 2012?? Frequency of sustainability reports??? 	<ul style="list-style-type: none"> # of sustainability indicators in the database % of government entities and private sector companies that report against sustainability indicators. Degree of NSSD information availability
5. Capacity Building <ul style="list-style-type: none"> Develop a capacity building programme Organise capacity building sessions on sustainable development Establish a fund to support community based capacity building projects 	<ul style="list-style-type: none"> Number of trained officials capacitated on sustainable development by 2012?? # of community based capacity building projects funded annually starting in 2012. 	<ul style="list-style-type: none"> A capacity building programme # of NSSD capacity building sessions conducted # of community based capacity building projects funded

4. OPTIONAL INSTITUTIONAL ARRANGEMENTS FOR THE MANAGEMENT OF THE NSSD

4.1 Introduction

This section presents proposals on institutional arrangements to support the implementation of the National Strategy for Sustainable Development (NSSD). It was developed in parallel to, and in support of the development of the NSSD strategy and action plan. It is presented based upon a review of literature on international practice, interviews with stakeholders and an assessment of what will be possible within the context of South Africa. There are three options presented without prejudgement and following further consultations and approval of the Cabinet, there will be a selection of one amongst these three options, a combination of the options or an entirely new option depending on what emerges from further reviews of literature, discussions with stakeholders and assessments of what is feasible.

The recommendations on planning, monitoring, reporting and evaluation as well as on financing contained in this section are likely to apply whichever option is finally adopted. Amongst the key principles that inform this discussion and will inform the final recommendation are the need to:

- Ensure simplicity without compromising effectiveness.
- Make use of and create linkages with existing frameworks and mechanisms in order not to re-invent the wheel and to avoid the proliferation of structures.
- Learn from international practice.
- Ensure high level location and support for the NSSD

4.2 Planning, Monitoring, Reporting and Evaluation

The approach to be used for planning, monitoring, evaluation and reporting on progress towards the attainment of sustainability targets will be aligned with the existing government wide monitoring and evaluation system. This alignment will ensure that the practice of sustainable development becomes integrated into the routine work of government and performance against targets becomes subject to established accounting systems, including auditing by the Auditor General. This is also in keeping with advice contained in the OECD guide for sustainable development, that sustainable development plans should be integrated into national frameworks in order to ensure access to the budget (OECD Guide, 2001).

4.2.1 Planning for Sustainable Development

A key aspect of effective planning for sustainable development will be the finalisation of the NSSD and the development of a national set of sustainability indicators and targets²⁵. The figure below presents how sustainable development will be integrated into the national planning system.

It further shows the current national planning system, with the national vision and strategic plan likely to be added with the establishment of the National Planning Commission (NPC). The figure shows the hierarchy of planning frameworks to which government departments at all levels need to respond. Sustainability indicators and targets will be integrated into these planning frameworks, starting with the National Vision and Strategic Plan which is likely to cover a longer period, possibly 15 years according to the revised Green Paper on the NPC. This also takes care of the need for intergenerational sustainability targets as recommended.

