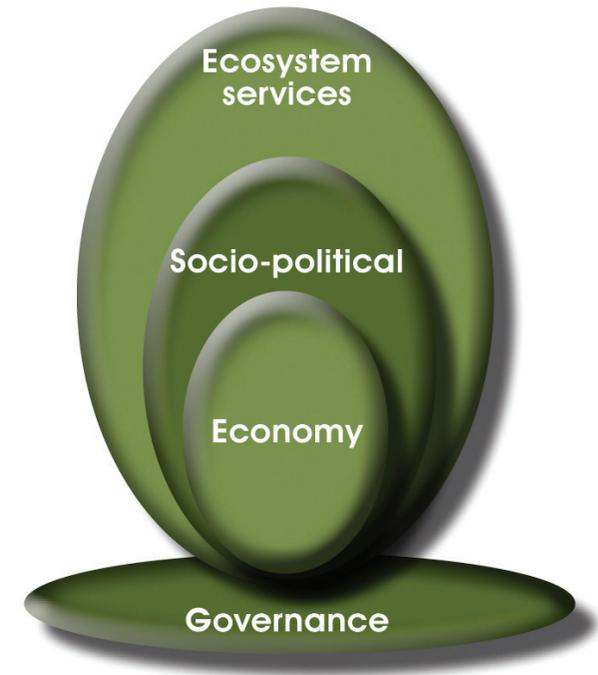


National Strategy

*for Sustainable Development
and Action Plan (NSSD 1)*

2011-2014

Approved by Cabinet on 23 November 2011



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA



Vision for a sustainable society:

“South Africa aspires to be a sustainable, economically prosperous and self-reliant nation 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.”

Source: National Framework
on Sustainable Development (NFSD), 2008



A systems approach to sustainability is one where the economic system, the socio-political system and the ecosystem are embedded within each other, and then integrated through the governance system that holds all the other systems together in 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.

Source: National Framework on Sustainable Development (NFSD), 2008



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List of acronyms

AG	Auditor-General	NCSD	National Committee on Sustainable Development
APP	Annual Performance Plan	NDIR	National Development Index Report
BAU	Business-as-usual	NEMA	National Environmental Management Act
BEE	Black Economic Empowerment	NEMBA	National Environmental Management: Biodiversity Act
CBO	Community-based Organisations	NFSD	National Framework for Sustainable Development
CEC	Committee for Environmental Coordination	NGO	Non-governmental Organisation
COGTA	Department of Cooperative Governance and Traditional Affairs	NGP	New Growth Path
COP 17	17th session of the Conference of the Parties	NIPF	National Industrial Policy Framework
CSD	Commission on Sustainable Development	NPAES	National Protected Areas Expansion Strategy
DEA	Department of Environmental Affairs	NPC	National Planning Commission
EGS	Environmental Goods and Services	NSDP	National Spatial Development Perspective
FOSAD	Forum of South African Heads of Departments	NSSD	National Strategy for Sustainable Development
FTE	Full-time Equivalent	NYDA	National Youth Development Agency
GDP	Gross Domestic Product	OECD	Organisation for Economic Cooperation and Development
GHG	Greenhouse Gas	PAJA	Promotion of the Administrative Justice Act
HDI	Human Development Index	PGDS	Provincial Growth and Development Strategy
IPAP	Industrial Policy Action Plan	PPP	Public-private Partnerships
ICT	Information and Communication Technology	R&D	Research and Development
IDP	Integrated Development Plan	RDP	Reconstruction and Development Programme
IPCC	Intergovernmental Panel on Climate Change	REFIT	Renewable Energy Feed-in Tariffs
IP	Intellectual Property	SAEOR	South Africa Environmental Outlook Report
IPP	Independent Power Producer	SALGA	South African Local Government Association
IRP	Integrated Resource Plan	SARI	South African Renewables Initiative
JPOI	Johannesburg Plan of Implementation	SDF	Spatial Development Framework
JSE	Johannesburg Stock Exchange	SDIP	Service Delivery Improvement Plan
LED	Local Economic Development	SDBIP	Service Delivery Budget Implementation Plan
MDG	Millennium Development Goals	SoNA	State of the Nation Address
MEA	Multilateral Agreement	SoPA	State of the Province Address
MEC	Member of the Executive Committee	UN	United Nations
MINMEC	Ministers and Executive Committee	UNEP	United Nations Environmental Programme
MINTHEC	Ministerial Technical Committee	UNFCCC	United Nations Framework Convention on Climate Change
MLRA	Marine Living Resources Act	WMA	Water Management Area
MTSF	Medium-term Strategic Framework	WSSD	World Summit on Sustainable Development
NAFU	National African Farmers' Union		

Preface

In 2008, Cabinet approved the South Africa National Framework for Sustainable Development (NFSD). The approval signalled a new wave of thinking aimed at promoting the effective stewardship of South Africa's natural, social and economic resources. This National Strategy for Sustainable Development and Action Plan – also referred to as NSSD 1 (2011–2014) – was approved by Cabinet on 23 November 2011. The NSSD 1 builds on the 2008 NFSD and several initiatives that were launched by the business sector, government, NGOs, civil society, academia and other key role players to address issues of sustainability in South Africa. The NSSD 1 will be implemented during the period 2011–2014. The lessons and evaluation of progress regarding the implementation of NSSD 1 will inform NSSD 2 (2015–2020).

This is a proactive strategy that regards sustainable development as a long-term commitment, which combines environmental protection, social equity and economic efficiency with the vision and values of the country. The NSSD 1 marks the continuation of a national partnership for sustainable development. It is a milestone in an ongoing process of developing support, and initiating and upscaling actions to achieve sustainable development in South Africa. The 1992 Rio Earth Summit, which was followed by the 2002 Johannesburg World Summit on Sustainable Development, provided a platform to learn and begin to

implement sustainability practices. The 2012 Rio+20 identified two important themes to support the country's efforts. These are the green economy, in the context of sustainable development and poverty eradication, and the institutional framework for sustainable development.

The following five strategic objectives are identified in the NSSD 1:

1. Enhancing systems for integrated planning and implementation
2. Sustaining our ecosystems and using natural resources efficiently
3. Towards a green economy
4. Building sustainable communities
5. Responding effectively to climate change

Various interrelated and enabling interventions that promote sustainable development are being implemented throughout the country. The NSSD 1 identifies 113 interventions that can be monitored for implementation. The twenty headline indicators have been identified to monitor progress in the implementation of NSSD 1 (2011–2014). These headline indicators are selected from existing indicators including the Development Indicators, the Millennium Development Goals and the 12 government outcomes.

The Department of Environmental Affairs will establish and oversee the National Committee on Sustainable Development (NCSD) that will operate in multifold

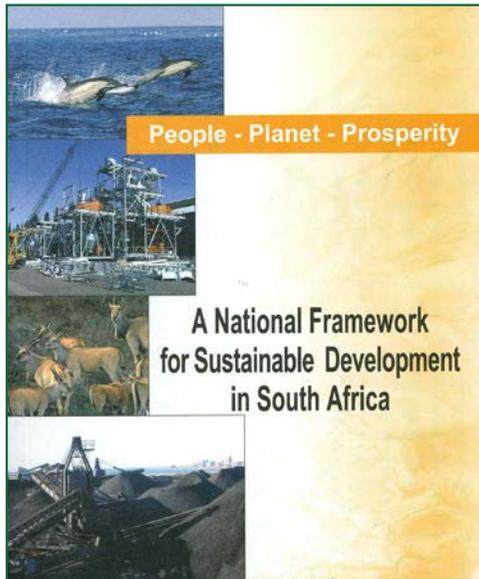
among government spheres to engage civil society, NGOs, the private sector, academia, independent reviewers and other multistakeholders. South Africa's commitment to a long-term sustainable development trajectory that is economically, socially and environmentally sustainable, requires scientific, technological and innovation capabilities, supported by strategic public investments and strategic partnerships. The department, in collaboration with all key stakeholders, will galvanise action towards the implementation of the strategy through the harmonised planning of programmes and execution.

The team responsible for the development, coordination, monitoring and reporting of the NSSD 1 comprises Ms Dorah Nteo, Ms Mapula Tshangela and Ms Faith Phooko, acknowledging the contribution of the previous team, Ms Keleabetswe Tlouane and Mr Eddy Moeketsi. Enquiries on the contents of the NSSD 1 and its implementation can be directed to: MTshangela@environment.gov.za.

*NSSD 1 builds
on the 2008
National
Framework for
Sustainable
Development.
Progress
made in its
implementation
will inform
NSSD 2*

1. Introduction and Background

Sustainable development is increasingly being acknowledged worldwide as a conceptual framework for development that recognises the interdependency between economic growth, social equity and environmental integrity.



In 2008, Cabinet approved the National Framework for Sustainable Development (NFSD), which signalled a new wave of thinking that was aimed at promoting the effective stewardship of South Africa's natural, social and economic resources.

The National Strategy for Sustainable Development and Action Plan – also known as the NSSD 1 (2009–2014) – builds on the NFSD and several initiatives that have been launched by the business sector, government, NGOs, civil society, academia and other key role players to address issues of sustainability in South Africa.

The NSSD 1 presents an understanding of sustainable development and explains the route that is being taken. It presents an action plan and indicators for the implementation of the strategy. It is not prescriptive, but is enabling in orientation and will be used to review sustainability programmes. The strategy calls for an interdependency approach across sectors and action on sustainability. It covers the key areas of human development (people), ecological protection (the planet) and economic growth (prosperity). In order to be competitive in the future economic landscape, new ways of doing business will

be required, as well as progressive leaders who are willing and able to incorporate a long-term vision in their planning.

Furthermore, the strategy invites all role players to engage in an ongoing and constructive dialogue. This will be inspired by the need to develop a more efficient and equitable economy. It is critical that all role players implement the strategy initiatives and that collective actions make a significant contribution to environmental sustainability.