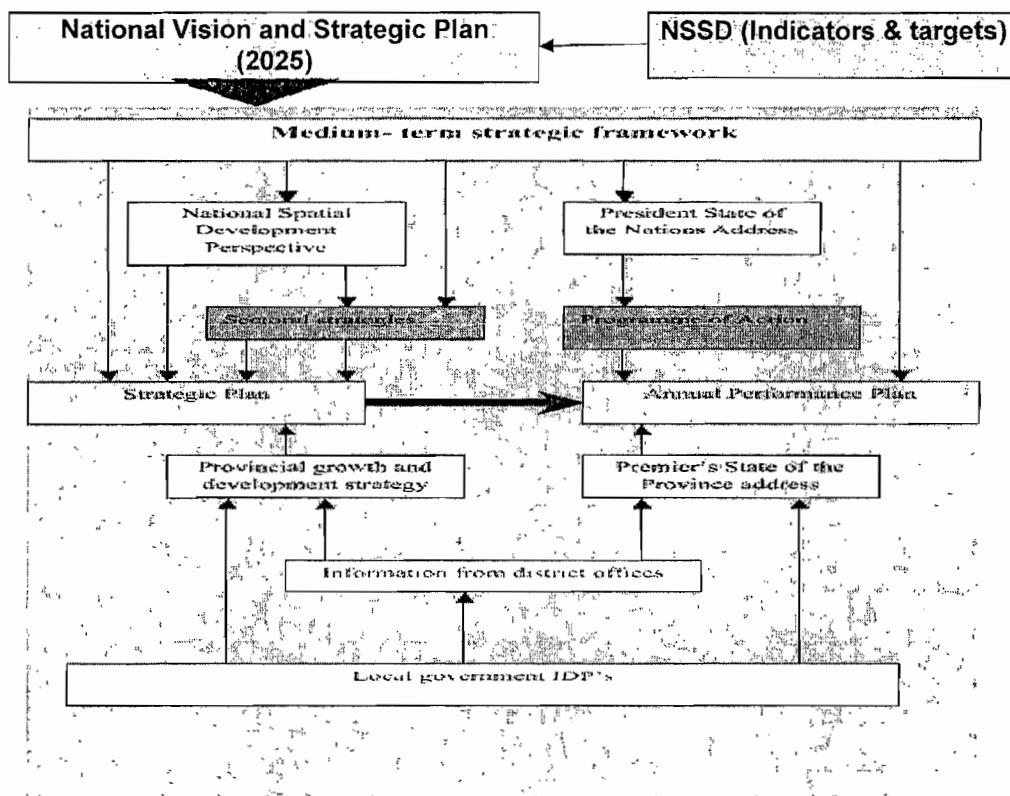
25 Countries that have adopted this approach include Germany, the United Kingdom, Cameroon, Madagascar, Denmark and Canada.

The Medium Term Strategic Framework (MTSF), is a framework that identifies national priorities over a five-year period of an administration's electoral mandate. The implementation of the National Framework for Sustainable development has been identified as a priority for the electoral mandate 2009-2014. Securing the prominence of sustainable development indicators and targets on these two over-arching frameworks will ensure that the whole of government's programme as reflected in all other planning frameworks places sustainable development at the centre of planning. It will also ensure that performance against sustainability targets are tracked and reported as part of regular development indicator reporting done by the Presidency.

Medium-term planning by government

National and provincial departments develop 5 year strategic plans that will be informed amongst others by the National Vision and Strategic Plan, the MTSF, National State of the Nation Address (SoNA) and the Provincial Growth and Development Strategies (PGDS) and States of the Province Address (SoPA) respectively. These five years strategic plans should include sustainability indicators and targets as core indicators agreed to by each of the government sectors as is required by the Treasury Guidelines for Strategic Planning. In their interactions with municipalities, and its oversight strategic planning oversight roles, provincial governments ensure that municipal Integrated Development Plans (IDPs), include sustainability indicators.

Figure 1: The National Planning Framework (Source: Adapted from a PCAS 2007 planning model)



Annual Planning

In the annual SoNA and Programme of Action (PoA), as well as in SoPA, the President and Premiers respectively highlight the centrality of sustainable development as directed by the National Vision and Strategic Plan as well as by the MTSF. National and Provincial Departments will then include sustainable development indicators and targets in their annual performance plans.

Municipalities will include these indicators in the annual Service Delivery Budget Implementation Plans (SDBIP), which are linked to their IDPs.

Spatial Planning

In the Green Paper: National Strategic Planning of September 2009 it is noted that national spatial guidelines are important tools for bringing about coordinated government action and alignment. Internationally, spatial planning instruments are increasingly being used to achieve alignment between the actions of different sectors and tiers within government. South Africa has an established spatial planning framework which is such that alignment can readily be achieved. The overarching framework for the country as a whole is provided in the National Spatial Development Perspective (NSDP). It is this level of planning with which the National Planning Commission will be concerned.

The Province's are responsible for developing a Provincial Growth and Development Strategy (PGDS), which includes a spatial plan, the Provincial Spatial Development Framework. Similarly, Integrated Development Plans (IDP) are formulated by local government (metros, district and local municipalities), which also have an associated spatial plan, namely the Spatial Development Framework / Plan (SDF/SDP). Thus, Province's need to align their PGDS and PSDF with the national perspective and the municipalities. Similar the IDPs and SDFs of local government need to be developed within the framework provided by the Province. In this way, co-ordination, alignment and integrated action with respect to the development of the space economy can be achieved.

The integration of sustainability principles in the National Strategic Plan, the PGDS and IDPs will ensure that sustainability is also reflected in spatial plans.

4.2.2 Coordination

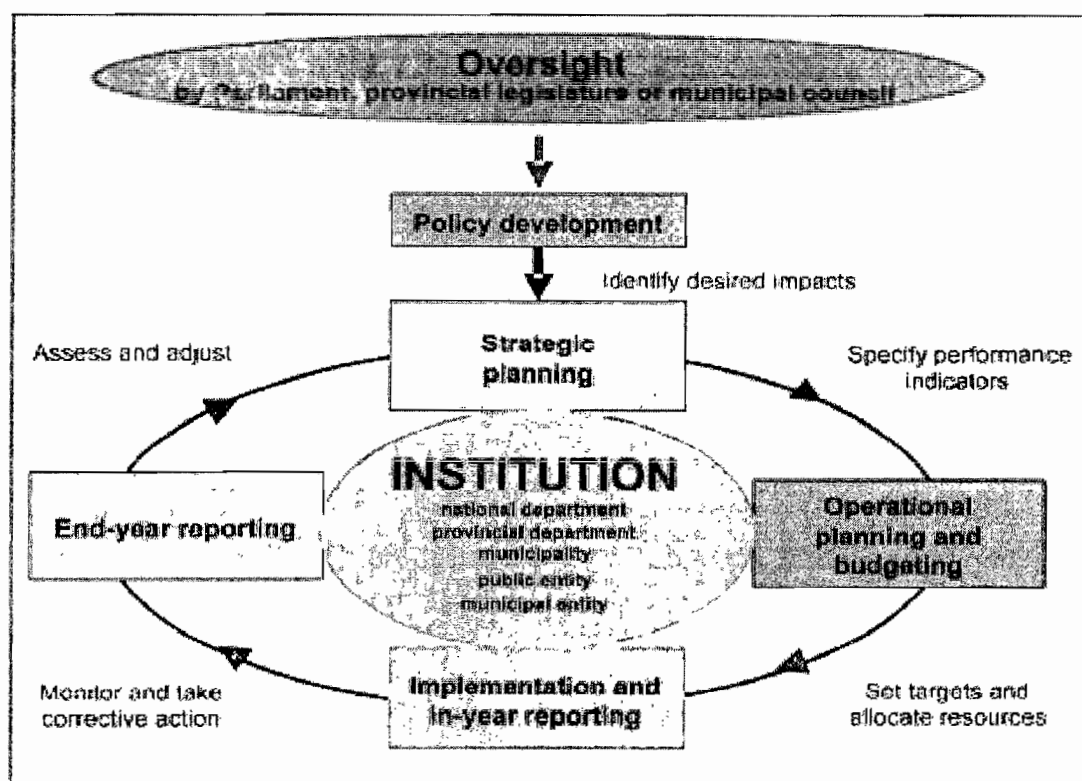
Effective coordination of work on sustainable development will be the responsibility of the body that will be established to drive sustainable development, making use of existing structures for both horizontal and vertical coordination. For horizontal coordination at a national level, the Forum of South African Heads of Departments (FOSAD) and the cluster system will be the main vehicles for coordination. The head of the body charged with this responsibility will be a member of FOSAD and the body will be represented at various cluster structures. Other sector specific coordinating structures will be used. For instance, the environmental sector has the Sub- Committee for Environmental Coordination as per National Environmental Management Act on cooperative governance.

Vertical coordination with provinces will happen through meetings of the Mintech and Minmecs. Performance against sustainability targets will be included in discussions taking place during these forums. Coordination with local government will happen through the South African Local Government Association (SALGA) and the Department of Cooperative Governance and Traditional Affairs.