SOUTH AFRICA'S NATIONAL STRATEGY FOR SUSTAINABLE DEVELOPMENT AND ACTION PLAN (NSSD 1)



“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”

<ul style="list-style-type: none"> • Develop and promote new social and economic goals based on ecological sustainability and build a culture that recognises that socioeconomic systems are dependent on and embedded in ecosystems • Increase awareness and understanding of the value of ecosystem services to human wellbeing • Ensure effective integration of sustainability principles into all policies, planning and decision-making at national, provincial and local levels • Ensure effective system-wide integration and collaboration across all functions and sectors • Monitor, evaluate and report performance and progress in respect of ecological sustainability in relation to socioeconomic goals 				
Enhancing systems for integrated planning and implementation	Sustaining our ecosystems and using natural resources efficiently	Towards a green economy	Building sustainable communities	Responding effectively to climate change
<ul style="list-style-type: none"> • Enhance effective governance, and institutional structures and mechanisms to achieve sustainable development and meeting the Millennium Development Goals (MDG) and Johannesburg Plan of Implementation (JPOI) goals and targets • Strengthen monitoring and reporting for improved environmental performance by government and the private sector 	<ul style="list-style-type: none"> • Value, protect and continually enhance environmental assets and natural resources 	<ul style="list-style-type: none"> • A just transition towards a resource-efficient, low-carbon and pro-employment growth path 	<ul style="list-style-type: none"> • Create community awareness, participation and work together to protect their environment through changing the attitudes and behaviour in consuming resources sustainably and responsibly • Develop and support quality housing projects/programmes including building community self-sufficient farming strategies, indigenous knowledge, the sustainable production of herbs and traditional medicine, and businesses to secure societal equity and cohesion 	<ul style="list-style-type: none"> • A fair contribution to the global effort to achieve the stabilisation of greenhouse gas concentrations in the atmosphere at a level that prevents dangerous anthropogenic interference with the climate system • Effectively adapt to and manage unavoidable and potential damaging climate change impacts through interventions that build and sustain South Africa's social, economic and environmental resilience and emergency response capacity
11 interventions	40 interventions	17 interventions	21 interventions	18 interventions
3	6	4	4	3
National Committee on Sustainable Development (NCSD); spheres of government Civil society, private sector, academia, multi-stakeholder and independent review				
Planning, implementation, monitoring evaluation and reporting				

1.1 Sustainability and sustainable development

Although the concept of sustainable development has been on the international agenda since the United Nations 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 this strategy for sustainable development, a fixed definition of these terms has been accepted in a South African context.

Sustainability (or a sustainable society) is seen as the overall goal of the NSSD 1. Sustainability in this context implies **ecological sustainability**. In the first instance, it recognises that the maintenance of healthy ecosystems and natural resources are preconditions for human wellbeing. In the second instance, it recognises that there are limits to the goods and services that can be provided. In other words, ecological sustainability acknowledges that human beings are part of nature and not a separate entity.

Sustainable development is the process that is followed to achieve the goal of

sustainability. Sustainable development implies the selection and implementation of a development option, which allows for appropriate and justifiable social and economic goals to be achieved, based on the meeting of basic needs and equity, without compromising the natural system on which it is based.

1.2 From vision to action: the NSSD 1 process

The process of developing the NSSD 1 is undertaken according to the following phases:

Phase I: 2003–2008: Phase I involved an analysis of long-term economic, social and environmental trends and related policy initiatives. This informed the vision, goals and strategic priorities for sustainable development and culminated in the NFSD, which was adopted by Cabinet in June 2008.

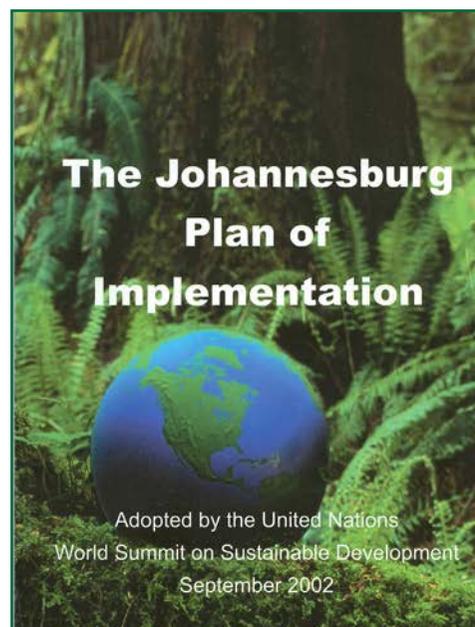
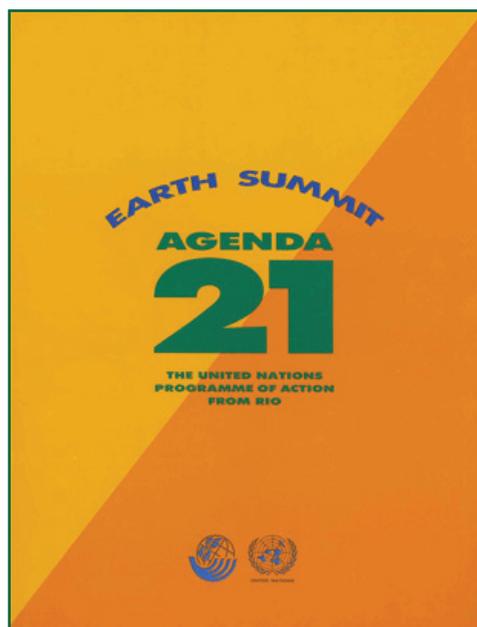
Phase II: 2009–2010: Phase II involved the formulation of a strategy and action plan for the period 2010–2014 to facilitate the implementation of the vision, goals and strategic priorities outlined in the NFSD. It included proposals for an institutional framework to drive sustainable development, as well as a process to monitor and evaluate progress made in implementing the NSSD 1.

Phase III: 2011–2014 and onwards: Although many relevant activities are already being implemented, a formal implementation of the Action Plan will commence upon approval of the NSSD 1. Implementation will be accompanied by an ongoing process of monitoring and evaluating the progress that is being made in achieving the goal of a sustainable society. This will also provide feedback for a system of adaptive management.

The evaluation of progress regarding the implementation of the NSSD 1 will inform the NSSD 2 (2015–2020).

1.3 The South African vision as outlined in the NFSD

The World Summit on Sustainable Development (WSSD), which was held in South Africa in 2002, was tasked with reinvigorating the global commitment to sustainable development. It delivered a number of key outcomes, including a political declaration known as the Johannesburg Plan of Implementation (JPOI), and a range of partnership initiatives.



According to Paragraph 162(b) of the JPOI, "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 WSSD, Cabinet mandated the former Department of Environmental Affairs and Tourism and the former Department of Foreign Affairs to formulate a National Strategy for Sustainable Development. The first phase of this process culminated in the adoption of the NFSD by Cabinet in June 2008.

Among other things, the NFSD spells out South Africa's vision for a sustainable society:

"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

The fundamental principles relate to the following fundamental human rights that are guaranteed in the Constitution of the Republic of South Africa:

- Human dignity and social equity
- Justice and fairness
- Democratic governance
- A healthy and safe environment

Substantive principles

The substantive principles are based on the following sustainable development principles that are already enshrined in South African law and that underscore a systems approach to achieving sustainable development:

- Natural resources must be used sustainably.
- Socioeconomic systems are embedded in and are dependent on ecosystems.
- Basic human needs must be met to ensure that the resources that are necessary for long-term survival are not destroyed for short-term gain.

Process principles

The process principles apply to the implementation of the NFSD and the NSSD 1, and include the following:

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

The NFSD provides a valuable step in defining key sustainable development principles for the country. At the same time, it is mindful of global challenges and growth ideals. Because of certain complex development considerations – including the disturbing widening of the gap between the rich and the poor populations in the country – a simple 'triple bottom line' approach to sustainable development is insufficient. This realisation has led to a broader definition of sustainable development, which, in accordance with the systems approach to sustainability (see definition), accepts that socio-political, economic and ecosystem factors are embedded within each other and are integrated through the governance system that holds all the other systems together in a legitimate regulatory framework.

1.4 Purpose of the NSSD 1 and the Action Plan

The NFSD formed the first step of the NSSD 1 process. This document provides the National Strategy for Sustainable Development and an Action Plan to support the implementation of the NFSD. It therefore provides a high-level roadmap for strategic sustainable development. Its intention is to provide public and private sector organisations with guidance when it comes to their own long-term planning, as the development of sector- or subject-specific strategies and action plans must be consistent with the NSSD 1.

The NSSD 1 sets out key areas that are in need of attention to ensure that a shift takes place towards a more sustainable development path. In this regard, the following key elements have been identified:

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

The Action Plan that forms part of the strategy is formulated within the context of the five strategic priorities that have been identified in the NSSD 1. It sets out the strategic goals, interventions and indicators for each of these strategic priorities.

1.5 The NSSD 1's links with the National Planning Commission, the New Growth Path and the Industrial Policy Action Plan

The section unpacks the relationship between the national long-term vision and National Strategic Plan, National Strategy for Sustainable Development, New Growth Path and Industrial Policy Action Plan.

THE PRESIDENCY AND CABINET	NATIONAL PLANNING COMMISSION	NATIONAL STRATEGY FOR SUSTAINABLE DEVELOPMENT	NEW GROWTH PATH	INDUSTRIAL POLICY ACTION PLAN
<p>The President and Cabinet have the constitutional responsibility for approving government policy. The President exercises executive authority, together with other members of Cabinet. Their functions include the following:</p> <ul style="list-style-type: none"> • Implement national legislation • Develop and implement national policy • Coordinate the functions of state departments and administrations • Prepare and initiate legislation • Perform any other executive function provided for in the Constitution or in national legislation 	<p>The National Planning Commission (NPC) is responsible for developing a long-term vision and strategic plan for South Africa. It comprises 25 part-time commissioners, appointed by the President on the basis of their skills and expertise, who serve for a period of five years. Their functions include the following:</p> <ul style="list-style-type: none"> • Lead the development (and periodic review) of the draft South Africa Vision 2030 and long-term national strategic plan for approval by Cabinet • Lead investigations into critical long-term trends under the supervision of the Minister in the Presidency for the NPC, with technical support from a Secretariat and in partnership with other relevant parties • Advise on key issues, such as food security, water security, energy choices, economic development, poverty and inequality, the structure of the economy, human resource development, social cohesion, health, defence capabilities and scientific progress • Assist to mobilise society around a national vision and other tasks related to strategic planning • Contribute to reviews of implementation or progress in achieving the objectives of the National Plan • Contribute to the development of international partnerships and networks of expertise on planning 	<p>The NSSD 1 contains a five-year strategy and action plan. It is linked to the Medium-term Strategic Framework (MTSF) for 2009–2014. At the end of this period, the NSSD 1 will be followed by the NSSD 2 that will be implemented in the period 2015–2020.</p> <p>A systems approach will be followed through the establishment of the National Committee on Sustainable Development (NCSDD). The NCSDD is a dedicated institutional structure that will oversee implementation and monitoring interventions to address issues of sustainability in South Africa.</p> <p>The NSSD 1 sets out key areas that require attention in order to ensure a shift towards a more sustainable path. It identifies strategic goals for the period, as well as priorities, objectives, interventions and headline indicators, with the intention of feeding them into the long-term national vision and strategic plan.</p> <p>The Action Plan sets out the strategic goals and interventions that are required in respect of the strategic priorities that have been identified.</p>	<p>The New Growth Path (NGP) establishes a labour-absorbing growth path for the country. The NGP identifies a number of job drivers.</p> <p>It identifies areas where employment creation is possible on a large scale as a result of substantial changes in conditions in South Africa and globally.</p> <p>It also lays out a dynamic vision for the collective achievement of a more developed, democratic, cohesive and equitable economy and society over the medium term, in the context of sustained growth.</p>	<p>The Industrial Policy Action Plan (IPAP) builds on the National Industrial Policy Framework (NIPF) and the 2007/08 IPAP.</p> <p>It is a significant step forward in scaling up government's efforts to promote long-term industrialisation and industrial diversification beyond the current reliance on traditional commodities and non-tradable services, with the aim to expand production in value-added sectors with high employment and growth multipliers that compete in export markets, as well as those that compete in the domestic market against imports. The IPAP is also an integral component of the New Growth Path.</p>

2. A National Strategy for Sustainable Development

South Africa is an emerging economy. While significant progress has been made since the first democratic election of 1994, there are still significant developmental challenges that need to be addressed in a manner that adheres to the principles of sustainable development.

The Development Indicators, which were released by the Presidency at the end of 2010, provide measures based on trend analyses, to assist in understanding the impact of various government policies and programmes. They are clustered into ten themes: economic growth and transformation, employment, poverty, inequality, household and community assets, health, education, social cohesion, safety and security, international relations and good governance.

Based on information provided in the labour force surveys of Statistics South Africa, there are still high levels of inequality and unemployment. In mid-2011, the unemployment rate stood at 25.7%.

In terms of access to services by households, the General Household Survey, 2002–2009 of Statistics South Africa revealed the following domestic situation for 2009:

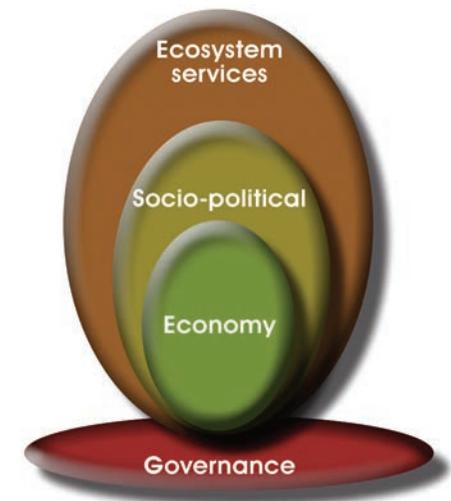
- 13.4% of households lived in informal dwellings
- 7.6% of households did not have access to water supply from a safe source
- 27.8% of households did not have access to sanitation
- 17.4% of households did not have access to electricity

An additional challenge for the country is the increasing number of maternal deaths. According to the Millennium Development Goals Country Report for 2010, the maternal mortality ratio could be as high as 625. Adult illiteracy is also something that needs to be addressed. According to Statistics South Africa, the proportion of individuals over the age of 20 years who could be regarded as functionally illiterate stood at 19.2% in 2010.

On the other hand, the South African economy has certain characteristics in common with a number of developed

countries. It is highly energy-intensive and its per capita carbon emissions rank among the highest in the world. According to the Greenhouse Gas Inventory South Africa, which was compiled under the United Nations Framework Convention on Climate Change (UNFCCC) in May 2009, the country's emissions increased from 347 metric tons CO₂ equivalent (Mt CO₂e) in 1990 to 437 Mt CO₂e in 2000. The trends analysis that informed the NFSD revealed that the country's natural resource base is under severe pressure. Many of its ecosystems are already seriously degraded and South Africa is likely to be significantly affected by climate change. These point to the fact that South Africa is currently on an unsustainable development path.

Following the adoption of the NFSD, South Africa (along with many other countries) has been in an economic recession due to the global financial crisis. This has exacerbated many of the socioeconomic problems.



According to a report published by the Organisation for Economic Cooperation and Development (OECD) in 2008, the prices of many staple foods nearly doubled between 2005 and 2007 and spiked in early 2008 (OECD, 2008). The United Nations Environment Programme (UNEP) reported in March 2009 that oil prices had increased to almost US\$150/barrel in 2008 (UNEP, 2009). Prof Tim Jackson, economics commissioner with the Sustainable Development Commission in the United Kingdom, predicts that oil scarcity is likely to become a significant issue over the next decade. He also notes that global carbon emissions have risen by 40% since 1990 (Jackson, 2009).

Climate change is expected to reduce crop yields and alter rainfall patterns, which will further exacerbate food and water security. Pollution also poses a threat to water scarcity and will have a serious impact on people's health. In the opinion of Dr Rajendra K Pachauri, chair of the Intergovernmental Panel on Climate Change (IPCC) and co-recipient of the 2007 Nobel Peace Prize, 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 (Pachauri, 2009).

These concerns do not only pose a threat to achieving the goal of a sustainable society in the long term, but also challenge the ability of government to meet its short-

term socioeconomic objectives and to deliver on the Millennium Development Goals. (An analysis of the links between these threats and socioeconomic variables is presented in the form of a matrix in Annex A.)

In the face of the multiple international crises, the UNEP proposed the Global Green New Deal in a policy brief published in March 2009 as part of its Green Economy Initiative. In this report, it recommends that countries view the financial crisis as an opportunity to shift their economies towards ecological sustainability (UNEP, 2009). This report was followed by the Green Economy Report (*Towards a Green Economy: Pathways to Sustainable Development and Poverty*), which outlines priority areas of focus in transitioning to a green economy (UNEP, 2011). This publication, together with the work of many other agencies and governments (including South Africa), is set to inform a renewed sustainable development vision for the next century.

In developing the the NSSD 1 as a strategy to give effect to the NFSD, cognisance is taken of the threats that are detailed in Annex 1. The strategy contains the following elements:

- Directing the development path towards sustainability
- Changing behaviour, values and attitudes

- Restructuring the governance system and building capacity

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

The strategic goals of the NSSD 1 include the following:

- Develop and promote new social and economic goals based on ecological sustainability, and build a culture that recognises that socioeconomic systems are dependent on and embedded within ecosystems.
- Increase awareness and understanding of the value of ecosystem services to human wellbeing.
- Ensure effective integration of sustainability principles into all policies, planning and decision-making at national, provincial and local levels.
- Ensure effective system-wide integration and collaboration across all functions and sectors.

- Monitor, evaluate and report performance and progress in respect of ecological sustainability in relation to socioeconomic goals.

2.1 Towards sustainable development practices

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. This has resulted in an energy-intensive economy and an erosion of the resource base: a situation that is clearly unsustainable.

Historically, most of South Africa's towns and cities have been characterised by urban sprawl. The predominant housing model is detached, single family houses. Moreover – largely as a result of apartheid policies – communities are not integrated, and low-income housing and informal settlements are generally located on the outskirts of urban areas, far removed from job opportunities and community services. At the same time, safe and efficient public transport is generally lacking. There are also enormous inequalities between the lifestyles of those living in informal settlements (where there are limited or no basic services) and the high consumption levels characteristic of the wealthy suburbs. This lack of access to modern services often forces the poor to

engage in practices that are detrimental to both their health and the environment, for example, the indoor burning of solid fuels for cooking. This practice is not consistent with a sustainable society.

The need to put new socioeconomic objectives in place, 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 crisis, *Framework for South Africa's response to the international economic crisis* (Department of Trade and Industry, 2009), notes the need to emphasise opportunities to green the economy. The Global Green New Deal report of UNEP (updated in September 2009 for the G20 Pittsburgh Summit) assigns South Africa 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, Pravin Gordhan, speaking at the UNEP Finance Initiative Global Round Table on 22 October 2009, has also recognised that the cost of a lack of action towards sustainable development will far exceed the cost of

moving towards a low-carbon economy. Furthermore, in his Medium-term Budget Policy Statement Speech, delivered on 27 October 2009, he identified innovation (especially around climate change challenges) as a priority.

2.2 Changing values and behaviour

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

A key component of moving towards a sustainable society is to change people's perceptions of what constitutes 'wellbeing' and – based on this – to develop new social goals. Efforts should be made to increase awareness and to understand the important role that ecosystems and natural resources play in human wellbeing. Efforts should also be made to introduce incentives or disincentives to encourage environmentally responsible behaviour.

The current structure of society often prevents people from behaving in a sustainable manner, even when they would like to do so. This is illustrated by the lack of safe and efficient public transport, and the shortage of recycling facilities. Attempts to change behaviour must therefore be supported by the availability 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. It will require the involvement of government, business and a number of civil society organisations. If the level of awareness that is required to bring about a change in society's goals is to be achieved, the support of a range of NGOs, churches, youth groups, unions and cultural organisations will have to be enlisted. It is recommended that a massive outreach programme be developed to promote this strategy.

2.3 Restructuring the governance system and building capacity

The process of developing the NSSD 1 is driven by the Department of Environmental Affairs (DEA) through consultation. There are already a number of sectors that 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 for a number of reasons. These include inadequate resources, lack of management and institutional capacity, and the absence of technical capacity.

Initiatives need to be linked to an institutional framework with clear mandates to ensure the effective coordination of the priorities contained in the NSSD 1. Its implementation needs to be linked to the incorporation of principles of sustainability into the policies, legislation, strategies and action plans of government. This includes the effective monitoring and evaluation of progress towards achieving a sustainable future. The contributions of the private sector and civil society also need to be managed.

3. The Action Plan and Strategic Priorities



In the NSSD 1, five strategic priorities and an associated Action Plan have been developed within the context of sustainable development. Cognisance is taken of emerging global issues and challenges, such as the financial crisis, the global climate change and transitioning to a green economy. To remain within the prevailing and flexible context, the strategic priorities of the NFSD have been reformulated as follows:

NFSD strategic priorities	Reformulated NSSD 1 strategic priorities
Priority 1: Enhancing systems for integrated planning and implementation	Priority 1: Enhancing systems for integrated planning and implementation
Priority 2: Sustaining our ecosystems and using natural resources efficiently	Priority 2: Sustaining our ecosystems and using natural resources efficiently
Priority 3: Economic development through investing in sustainable infrastructure	Priority 3: Towards a green economy
Priority 4: Creating sustainable human settlements	Priority 4: Building sustainable communities
Priority 5: Responding appropriately to emerging human development, economic and environmental challenges (including climate change, rising oil prices, globalisation and trade)	Priority 5: Responding effectively to climate change

The five strategic priorities are discussed in the following subsections, with strategic goals proposed for each priority. Key interventions, targets and indicators for each priority are outlined in each tabulated Action Plan, while 20 headline indicators have been identified to monitor progress towards the implementation of NSSD 1.