4.2.3 Monitoring, Evaluation and Reporting for Sustainable Development

With sustainability indicators and targets forming part of government programmes, performance monitoring and reporting will follow the Framework for Managing Programme Performance Information (FMPPPI). Figure 2 shows how planning, budgeting and reporting are inter-linked. This cycle will apply equally to sustainable development in accordance with the intention to integrate it into the government programme as reflected in the foregoing section.

Figure 2: Planning, budgeting and reporting for Sustainable Development (Source: National Treasury, 2007)



In monitoring of performance against sustainability indicators will be done through quarterly non-financial reports which are linked to programme outputs or strategic objectives contained in Annual Performance Plans (APPs) of government departments, municipalities and Public Entities. The body that is charged with sustainable development will participate in the review of departmental strategic plans and APPs and will conduct periodic analysis of reports with a view to keeping track of the countries' overall progress towards achieving sustainability targets. The body will also analyse annual reports for the same purpose. Because the system will be integrated into the government's reporting and accounting cycle, performance against sustainability targets will also be subject to auditing by the Auditor General (AG). A special function to audit performance on sustainable development should be established within the office of the Auditor General, focussing on monitoring sustainability outputs²⁶. Oversight bodies such as parliament, provincial legislatures and municipal councils will hold the executive accountable for delivery against sustainability indicators and targets, including associated spending.

Other sources of information for the country's progress towards achieving sustainability will be surveys that are periodically conducted by Statistics South Africa (StatsSA). StatsSA, as the entity responsible for South Africa's official statistics will be tasked with the tracking of and reporting on sustainability indicators in its surveys²⁷. These indicators should be considered in the finalisation of sustainability indicators. The periodic South Africa Environmental Outlook Reports (SAEOR), the

26 An example of this approach can be found in Canada.

27 StatsSA is in the process of developing environmental accounting indicators covering different sectors, including water, energy etc.

provincial and municipal state of environment reports and other similar reports will be important sources of information.

The body charged with Sustainable Development will take responsibility for distilling information from all these reports, verifying its accuracy and validity and producing annual reports which will be presented to Parliament and to the UN. The body will seek certification as a producer of official statistics from StatsSA in accordance with the South African Statistical Quality Assessment Framework (SASQAF). This framework sets criteria for certification, including the relevance, accuracy, timeliness, accessibility, methodological soundness and integrity of produced statistics. The body will be a member of the National Statistics System.

Reporting on sustainable development by the private sector will be encouraged through incorporation into the King code for corporate governance, including the triple bottom line reporting requirement of the JSE. The body that is charged with sustainable development will initiate discussions with private sector representative bodies to ensure reporting. Industry bodies could be required to produce annual reports on the contributions of various sectors towards sustainable development. Civil society will play a key role in the monitoring of the government's performance towards the achievement of sustainability targets. Part of this role will be exercised through the establishment of a multi-stakeholder consultative forum.

Key to effective monitoring, evaluation and reporting will be the establishment of baselines for all sustainability indicators.

Evaluation

The body charged with driving sustainable development will commission regular external evaluations on South Africa's performance in relation to the achievement of sustainability. In addition, sustainability will be included as part of the 5 year reviews that are conducted by the Presidency, the next one being a twenty-year review of government performance. Performance will also be presented as part of periodic development indicator reports which the Presidency produces. As part of ongoing evaluation of sustainable development performance, the body will commission periodic spending reviews because spending is a good indicator of the level of commitment. In addition, the Department of Public Service and Administration (DPSA), the Public Service Commission (PSC) and the Departments of Cooperative Governance and Traditional Affairs (COGTA) will all play key evaluative roles in keeping with their respective mandates.

In order to ensure that there is learning and adaptation on sustainable development, periodic multi-stakeholder sustainable development review conferences will be convened by the body that will be charged with driving sustainable development²⁸. In addition, a research network on sustainable development constituted by research institutions both state and non-state, including academic institutions will be established and sponsored through the budget of the new body.

4.3 The Role of the Private Sector in Sustainable Development

As suppliers of societal goods and services, the private sector has a pivotal contribution to make in the pursuit of sustainable development objectives and targets. Within the context of sustainable development, a key principle that will be adopted in relation to the private sector is that of partnership with government and civil society. To this end, industry bodies will be invited to send representatives to the consultative forum that will be established for the implementation of the NSSD. In addition, the various sectors of private sector, via industry bodies will be encouraged to do the following:

- Identify sustainable development goals that are relevant to their sectors
- Agree sectoral sustainability indicators and targets in line with those contained in the national strategy.

28 Canada does these reviews every three years

- Discuss and agree monitoring and reporting mechanisms on sustainable development. This might entail a requirement that companies submit annual progress reports on their activities and progress towards contributing to sustainability targets.
- Submission of annual industry sector sustainable development progress reports to the body tasked with the management and implementation of sustainable development in South Africa.
- The establishment of a Sustainable Development Fund (SDF), in partnership with government and the donors to support projects and initiatives aimed at supporting sustainable development. The fund will be managed by the sustainable development institution and the beneficiaries of this fund should include civil society organisation and research institutions.

4.4 The role of Civil Society in Sustainable Development

Civil society as represented by the NGO, CBO and labour has a key role to play in advancing sustainable development in South Africa. This is the sector that tends to pay the highest price for unsustainable development practices.

Civil society will be represented in the consultative forum. In addition to this, civil society will have the following roles to play:

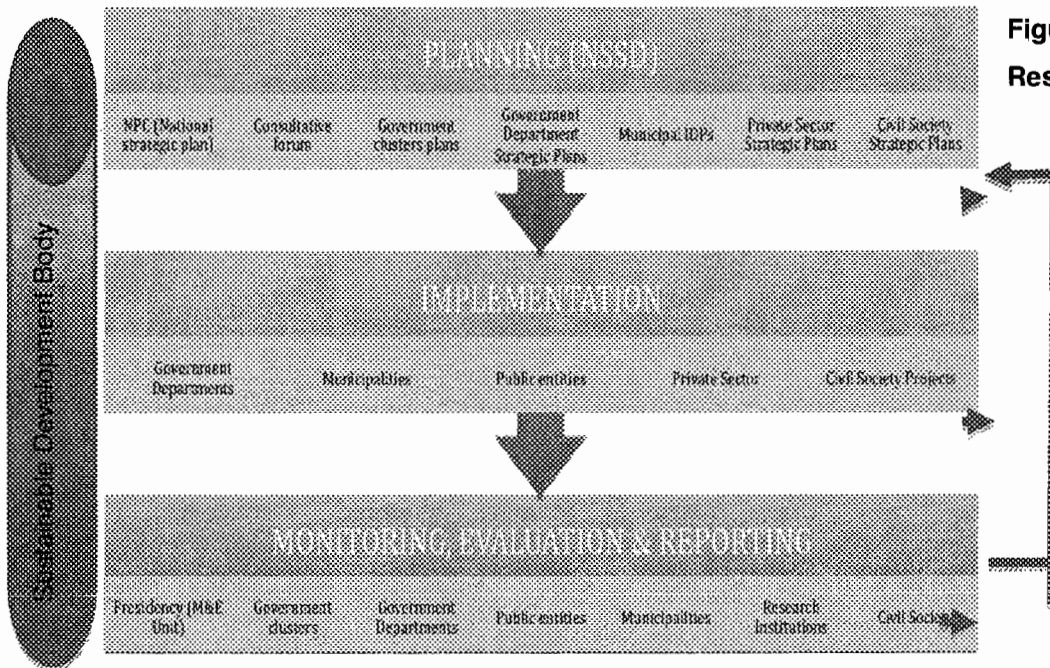
- The identification, design and implementation of community based sustainable development projects. These could be funded from the sustainable development fund.
- Participation in research and development on sustainable development. Such research could also be funded through the fund mentioned above.
- Serve as a watch-dog, tracking the performance of government and the private sector against sustainability targets. This role will also include lobbying and advocacy for sustainable development.

4.5 Responsibility Matrix

Figure 3 is a presentation of institutional responsibilities for the strategic management of the NSSD. The three key aspects of strategic management are planning, implementation and monitoring/evaluation/reporting.

The figure shows that institutions that will take responsibility for planning will include the NPC, government clusters, government departments, private sector organisations and non-governmental organisations. Elements of sustainable development, including goals and indicators will be reflected in strategic plans of these entities.