The indicators included in each tabulated Action Plan provide a starting point for the development of a set of national sustainability indicators. They were compiled from key strategic national documents, including the Development Indicators published by the Presidency, the Environmental Sustainability Indicator Technical Report, the Millennium Development Goals (MDG) and the 12 key outcomes that give structure to government's priorities for the MTSF.

Figure 1: National Strategy for Sustainable Development Strategic Priorities

STRATEGIC PRIORITY	HEADLINE INDICATORS
Enhancing systems for integrated planning and implementation	<ul style="list-style-type: none"> • Establish an effective National Committee on Sustainable Development (NCSD) <i>[established by March 2012]</i> • Number of government entities and private sector companies that report against sustainability indicators <i>[King III sustainability reporting, Carbon Disclosure Project and Water Disclosure Project]</i> • Number of community-based capacity building projects <i>[begin measuring]</i>
Sustaining our ecosystems and using natural resources efficiently	<ul style="list-style-type: none"> • Curtail water losses at water distribution systems to an average percentage reduction (saving) <i>[from 30 to 15% by 2014]</i> • Reduction (saving) of demand as determined in the reconciliation strategies for seven large water supply systems by 15% <i>[assessment of water requirements and water monitoring systems implemented by 2014]</i> • Increase the number of Blue Flag beaches <i>[to above 29 beaches]</i> • Rehabilitation of land affected by degradation <i>[3.2 million ha by 2014]</i> • Percentage of coastline with partial protection <i>[from 12 to 14% by 2014]</i> • Percentage of land mass protected (formal and informal) <i>[from 6.1 to 9% by 2014]</i>
Towards a green economy	<ul style="list-style-type: none"> • Progress on the implementation of the nine green economy programmes <i>[Impact on social (jobs), economic (industry development) and environmental (ecosystem) benefits by 2014]</i> • Increase percentage (or amount) of financial resources ringfenced/streamlined and spent for green economy programmes <i>[2010/11 amount – Industrial Development Corporation: R11.7 billion, Development Bank of South Africa: R25 billion, Private: >R100 billion, National Treasury: R800 million]</i> • Number of patents, prototypes, and technology demonstrators added to the intellectual property (IP) portfolio annually from funded or co-funded research programmes <i>[five additions to the IP portfolio – patents, patent applications, licences and trademarks – by March 2014]</i> • Share of GDP of the Environmental Goods and Services (EGS) Sector <i>[3% of GDP by 2014]</i>
Building sustainable communities	<ul style="list-style-type: none"> • Percentage of households with access to water <i>[92 to 100%], sanitation [69 to 100%], refuse removal [64 to 75%] and electricity [81 to 92%] [by 2014]</i> • Upgrading of 400 000 households in well-located informal settlements with access to basic services and secure tenure <i>[approximately 2 700 informal settlements are in good locations, ie located close to metropolitan areas and basic services, have high densities and, in 2008, housed approximately 1.2 million households]</i> • Increase in the South African Human Development Index (HDI) <i>[2010 HDI: 0.597]</i> • Gini coefficient (reduce income inequality) <i>[2008: 0.66]</i>
Responding effectively to climate change	<ul style="list-style-type: none"> • Greenhouse gas emissions (metric ton CO₂ equivalent) <i>[34% reduction below a business-as-usual baseline by 2020 and 42% by 2025]</i> • Percentage of power generation that is renewable <i>[10 000 GWh by 2014]</i> • Climate change adaptation plans developed <i>[12 sectors by 2012 (Biodiversity, Forestry, Water, Coastal Management, Agriculture, Health, Tourism, Land and Rural Development, Local Government, Fisheries, Human Settlements, Business/Insurance)]</i>

Figure 2: NSSD 1 twenty headline indicators

3.1 Priority 1: Enhancing systems for integrated planning and implementation



Effective implementation of the NSSD 1 and the Action Plan will require an institutional mechanism that facilitates coordinated planning, monitoring and evaluation of performance, and measures progress towards sustainability that supports ethical behaviour, and also defines and underpins conduct that is right or wrong at an individual and institutional level (in the national, provincial and local spheres of government). The need to ensure that there is capacity to implement sustainable development remains critical across all sectors in South African society, especially in the public sector. The policies, frameworks, plans

and strategies need to be realigned and improved to integrate sustainable development considerations.

The following are the immediate goals to enhance institutional systems and capacity for the implementation of the NSSD 1 under Priority 1:

- Ensure integration of sustainable development into the national vision and strategic planning processes of government
- Establish a monitoring and evaluation system to facilitate the ongoing assessment of progress towards sustainability

- Ensure effective planning and implementation of sustainable development
- Build capacity to enhance the effectiveness of government agencies to empower communities
- Enforce normative criteria (values, attitudes and aptitudes) as a suitable base for effective and efficient public service delivery to the public or communities

The need to ensure that there is capacity to implement sustainable development remains critical across all sectors in South African society, especially in the public sector.

TABLE 3.1. ACTION PLAN: PRIORITY 1: ENHANCING SYSTEMS FOR INTEGRATED PLANNING AND IMPLEMENTATION

STRATEGIC PRIORITY	GOALS	INTERVENTIONS	INDICATORS AND HEADLINE
<p>Enhancing governance systems for integrated planning and implementation</p> <p>Objectives:</p> <ul style="list-style-type: none"> Enhance effective governance and institutional structures and mechanisms to achieve sustainable development and meet the MDG and the JPOI goals and targets. Strengthen monitoring and reporting for improved environmental performance by government and the private sector. 	<p>Ensure integration of sustainable development into the national vision and strategic planning processes of government</p>	<ul style="list-style-type: none"> Engagement with government departments, the Presidency and the NPC to discuss the integration of sustainability principles, outcomes, indicators and other NSSD 1 proposals into the national vision and strategic plan Active participation in processes aimed at developing and implementing Vision 2030 and the National Strategic Plan Engagement with the private sector, civil society and academia 	<ul style="list-style-type: none"> Effective National Committee on Sustainable Development (NCSD) established Sustainability indicators integrated into government-wide strategic plans (national, provincial, local and public entities) and private sector strategic plans Clusters and departments leading various priority areas feed into the NCSD Number of engagement sessions held between the NCSD and the NPC
	<p>Establish a monitoring and evaluation system to facilitate the ongoing assessment of progress towards sustainability</p>	<ul style="list-style-type: none"> Development and adoption of a set of national sustainability indicators Tracking and reporting of sustainability indicators by government entities and the private sector Establishment of an information management system linked to the sustainability indicators 	<ul style="list-style-type: none"> Number of stakeholder meetings held to finalise sustainability indicators Sustainability indicators developed Number of government entities and private sector companies reporting against sustainability indicators Number of sustainability reports published by government and the private sector Degree of NSSD information availability
	<p>Ensure effective planning and implementation of sustainable development</p>	<ul style="list-style-type: none"> Engagement through the Forum of South African Heads of Departments (FOSAD) clusters and inter-governmental structures and forums in the three spheres as envisaged in the Intergovernmental Relations Framework Act on Sustainable Development Strengthening of the integration of sustainability principles in the specific planning frameworks and strategies, such as the Provincial Growth and Development Strategy (PGDS), the Integrated Development Plan (IDP), the Spatial Development Framework (SDF) and the Local Economic Development (LED) Strategy 	<ul style="list-style-type: none"> Number of engagement sessions conducted through the clusters Number of frameworks and strategies that have integrated sustainable development principles
	<p>Build capacity to enhance the effectiveness of government agencies to empower communities</p>	<ul style="list-style-type: none"> Development of capacity-building programmes Organisation of capacity-building sessions on sustainable development Identification of funding to support community-based capacity-building projects 	<ul style="list-style-type: none"> A comprehensive capacity-building programme Number of capacity-building sessions conducted Number of community-based capacity-building projects

STRATEGIC PRIORITY	GOALS	INTERVENTIONS	INDICATORS AND HEADLINE
	<p>Enforce normative criteria (values, attitudes and aptitudes) as a suitable base for effective and efficient public service delivery to the public or communities</p>	<ul style="list-style-type: none"> • Participating in the Public Sector Anti-Corruption Capacity-building Programme • Facilitating the alignment of national, provincial and municipal anti-corruption policies and programmes • Provision of training on integrated ethics management • Addressing Batho Pele service delivery improvement plans (SDIPs) in departments' annual reports in order to promote their implementation • Applying the Promotion of Administrative Justice Act of 2000 (PAJA) for fairness in service delivery • Enhancing the current qualification accreditation system to ensure that appointees have the skills and experience required for their work • Strengthening the rate at which departments respond in fighting corruption, especially in managing conflicts of interest and tender irregularities • Strengthening the implementation of the Public Sector Integrity Management Framework in the whole of government 	<ul style="list-style-type: none"> • Departments' anti-corruption programmes aligned to the National Anti-corruption Strategy and Programme • Batho Pele SDIPs addressed in departments' annual plans. • Number of programmes conducted on integrated ethics management, for example, PAJA training

3.2 Priority 2: Sustaining our ecosystems and using natural resources efficiently

Natural resources (water, soil and biodiversity) form the basis of life, economic activity and human wellbeing. Functioning ecosystems generate goods (natural products, such as water, timber, flowers, food and medicines) and services (waste recycling, water and air purification, flood attenuation, recreational opportunities and carbon sequestration). The depletion or wasteful use of natural resources, and/or degradation of ecosystems poses a threat to the achievement of socioeconomic objectives. The analysis undertaken during the development of the NFSD concluded that South Africa's natural resource base is under severe pressure and that many of the country's ecosystems are degraded to the point that threatens our wellbeing. 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 South Africa's natural resources include the following:

- South Africa has a relatively low annual rainfall and water is extracted from most of the country's 22 major rivers to supply the growing number of domestic, agricultural and industrial users. It is estimated that national water requirements will exceed availability by 2025. 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 the degradation of agricultural land through over-exploitation and inappropriate and unsustainable farming methods pose a threat to food security. There are many issues that affect agricultural production, soil quality and erosion, as well as lack of infrastructure, but water is considered to be one of the most important (Raga & Taylor).
- About 34% of the country's terrestrial ecosystems, 82% of its main river ecosystems and 65% of its marine biozones

are threatened, whereas 50% of the wetlands have already been destroyed and living marine resources are either maximally or over-exploited.