Implementation will happen via the agency of government departments, public entities, municipalities, the private sector and civil society organisations. It would be expected that the programmes of government departments, public entities, provinces and municipalities include elements that relate to the implementation of the NSSD.



**Figure 3:
Responsibility Matrix**

All the entities that have responsibilities for implementing the NSSD will be expected to report on their performance against sustainability indicators. This they will do as part of the normal reporting process. Research institutions will play an important part in gathering and analysing data that relates to the NSSD. Within the context of government, the Monitoring and Evaluation Unit in the Presidency will play a key role in ensuring effective monitoring.

All the foregoing activities will be implemented under the coordination and guidance of the entity that will be responsible for the NSSD. The three possible institutional options for the implementation of the NSSD are described briefly below:

- **A Commission For Sustainable Development**

A statutory commission for Sustainable Development is created with a number of commissioners appointed by the President. The number of commissioners will be determined by the final institutional arrangement and design of the organisation. The commissioners will be drawn from different sectors and stakeholder groups of South African society including business, civil society, labour and academia. Commissioners are appointed and allocated responsibilities to oversee different areas of specialisation in sustainable development

- **Integration into The Presidency**

Sustainable development is integrated into the work of the mooted NPC in the Presidency. Amongst the 20 commissioners to be appointed to the commission, there should be one for sustainable development. The Commission facilitates the process of developing sustainable development indicators, which then form part of the national plan. Each sector commits to a set target through the existing government cluster system. The Commission works closely with the mooted inter-ministerial body that will take advice from the Commission and advise the President on matters of national strategic planning, including sustainable development.

- **A Unit within the Department of Environmental Affairs (DEA)**

Create a unit within DEA at a branch level (or elevate the existing structure to branch level) to be responsible for sustainable development.

After an extensive consultation through the relevant cabinet clusters, the final option suitable for the country will be presented at the cabinet for approval.

4.6 Financing of Sustainable Development

The financing of the body that is charged with sustainable development and its activities will be sourced from the national fiscus, through the national budgeting process. This is because sustainable development will gradually become an integral part of how government works. In addition to this, funding from donors as well as funds from the economy, for instance, Public Private Partnerships (P-P-Ps) will be attracted. The National Treasury is already looking at the possibility of introduction of environmental taxes. These could serve as a further source of sustainable development financing.

A sustainable development fund will be established by the body tasked with the implementation of sustainable development, in partnership with the donor community and the private sector. This fund will be used to support projects, including community based projects and research initiatives that are directed at supporting sustainable development. Donor and private sector funding will be sourced as a compliment to government's own contribution to this fund.

5. CONCLUDING REMARKS

This document has presented the NSSD and action plan. It also presents three institutional options for the implementation of the NSSD. Recommendations for planning, coordination, monitoring and evaluation, as well as for the financing of the activities of the NSSD institution are also included. The process of drafting the NSSD and action plan can only be concluded once there has been sufficient discussion and substantial agreement, amongst key decision makers, on the adoption of one amongst the three institutional options that are presented. This could also entail a combination of aspects of more than one of the options. Suggestions and comments emanating from these discussions will be considered in the finalisation of an institutional framework that will form part of the final NSSD and action plan.

Once an institutional framework has been adopted, there will be a need for institutional design and job evaluation processes to be carried out. These processes fall outside the scope of the drafting process but are a necessary aspect of implementing the recommendations. It will be important for these processes to follow the guidelines for designing organisational structures in the public sector, the Public Finance Management Act, the Public Service Act and other relevant key government frameworks.

The indicators contained in the action plan are preliminary. Their finalisation will require discussion and validation by stakeholders, a process that should be coordinated by DEA. Validation should include confirmation of their appropriateness, as well as the quantification of targets and deadlines. Once the validation process is complete, these indicators can be adopted and included in a sustainability indicators database for purposes of planning, monitoring, evaluation and reporting.

Urgent action is required to direct the development path of the country towards sustainability, particularly in light of the potential consequences of climate change. It is acknowledged at an international level that the most poor and vulnerable people are likely to be affected most by climate change. For this reason, it is an imperative that active and urgent interventions are taken to deliver on social objectives, whilst ensuring that the natural resources on which a decent quality of life depends are managed to ensure their long-term sustainability. Thus, this strategy and Action Plan must be given priority and achievements against its targets must be assessed through applying the relevant indicators.