- There are elevated levels of a variety of pollutants in the atmosphere that, among other things, are leading to a growing incidence of respiratory problems.

If South Africa is to achieve the vision of a sustainable society, these trends need to be urgently reversed by working towards achieving the following strategic goals under Priority 2:

- Manage the use of all natural resources to ensure their sustainability
- Protect and restore scarce and degraded natural resources
- Prevent the pollution of air, water and land resources so that community and ecosystem health is not adversely affected
- Avoid the irreversible loss and degradation of biodiversity (marine, terrestrial and aquatic ecosystems)

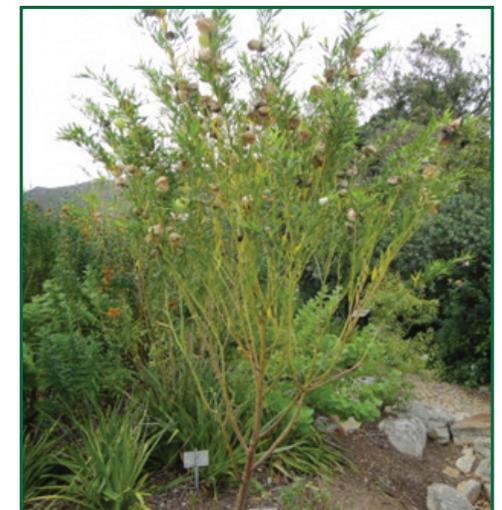


TABLE 3.2. ACTION PLAN: PRIORITY 2: SUSTAINING OUR ECOSYSTEMS AND USING NATURAL RESOURCES EFFICIENTLY

STRATEGIC PRIORITY	GOALS	INTERVENTIONS	INDICATORS AND HEADLINE
<p>Sustaining our ecosystems and using natural resources efficiently</p> <p>Objectives:</p> <ul style="list-style-type: none"> Value, protect and continually enhance environmental assets and natural resources 	<p>Manage the use of all natural resources to ensure their sustainability</p>	<p>Water resources</p> <ul style="list-style-type: none"> Implementation of water demand management via a staggered tariff structure, water loss management and conservation measures (water-wise activities) Establishing and strengthening catchment management agencies Undertaking reserve determinations for priority rivers and estuaries, and incorporating ecological requirements into water resource planning Determining sustainable use levels for strategic aquifers Integration of water availability concerns into economic development planning, water allocation reform and water reconciliation strategies for each water management area (WMA) Enhancing the water resources base by investing in desalination plants and water harvesting where appropriate Strengthening invasive plant management in catchments Addressing the backlog in the issuing of water use licences 	<ul style="list-style-type: none"> Availability of groundwater and surface water Freshwater available per capita Water stress Ecological reserve volume and flow Sustainable abstraction levels for strategic aquifers Water use per capita Water losses at water distribution systems curtailed to an average percentage reduction (saving) Water use per area (to indicate equity) Reduction (saving) of demand as determined in the reconciliation strategies for seven large water supply systems by 15% Number of rivers where abstraction exceeds or meets ecological reserve requirements Number of Blue Flag beaches increased Number of strategic aquifers where abstraction exceeds or meets sustainable volumes
	<p>Protect and restore scarce and degraded natural resources</p>	<p>Living marine resources</p> <ul style="list-style-type: none"> Implementation of a regulatory framework for rights allocation in subsistence, large pelagic, recreational and non-consumptive sectors Reviewing the performance of rights-holders Growing the fisheries sector (implementing the aquaculture policy, assessing the potential of new fisheries and the non-consumptive sector) in accordance with the Marine Living Resources Act (MLRA) Proceeding with the declaration of priority areas for the expansion of protected areas; a total area of 122 782 km² (12 278 200 ha – 20 year target) and 42 priority areas have already been identified Rebuilding depleted stocks (abalone, hake and line fish) Implementation of an ecosystem approach to the management of seabirds, sharks and selected fisheries Intensification of compliance and enforcement efforts 	<ul style="list-style-type: none"> Number of registered fishermen in each sector Status of selected fish stocks Contribution of mariculture and the non-consumptive sector to the GDP Trends in transgressions recorded in monitoring and inspection registers Percentage of coastline with partial protection

STRATEGIC PRIORITY	GOALS	INTERVENTIONS	INDICATORS AND HEADLINE
		<p>Biodiversity and ecosystems</p> <ul style="list-style-type: none"> • Finalising and implementing the Protected Area Expansion Strategy to create a network that is representative of South Africa's biodiversity • Establishing and strengthening provincial stewardship programmes • Strengthening programmes that support the informal conservation system • Implementation of the Integrated Coastal Management Act • Mainstreaming biodiversity into spatial and land-use plans through provincial bioregional spatial plans, bioregional sector plans and bioregional plans • Finalising and implementing the Invasive Alien Species Regulations • Establishing seed banks • Development and implementation of invasive species management plans for protected areas • Development and implementation of estuary management plans for priority estuaries • Reintroducing environmental courts • Implementation of the Framework on Fiscal Incentives for Biodiversity • Implementation of the provisions of the National Environmental Management: Biodiversity Act (NEMBA) in respect of the listing and protection of threatened ecosystems 	<ul style="list-style-type: none"> • Protection status of threatened ecosystems • Percentage land mass protected • Status of priority estuaries • Number of critically endangered species • Number of endangered species • Number of critical biodiversity areas • Percentage land surface classified as critical biodiversity areas • Number of landowners participating in conservation farming or land stewardship programmes • Number of spatial plans that integrate or mainstream biodiversity issues
	<p>Prevent the pollution of air, water and land resources so that community and ecosystem health is not adversely affected</p>	<p>Air and water quality</p> <ul style="list-style-type: none"> • Reducing the household combustion of various fuels by increasing access to electricity and/or renewable resources • Reducing the use of fossil fuel for electricity generation • Speeding up the implementation of air quality legislation through air quality management plans in priority areas and hot spots • Developing ambient air quality standards and reviewing air pollution permits • Reducing vehicle emissions • Reintroducing environmental courts 	<ul style="list-style-type: none"> • Ambient air quality • Percentage of households with access to electricity • Number of non-compliance incidents and directives issued for non-compliance • Percentage of permitted facilities that are being monitored • Percentage of permitted facilities that comply with permit requirements • Percentage of households with access to sanitation • Surface water nutrients

STRATEGIC PRIORITY	GOALS	INTERVENTIONS	INDICATORS AND HEADLINE
		<ul style="list-style-type: none"> • Provision of universal access to sanitation • Installation of clean technology options and reuse of wastewater • Development and implementation of catchment management plans • Implementation of Receiving Water Quality Objectives Approach • Eradicating backlogs in the issuing of effluent discharge permits • Implementation of the Programme of Action on Land-based Sources of Marine Pollution in eight priority areas 	<ul style="list-style-type: none"> • Coastal water quality status • Number of water bodies meeting the applicable receiving water quality objectives
		<p>Waste management</p> <ul style="list-style-type: none"> • Implementation of the National Waste Act • Ensuring the effective implementation of waste management legislation • Implementation of waste minimisation programmes and the provision of appropriate facilities and incentives to support them 	<ul style="list-style-type: none"> • Percentage of permitted facilities that are being monitored • Percentage of wastewater being reused • Tonnage of waste going to landfill sites • Generation of hazardous waste • Tonnage of materials being recycled • Number of non-compliance incidents and directives issued for non-compliance • Percentage of permitted facilities that comply with permit requirements • Waste recycled per capita
	<p>Avoid the irreversible loss and degradation of biodiversity (marine, terrestrial, aquatic ecosystems)</p>	<p>Arable land</p> <ul style="list-style-type: none"> • Reforming agricultural legislation to support sustainable farming practices • Strengthening land care, woodlands conservation, habitat rehabilitation, ecosystem rehabilitation, reforestation and other conservation farming programmes • Ensuring the retention of high-potential agricultural land for agricultural purposes, wherever feasible • Improving coordination with other government departments and organisations that have jurisdiction over the use of land and other natural resources 	<ul style="list-style-type: none"> • Rates of soil loss and erosion • Rehabilitation of land affected by degradation • Number of farmers participating in land care or similar programmes • Percentage of organic production • Extent of organic production areas • Percentage of high-potential agricultural land being used for agricultural purposes

3.3 Priority 3: Towards a green economy

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. These include the following:

- 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 2008)
- The natural resource base is under severe pressure
- There is a national crisis in terms of electricity supply
- There is widespread poverty, unemployment and inequality

A green economy implies the decoupling of resource use and environmental impacts from economic growth. It is characterised by substantially increased investment in green sectors, supported by enabling policy reforms. 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" (Jackson, 2009).

The South African approach is to ensure that a green economy is supported by a practical and implementable action

plan that recognises the importance of building on existing best processes, programmes, initiatives and indigenous knowledge in key sectors, to shift towards a resource-efficient, low-carbon and pro-employment growth path. It also recognises that government alone cannot manage and fund a just transition to a green economy, and that the private sector and civil society must play a fundamental role.

The Economic Sectors and Employment cluster departments hosted the first national Green Economy Summit from 18 to 20 May 2010 to gather valuable insights on key focus areas and issues that require attention in the short, medium and long term. The summit was addressed by the President, ministers, deputy ministers, members of the Executive Council (MECs) and Parliamentary Committee chairpersons, as well as representatives from the private sector, NGOs and labour organisations.

In his address, the President highlighted the fact that ecosystem failure will seriously compromise the country's ability to address its social and economic priorities. He further reiterated that natural resources are national economic assets, and the economy depends heavily on energy and mineral resources, biodiversity, agriculture, forestry, fishing and tourism. The President pointed

out that South Africa has no option but to manage its natural resources in a sustainable manner, and that it has no choice but to be ecofriendly and develop a green economy.

The Cabinet approved a number of key supportive policies and this was the first sign that the green economy was being prioritised by government. The policies in question included the Medium-term Strategic Framework (MTSF) 2009–2014, the Ten-year Innovation Plan, the revised Industrial Policy Action Plan for 2010/11–2012/13 (IPAP2), the revised Integrated Resource Plan (IRP2) and New Growth Path (NGP).

Through contributions from the various sectors' implementation plans, South Africa is to develop a National Green Economy Strategy. The implementation of this strategy has a number of cross-cutting roles and responsibilities and will require work to ensure coherence and coordination within government and between social partners. The strategy will also address crucial issues of technology, innovation, localisation, manufacturing, skills and funding, drawing from a variety of potential sources, including the fiscus, international funds, business and industry, public-private partnerships (PPPs) and other possible measures. The review of relevant regulatory, macro- and microeconomic policies and institutional





frameworks will culminate in proposals of the appropriate regulatory framework to enable the development of sector action plans and related green markets and industries.

Guided by the outcomes of the National Green Economy Summit, the environment sector has developed an implementation plan for this sector's contribution to national green economy action. The country began interventions and fundraising nationally and internationally for the implementation of the nine key focus areas:

1. Resource conservation and management
2. Sustainable waste management practices
3. Water management
4. Environmental sustainability, which comprises the following:
 - (i) Greening and legacy projects: Major events and tourism
 - (ii) Research, awareness, training, skills development and knowledge management

5. Green buildings and the built environment
6. Sustainable transport and infrastructure
7. Clean energy and energy efficiency
8. Agriculture, food production and forestry
9. Sustainable consumption and production

The goals of a transition towards a green economy should include green growth contributions to economic growth and employment, while preventing environmental degradation and pollution, loss of biodiversity and unsustainable natural resource use.

Priority 3 (Towards a green economy) identified the following necessary enablers of implementation:

- Provide support to the regulatory framework
- Implement and upscale green economy programmes

- Implement skills development, particularly youth in the green economy sector/industries
- Use market-based instruments
- Promote innovation, science and technology
- Create investment and finance opportunities and financing instruments
- Create and protect jobs
- Implement Industrial Policy Action Plan 2: 2010/11–2012/13 (IPAP2)



TABLE 3.3. ACTION PLAN: PRIORITY 3: TOWARDS A GREEN ECONOMY

STRATEGIC PRIORITY	GOALS	INTERVENTIONS	INDICATORS AND HEADLINES
<p>Towards a green economy</p> <p>Objective:</p> <ul style="list-style-type: none"> A just transition towards a resource-efficient, low-carbon and pro-employment growth path 	<p>Provide support to the regulatory framework</p>	<p>National Green Economy Strategy (contribution to Outcome 4: Decent employment through inclusive economic growth)</p> <p>Sectors' green economy implementation plans</p>	<ul style="list-style-type: none"> Developed and approved sectors' green economy implementation plans Approved National Green Economy Strategy
	<p>Implement and upscale green economy programmes</p>	<p>Sustainable consumption and production</p> <p>Formulation and adoption of sustainable development performance monitoring to guide the integration of economic growth, social equity and environmental protection, including measures for institutional triple bottom-line accounting and finalisation of the national eco-label</p>	<ul style="list-style-type: none"> Progress on the implementation of the nine green economy programmes
		<p>Green buildings and the built environment</p> <p>Development and implementation of the Green Building Regulatory Enforcement Programme, and awareness and capacity-building programmes at local levels of governance</p>	<ul style="list-style-type: none"> Progress on the implementation of the nine green economy programmes
		<p>Sustainable transport and infrastructure</p> <p>Reducing the transport sector's carbon footprint through cost-effective interventions, including shifting freight from road to rail, as well as passengers towards public and non-motorised transport, shifting from inefficient and internal combustion engine vehicles to efficient, hybrid and electric vehicles</p>	<ul style="list-style-type: none"> Progress on the implementation of the nine green economy programmes
		<p>Clean energy and energy efficiency</p> <ul style="list-style-type: none"> Diversification of energy sources and implementation of energy efficiency programmes that are crucial for ensuring green growth, as contained in the IRP Encouraging investment in renewable energy on a scale sufficiently large to justify the localisation of competitive technologies, along with active support for local renewable technology manufacturing to present an opportunity for sustainable economic development and job creation 	<ul style="list-style-type: none"> Progress on the implementation of the nine green economy programmes

STRATEGIC PRIORITY	GOALS	INTERVENTIONS	INDICATORS AND HEADLINES
		Environmental sustainability (cross-cutting) <ul style="list-style-type: none"> Implementation of greening legacy interventions (2010 Soccer World Cup, COP 17 flagship, major events and tourism projects) Implementation of programmes in research, awareness, training, skills development and knowledge management Implementation of green economy interventions by local government, including communication, education and regulation that will be necessary to ensure local green growth and job creation, as well as urban infrastructure, sustainable land-use management, spatial planning and the efficient use of natural resources Implementation of green cities and towns, event greening and tourism 	<ul style="list-style-type: none"> Progress on the implementation of the nine green economy programmes
		Resource conservation and management Implementation of programmes to ensure the conservation, sustainable management and rehabilitation of natural and ecosystem services and assets (freshwater, marine environments, grasslands, landscapes) and to improve reductions in energy and water use	<ul style="list-style-type: none"> Progress on the implementation of the nine green economy programmes
		Sustainable waste management practices Implementation of the waste hierarchy and the ambition to minimise waste and, where unavoidable, recycling and reusing waste or turning it into energy	<ul style="list-style-type: none"> Progress on the implementation of the nine green economy programmes
		Agriculture, food production and forestry <ul style="list-style-type: none"> Adoption of Integrated Water and Land Resources Management as a model framework for the sound and equitable allocation of water as a public good among all users, and its implementation in a sustainable way at all levels, including catchments Supporting programmes to ensure the protection of agricultural land, sustained food security and local economic development 	<ul style="list-style-type: none"> Progress on the implementation of the nine green economy programmes
		Water management Implementation of interventions defined in Output 1 of Outcome 10 (Water demand, security and efficiency, water resource protection and water quality regulation)	<ul style="list-style-type: none"> Progress on the implementation of the nine green economy programmes
	Implement skills development, in particular the youth, in the green economy sector (green industries)	Ensuring a well-maintained and resourced training academy that produces quality graduates with skills relevant to the green economy through relevant stakeholders, for example, the National Youth Development Agency (NYDA)	<ul style="list-style-type: none"> Creation of 40 permanent jobs (youths employed in green industries) per annum Training of 500 youths per quarter, incubating them in community development projects
Use market-based instruments	Development of instruments to incentivise the use and production of environmentally friendly products without having a huge negative impact on production costs		

STRATEGIC PRIORITY	GOALS	INTERVENTIONS	INDICATORS AND HEADLINES
	<p>Grow and strengthen a portfolio of niche high-potential science and technology capabilities, as well as actively facilitate the exploitation of both existing and new capabilities to support sustainable development priorities and green economy ambitions</p>	<ul style="list-style-type: none"> • Implementation of the Ten-year Innovation Plan to support the commercialisation of green technologies • Increasing research, development and innovation in human capital for a growing knowledge economy • Increasing investment in strategic research and development (R&D) that contributes to improving government decision-making on science and technology as productive investments and to promote the private sector's R&D activities • Increasing the graduate output in natural and physical sciences • Increasing the country's expenditure on R&D as a percentage of GDP 	<ul style="list-style-type: none"> • Percentage spent on research, development and innovation for the development of green industries • Human capital development in research, development and innovation by increasing the output of graduates as follows: 200 students funded annually for research degrees (master's and PhDs) by 31 March 2014 • Number of patents, prototypes and technology demonstrators added to the intellectual property (IP) portfolio annually from funded or co-funded research programmes (five additions to the IP portfolio – patents, patent applications, licences and trademarks – by March 2014) • Number of publications generated annually in identified niche areas per year (150 published scientific and technical papers by 31 March 2014) • Number of graduates in the natural and physical sciences and engineering per annum • Percentage increase in R&D expenditure as a percentage of GDP • Number of patents registered in the natural and physical sciences and engineering sector (including waste, water, energy, environmental monitoring and management)
	<p>Create investment and finance opportunities and financing instruments</p>	<p>Development of Green Economy Mechanism</p>	<ul style="list-style-type: none"> • Number of programmes supported by the Clean Technology Fund meeting renewable energy targets • Percentage (or amount) of financial resources ring-fenced or streamlined for green economy programmes • Number of programmes supported by Green Economy Fund
	<p>Create and protect jobs</p>	<p>Promotion of programmes that create green jobs</p>	<ul style="list-style-type: none"> • Number of direct green jobs created • Number of work opportunities and full-time equivalent (FTE) jobs • Share of non-public works employment as a percentage of total employment
	<p>Implement Industrial Policy Action Plan</p>	<ul style="list-style-type: none"> • Manufacturing aspects of the green economy within social, economic and environmental criteria: interventions in green industries, industrial energy efficiency and the South African Renewables Initiative (SARI) • Implementation of regulatory instruments to stimulate the Environmental Goods and Services (EGS) Sector • Interventions to promote greater localisation and manufacturing 	<ul style="list-style-type: none"> • Share of GDP of the EGS industry • A higher growth rate in the waste recycling industry • Percentage localisation of manufacturing of materials with solar and wind power • Local production of solar water heaters

3.4 Priority 4: Building sustainable communities



Nelson Mandela at Kirstenbosch

Mandela honours Kirstenbosch

Nelson Mandela planted this pepper-bark tree (*Warburgia salutaris*) on his visit to Kirstenbosch on 21 August 1996.

The pepper-bark tree is a famous medicinal tree in South Africa. Just as this tree has brought healing to the people of South Africa, so too has Nelson Mandela brought healing to our nation.







Strelitzia reginae 'Mandela's Gold'

Kirstenbosch honours Mandela

This is our prized yellow strelitzia named in honour of President Mandela.

It is an unusual golden yellow colour form of the normally orange species, and it took us nearly 20 years of selecting and careful cross-pollinating to develop.

"I am happiest when I am in the wild because I can listen ... as the poet says 'In the still air music lies unheard, in the rough mountains, beauty's height unseen'. I always feel the force of that sentiment when I am in this environment. And I am very happy that you have done me the honour of being associated with this remarkable place." President Nelson Mandela at Kirstenbosch, 21 August 1996.

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 upfront costs. Moreover, the lack of long-term planning means that there is insufficient infrastructure in many areas (for example, wastewater treatment plants) to meet the needs of the rapidly growing urban population. Insufficient attention has been given to the environmental constraints and opportunities of particular locations.

The following are the overall specific strategic goals under Priority 4 that aim to reduce poverty and provide a decent quality of life for all:

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

To be sustainable, human settlements must meet the different 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 poverty-stricken people still living in informal settlements in South Africa, building such communities is a priority.

For the past few years, this priority has been guided by the Breaking New Ground Policy. However, there have been significant problems with housing and service delivery. With the pressure of meeting quantitative targets, large numbers of houses have been built at the expense of quality and durability, to the extent that thousands of Reconstruction and Development Programme (RDP) houses are currently being demolished and rebuilt.