Annex A

TABLE 2.1 - Links between environmental and other threats and key socio-economic variables.

THREATS	Globalisation & current development model	Climate Change	Water scarcity	Ecosystem degradation	Pollution	Depletion of natural resources	Social inequity (incl gender) & poverty	Poor governance & lack of capacity
SOCIO-ECONOMIC IMPERATIVES	IMPACTS							
Food Security	Rising food prices due to multi-national monopolies. price of inputs. agricultural subsidies and competing land-use options.	Crop yields (eg. maize) likely to decrease up to 50% in some African countries.	Crop failures & livestock deaths from drought and/or depleted water resources.	Loss of eg. agricultural potential due to soil erosion and decreased availability of water.	Reduced productivity due to air/water/soil contamination.	Loss/ lessening of natural food sources eg. fish stocks, forest resources, wild fruits and nuts	Inability to purchase food on the markets. limited access to land for food growing. Less subsistence and livelihood support from land.	Inadequate measures to prevent food price fixing. loss of land with agricultural potential etc. Lack of support for sustainable agriculture.
Water Security	Water demand exceeds supply	SA rainfall patterns to change – drier in some areas & less predictable.	Water demand exceeds availability.	Natural water storage capacities of wetlands, aquifers etc lost.	Lack of water of adequate quality for human consumption.	Water demand exceeds availability.	Lack of access to water supply networks/ affordability issues.	Insufficient investment in infrastructure & lack of operational skills.
Energy Security	Rising oil/ energy prices – reduced affordability.	Growing pressure to reduce use of fossil fuels.	Limits on hydro-power as an alternative to fossil fuels.	Continued mining for new fossil fuels. climate change impacts	Pressure to phase out highly polluting energy sources. Health impacts from continued use of coal	Depletion of coal/ oil reserves.	Lack of access to electricity supply networks/ affordability issues.	Poor forward planning – inadequate supply & limited development of renewables.
Shelter related infrastructure (including transport)	Current model favours single unit dwellings, private rather than public transport etc. - all unsustainable.	Increase in damage (+ costs) due to extreme weather events. Buildings not suitable for hotter weather.	Places limits on suitable locations for settlements – &/or high prices for water transfer schemes.	Loss of amenities from public use areas, ecosystems eg. rivers.	Impacts on health & quality of life in poorly located settlements.	Increased housing costs.	Major affordability concerns. Increased crime & other social problems.	Construction of sub-standard facilities & lack of maintenance. Communities not cohesive, stable or safe.

THREATS	Globalisation & current development model	Climate Change	Water scarcity	Ecosystem degradation	Pollution	Depletion of natural resources	Social inequity (incl gender) & poverty	Poor governance & lack of capacity
SOCIO-ECONOMIC IMPERATIVES	IMPACTS							
Social services (health, security, cultural resources & education)	Demand for social services exceeds capacity. High costs of e.g. imported medicines.	Spread of diseases such as malaria, increase in natural disasters (e.g. flooding) and decreased water availability.	Decreased health and wellbeing. Deaths from poor sanitation and hygiene increase	Loss of aesthetic, spiritual & recreational resources.	Pollution-related health problems overload the health system	Reduced availability of eg. traditional medicines, biomass, building materials, livelihood support resources.	Large % of the population dependent on social services means that demand exceeds capacity	Lack of service delivery, declining education standards etc.
Sustainable livelihoods & jobs	Promotes jobs which are not sustainable in the longer-term. High unemployment & social unrest.	Impacts on livelihoods due to dwindling natural resources (including tourism as a livelihood support activity).	Limits on all jobs/ industries which require water	Loss of ecosystem services, including the benefits natural systems provide for climate change mitigation and adaptation.	Resources degraded though pollution making them unavailable for livelihood support	Options for sustaining livelihoods decline.	People without skills or resources are disadvantaged in terms of jobs or livelihood opportunities.	Inability to create sufficient jobs or livelihood opportunities.