TABLE 3.4. ACTION PLAN: PRIORITY 4: BUILDING SUSTAINABLE COMMUNITIES

STRATEGIC PRIORITY	GOALS	INTERVENTIONS	INDICATORS AND HEADLINES
<p>Building sustainable communities</p> <p>Objectives</p> <ul style="list-style-type: none"> • Create community awareness and participation, and work together to protect the environment through changing attitudes and behaviour in consuming resources sustainably and responsibly • Develop and support quality housing programmes, including building community self-sufficient farming strategies, indigenous knowledge, the sustainable production of herbs and traditional medicines, and businesses to secure societal equity and cohesion 	<p>Enhance spatial planning to promote social cohesion and integration between communities, as well as between communities and the natural environment</p>	<ul style="list-style-type: none"> • Development of national spatial planning guidelines • Strengthening sustainability principles in land-use planning, growth and development strategies and plans at all levels 	<ul style="list-style-type: none"> • Ecological footprint • Measure of social integration • Upgrading of 400 000 households in well-located informal settlements with access to basic services and secure tenure (approximately 2 700 informal settlements are in good locations, ie located close to metropolitan areas and basic services, have high densities and, in 2008, housed approximately 1.2 million households)
	<p>Ensure universal access to basic and community services</p>	<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"> • Percentage of households with access to water infrastructure, sanitation, refuse removal and electricity • Reduction in electricity consumption in the higher tariff range
	<p>Improve the quality of housing and other structures to optimise resource efficiency (energy, water, building materials, etc.)</p>	<ul style="list-style-type: none"> • Promotion of land stewardship and food growing programmes (urban and rural) • Implementation of local tourism projects • Implementation of sustainable production of traditional medicines • Implementation of local waste collection/recycling initiatives • Strengthening the People’s Housing Process • Implementation of the recommendations of the fishing harbour study • Supporting the Decent Work Agenda • Introduction of government procurement programmes that support LED • Supporting alternative business models such as co-operatives and community associations <p>Note: also see sustainable livelihoods in Table 3.2.</p>	<ul style="list-style-type: none"> • Number of people in employment in relevant sectors • Poverty Headcount Index • Human Development Index

STRATEGIC PRIORITY	GOALS	INTERVENTIONS	INDICATORS AND HEADLINES
	<p>Promote self-sufficiency, food security and equitable access to natural resources that support livelihoods</p>	<ul style="list-style-type: none"> • Development and implementation of climate adaptation strategies for water and agricultural sectors • Promoting conservation farming, permaculture and organic farming • Increasing support to urban good growing initiatives • Introducing schemes that enable the very poor to access sufficient nutritional food to support quality of life • Strengthening financial support and extension services through the Land Care Programme to land claim beneficiaries, small-scale women farmers and African farmers' unions, for example, the National African Farmers' Union (NAFU) • Incorporating sustainable land-use and agriculture principles into land claim projects in rural areas • Integrating conservation opportunities (as an alternative economic opportunity) into the land reform programme, particularly where agriculture is marginal 	<ul style="list-style-type: none"> • South Africa becomes a net exporter of food • Reduction in erosion and loss of soil • Fertiliser use per hectare of arable land • Food basket price • Percentage of people working the land in rural areas or the percentage of land being worked in rural areas • Percentage of organic production • Percentage of land claims settled • Percentage of land redistributed • Percentage of redistributed land used for community-based conservation
	<p>Improve equity, security and social cohesion</p>	<ul style="list-style-type: none"> • Black Economic Empowerment (BEE) programmes and gender mainstreaming 	<ul style="list-style-type: none"> • Gini coefficient (income inequality) • Living standards measure • Number of crimes • Various indicators of social cohesion in the National Development Index Report (NDIR)

3.5 Priority 5: Responding effectively to climate change

Climate change is considered to be among the most serious threats to global sustainable development, if not the most serious threat, 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 that are not only the most vulnerable, but also 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 to 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.

Many years ago, government recognised that climate change was real and that it was a significant threat to the country's development. This was formally acknowledged during the National Climate Change Conference in 2005. In November 2011, South Africa approved a National Climate Change Response white paper. This white paper presents government's vision for an effective climate change response and a long-term, just transition to a climate-resilient and lower-carbon economy and society. This response is guided by principles set out in the Constitution, the Bill of Rights, the National Environmental Management Act (NEMA), the Millennium Declaration and the United Nations Framework Convention on Climate Change. The development and implementation of an effective climate change response strategy is a priority for South Africa, both in the short and longer terms. Activities 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 adaptation-related activities, the National Programme on Climate Change should be vigorously pursued regardless of delays in the international arena.

The following are the overall specific goals under Priority 5 that relate to the national climate change response:

- Decrease 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
- Reduce dependency on fossil fuels and enhance security of electricity supply
- Build resilience to climate change in communities
- Ensure that ecosystem resilience is not disrupted



TABLE 3.5. ACTION PLAN: PRIORITY 5: RESPONDING EFFECTIVELY TO CLIMATE CHANGE

STRATEGIC PRIORITY	GOALS	INTERVENTIONS	INDICATORS AND HEADLINES
<p>Responding effectively to climate change</p> <p>Objectives:</p> <ul style="list-style-type: none"> A fair contribution to the global effort to achieve the stabilisation of greenhouse gas concentrations in the atmosphere at a level that prevents dangerous anthropogenic interference with the climate system 	<p>Decrease greenhouse gas (GHG) 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</p> <p>(GHG emissions to peak between 2020 and 2025 and decline from 2035)</p>	<ul style="list-style-type: none"> Mitigation interventions that significantly contribute to a peak, plateau and decline emission trajectory where greenhouse gas emissions peak between 2020 and 2025 at 34 and 42% respectively below a business-as-usual baseline, plateau to 2035 and begin declining in absolute terms from 2036 onwards, in particular interventions in the energy, transport and industrial sectors Feasibility study into the development of a specialised funding agency, the Climate Change Science Council 	<ul style="list-style-type: none"> GHG emissions (metric ton CO₂ equivalent)
	<p>Reduce dependency on fossil fuels and enhance security of electricity supply</p> <ul style="list-style-type: none"> Obtain 10 000 GWh of electricity from renewable sources by 2013 	<ul style="list-style-type: none"> Mitigation interventions that have potential positive job creation, poverty alleviation and/or general economic impacts, in particular interventions that stimulate new industrial activities and those that improve the efficiency and competitive advantage of existing business and industry 	<ul style="list-style-type: none"> MWh of electricity saved
	<ul style="list-style-type: none"> Have city-wide public transport systems in place by 2020 	<ul style="list-style-type: none"> Industry in partnership with government, promoting the development of sector-specific strategies and targets that will contribute to the achievement of the overall energy efficiency target set by government; developing common reporting requirements for energy usage from all energy sources, taking into account, where possible, existing internationally recognised protocols for reporting such as those developed by the Global Reporting Initiative; defining industry-specific projected energy use in the future, based on business-as-usual (BAU) growth expectations 	<ul style="list-style-type: none"> GHG intensity of electricity and transport (metric ton CO₂ equivalent per metre) Metric ton CO₂ equivalent of GHG emissions reduced
	<ul style="list-style-type: none"> Achieve energy efficiency target of at least 12% by 2015 	<ul style="list-style-type: none"> Renewable Energy Feed-in Tariffs (REFIT) as a mechanism to promote the deployment of renewable energy that place an obligation on specific entities to purchase the output from qualifying renewable energy generators at predetermined prices 	<ul style="list-style-type: none"> MWh of renewable energy electricity contributed to the national grid
	<ul style="list-style-type: none"> Use market-based instruments to support environmental fiscal reform 	<ul style="list-style-type: none"> The use of incentives and disincentives, including regulation and the use of economic and fiscal measures, to promote behaviour change that would support the transition to a low-carbon society and economy 	<ul style="list-style-type: none"> Market-based instruments to support environmental fiscal reform in South Africa published and implemented

STRATEGIC PRIORITY	GOALS	INTERVENTIONS	INDICATORS AND HEADLINES
	<ul style="list-style-type: none"> Develop Integrated Resource Plan (IRP2) 	<ul style="list-style-type: none"> The IRP2 is a long-term electricity capacity plan that defines the need for new generation and transmission capacity for the country. Together with other interventions, the IRP2 is intended to improve the long-term reliability of electricity supply through meeting adequacy criteria over and above keeping pace with economic growth and development, and to ascertain South Africa's capacity investment needs for the medium-term business planning environment. 	<ul style="list-style-type: none"> MWh of renewable energy contribution into the IRP2 MWh of electricity saved through energy efficiency and demand-side management interventions IRP 2 gazetted
	<ul style="list-style-type: none"> Roll out 1 000 000 solar water heaters by 2014 	<ul style="list-style-type: none"> 1 000 000 solar water heaters rolled out by 2014 to reduce electricity demand, and to provide universal access to modern, affordable and environmentally beneficial solar water heater services for all, off-setting rising electricity costs to residential households through savings on water heating through coal-generated electricity, and achieving renewable energy targets of 10 000 GWh, as contained in the White Paper on Renewable Energy of 2003 	<ul style="list-style-type: none"> MWh of electricity saved
	<ul style="list-style-type: none"> Biofuel strategy aims to achieve a 2% penetration level of biofuels in the national liquid fuel supply 	<ul style="list-style-type: none"> Contributing towards the achievement of the renewable energy goals, energy security and the reduction of GHG emissions 	<ul style="list-style-type: none"> Metric ton CO₂ equivalent of GHG emissions reduced Litres/percentage of biofuel contributed on liquid fuels per supply year
	<ul style="list-style-type: none"> Implement integrated energy planning 	<ul style="list-style-type: none"> Integrated energy planning will interpret the requirements of national economic, social and environmental policies for the energy sector; to analyse energy needs in terms of how their fulfilment will contribute towards attaining national economic and social goals; and to analyse the potential of energy supply systems and demand-side management to meet current and potential future energy needs. This would include analyses of individual supply subsectors and the linkages between subsectors and of the potential effects of global and technological developments on the energy sector 	<ul style="list-style-type: none"> Integrated energy planning policy developed and implemented
<ul style="list-style-type: none"> Effectively adapt to and manage unavoidable and potential damaging climate change impacts through interventions that build and sustain South Africa's social, economic and environmental resilience and emergency response capacity 	<p>Build resilience to climate change in communities</p> <ul style="list-style-type: none"> Develop, implement and maintain a GHG emissions information management system in respect of the energy sector 	<ul style="list-style-type: none"> A GHG emissions information management system in the energy sector will provide accurate, up-to-date and complete information to the South African Air Quality Information System's National Greenhouse Gas Inventory, hosted by the South African Weather Service. This GHG emissions information management system should provide measurable, reportable and verifiable information on all significant interventions 	<ul style="list-style-type: none"> Development of GHG emissions information management system in the energy sector
<ul style="list-style-type: none"> Develop various adaptation strategies with climate sensitive sectors 	<ul style="list-style-type: none"> Develop an energy efficiency standard 	<ul style="list-style-type: none"> Development and implementation of appropriate standards and guidelines and codes of practice for the appropriate use of renewable energy technologies 	<ul style="list-style-type: none"> Guidelines and codes of practice for the appropriate use of renewable energy technologies developed and implemented

STRATEGIC PRIORITY	GOALS	INTERVENTIONS	INDICATORS AND HEADLINES
<ul style="list-style-type: none"> Assist various key sectors to develop and implement climate change adaptation plans 	<ul style="list-style-type: none"> Develop energy efficiency methodology and monitoring tool Develop renewable energy methodology and monitoring tool 	<ul style="list-style-type: none"> The independent system operator entity will be responsible for reliability of the interconnected power system, which will control and operate the transmission system and dispatch generation (or balance the supply and demand) in real time 	<ul style="list-style-type: none"> Independent system operator established
	<ul style="list-style-type: none"> Finalise power purchase agreement 	<ul style="list-style-type: none"> The provisions of Regulation 7 of Government Notice R.721 Government Gazette No. 32378 of 5 August 2009 (Electricity Regulation Act No. 4 of 2006: Electricity Regulations on New Generation Capacity) authorise the Energy Regulator to prepare and pass rules not inconsistent with these regulations for purposes of setting out criteria for the selection of preferred independent power producer (IPP) under the REFIT programme. 	<ul style="list-style-type: none"> Rules on selection criteria for renewable energy projects under the REFIT programme published
	<ul style="list-style-type: none"> Enhance the ability of various sectors to manage and adapt to impacts of climate change 	<ul style="list-style-type: none"> Development of climate risk management systems for priority adaptation sectors 	<ul style="list-style-type: none"> Climate change adaptation plans developed
<ul style="list-style-type: none"> Strengthen key sectors such as water, agriculture, health etc to be more resilient and also have the ability to adapt to climate variability and change 	<p>Ensure that ecosystem resilience is not disrupted</p> <ul style="list-style-type: none"> Develop effective water management systems 	<ul style="list-style-type: none"> Adaptation interventions that address immediate threats to the health and wellbeing of South Africans, including interventions in the water, agriculture and health sectors 	<ul style="list-style-type: none"> Health surveillance plan developed and implemented Effective information dissemination tool that can be used by various sectors
	<ul style="list-style-type: none"> Strengthen early warning systems Reduce incidents of respiratory infections 	<ul style="list-style-type: none"> Development of information management systems that increase our ability to measure and predict climate change, and especially extreme weather events, floods, droughts and forest and veld fires 	<ul style="list-style-type: none"> Sustainable mechanisms that counteract or reduce natural disasters developed
	<ul style="list-style-type: none"> Establish emergency medical services and outbreak control systems 	<ul style="list-style-type: none"> Development of decision support systems, such as a malaria mapping tool 	
	<ul style="list-style-type: none"> Implement more than 50% of the National Protected Areas Expansion Strategy (NPAES) by 2020 to build ecosystem resilience and reduce risk of natural disasters 	<ul style="list-style-type: none"> Building economic and social resilience through the diversification of economies to reduce dependence on climate-sensitive sectors 	

4. Institutional arrangements for the management of the NSSD 1

4.1 Rationale

A number of institutional arrangements have been developed to support the implementation of the NSSD 1, based on a literature review on international practice, interviews with stakeholders and an assessment of what will be possible in a South African context. Among the key principles that informed the development of these arrangements were the need to do the following:

- Ensure simplicity without compromising effectiveness
- Make use of and create linkages with existing frameworks and mechanisms in order to avoid the proliferation of structures
- Learn from international practice
- Ensure high-level location and support for the NSSD 1

4.2 Planning, implementation, monitoring, evaluation and reporting

The approach that is used for planning, implementation, monitoring, evaluation and reporting on progress towards the achievement of sustainability targets must be aligned with the existing government-wide monitoring and evaluation system. This alignment will ensure that the practice of sustainable development is integrated into the

routine work of government and that performance against targets is subject to established accounting systems, including auditing by the Auditor-General (AG). This is also in keeping with advice contained in the guidelines of the Development Assistance Committee of the Organisation for Economic Cooperation and Development (OECD), *Strategies for Sustainable Development*, that sustainable development plans should be integrated into national frameworks to ensure access to the budget (OECD, 2001).

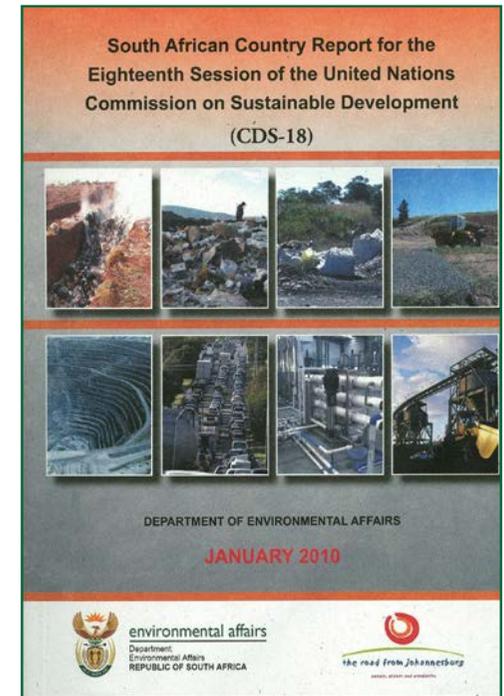
The Ministry of Water and Environmental Affairs, through the Department of Environmental Affairs (DEA) will be the coordinating focal point, working with relevant spheres of government, the private sector, NGOs and civil society. The DEA will establish and oversee the National Committee on Sustainable Development (NCSD), which will operate at multiple levels to engage government departments, civil society, the private sector, academia, independent reviewers and other stakeholders. The function of the NCSD will be to ensure that the goals of the NSSD 1 and the Action Plan are implemented effectively. These goals are the following:

- Develop and promote new social and economic goals based on ecological sustainability and build a culture that recognises that socioeconomic systems are dependent on and embedded in ecosystems

- Increase awareness and understanding of the value of ecosystem services to human wellbeing
- Ensure effective integration of sustainability principles into all policies, planning and decision-making at national, provincial and local levels
- Ensure effective system-wide integration and collaboration across all functions and sectors
- Monitor, evaluate and report performance and progress in respect of ecological sustainability in relation to socioeconomic goals

The DEA, in collaboration with the relevant sector departments and stakeholders, will initiate action towards the implementation of the strategy through the harmonised planning of programmes and execution. The NCSD will have different structures of engagement, for example, an Interministerial Committee, accounting officers and senior technical management that may form task teams. The institutional responsibilities for the strategic management of the NSSD 1 are illustrated in Figure 3.

The three key aspects of strategic management are planning, implementation and monitoring, and evaluation, and reporting. Institutions that will take responsibility for planning will include the National Planning Commission (NPC), government clusters, government departments, private sector organisations and NGOs. The relevant elements of the



NSSD 1, including goals, indicators and programmes, will be reflected in the strategic plans of these institutions and organisations, with the implementation, monitoring, evaluation and reporting of the strategy enforced through strategic plans.

All the parties that are responsible for the implementation of the NSSD 1 will be expected to report on their performance against sustainability indicators, as part of the normal reporting process. Research institutions will play an important role in gathering and analysing data that relates

to the NSSD 1. The NPC will provide a long-term vision for the country, while the Monitoring and Evaluation Committee of the Presidency will play a key role in the monitoring process.

The NCSD will be responsible for the effective coordination of work on sustainable development. This committee will be established to drive sustainable development, while making use of existing structures for both horizontal and vertical coordination. The main vehicles for horizontal coordination at a national level will be the Forum of South African Heads of Departments (FOSAD) and the cluster system, in particular the Cluster for International Cooperation, Trade and Security, Social Protection and Community Development, the Human Development Cluster, the Economic Sectors and Employment Cluster, and the Infrastructure Development Cluster.

The Director-General of the Department of Environmental Affairs will be a member of the FOSAD clusters that will carry through the work of the NCSD. Other formal and ad hoc sector-specific coordinating structures, such as the Committee for Environmental Coordination (CEC) of the Environmental Sector, will also be used in accordance with the National Environmental Management Act on cooperative governance.

Vertical coordination with provinces will be take place through meetings of

MINTEC (Ministerial Technical Committee) and MINMEC (Ministers and Executive Committee). Performance against sustainability targets will be included in discussions that take place during these forums. Coordination with local government will be facilitated through the South African Local Government Association (SALGA) and the Department of Cooperative Governance and Traditional Affairs (COGTA).

4.2.1 Planning for sustainable development

Sustainable development will be integrated into the national planning system. Figure 3 provides an illustration of 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 that will 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. Working with the NCSD, the Ministry of Water and Environmental Affairs will ensure that sustainable development is incorporated into the short- and long-term vision of government processes by engaging with the NPC.

Securing the prominence of sustainable development indicators and targets in

government's five-year MTSF ensures that sustainable development is placed at the centre of government planning. It also ensures that performance against sustainability targets is tracked and reported on as part of regular development indicator reporting to National Treasury and the Presidency.

Government's medium-term planning

The five-year strategic plans that are developed by national and provincial departments are to be informed, among others, by the national vision (Vision 2030) and strategic plan of the NPC, the MTSF, the National State of the National Address (SoNA), the Provincial Growth and Development Strategy (PGDS) and the State of the Province addresses (SoPA). These five-year strategic plans should include sustainability indicators and targets as core indicators agreed to by each of the government sectors, as required by the Treasury Guidelines for Strategic Planning. In their interactions with municipalities, and their strategic planning oversight roles, provincial governments must therefore ensure that municipal integrated development plans (IDPs) include sustainability indicators.

Annual planning

In the annual SoNA and SoPA, the President and premiers highlight the centrality of sustainable development as directed

by the national vision and strategic plan, and the MTSF. National and provincial departments then have to include sustainable development indicators and targets in their annual performance plans (APPs), while municipalities must include them in their 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, national spatial guidelines are identified as 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 the various spheres of government. South Africa has an established spatial planning framework, through which alignment can readily be achieved. The country's overarching framework is provided in the National Spatial Development Perspective (NSDP).

In the development of their PGDS, the provinces must include a spatial plan (the Provincial Spatial Development Framework). Similarly, local governments, in the development of their IDPs, must also include a spatial plan (the Spatial Development Framework or Spatial Development Plan). This means that both provincial and local governments

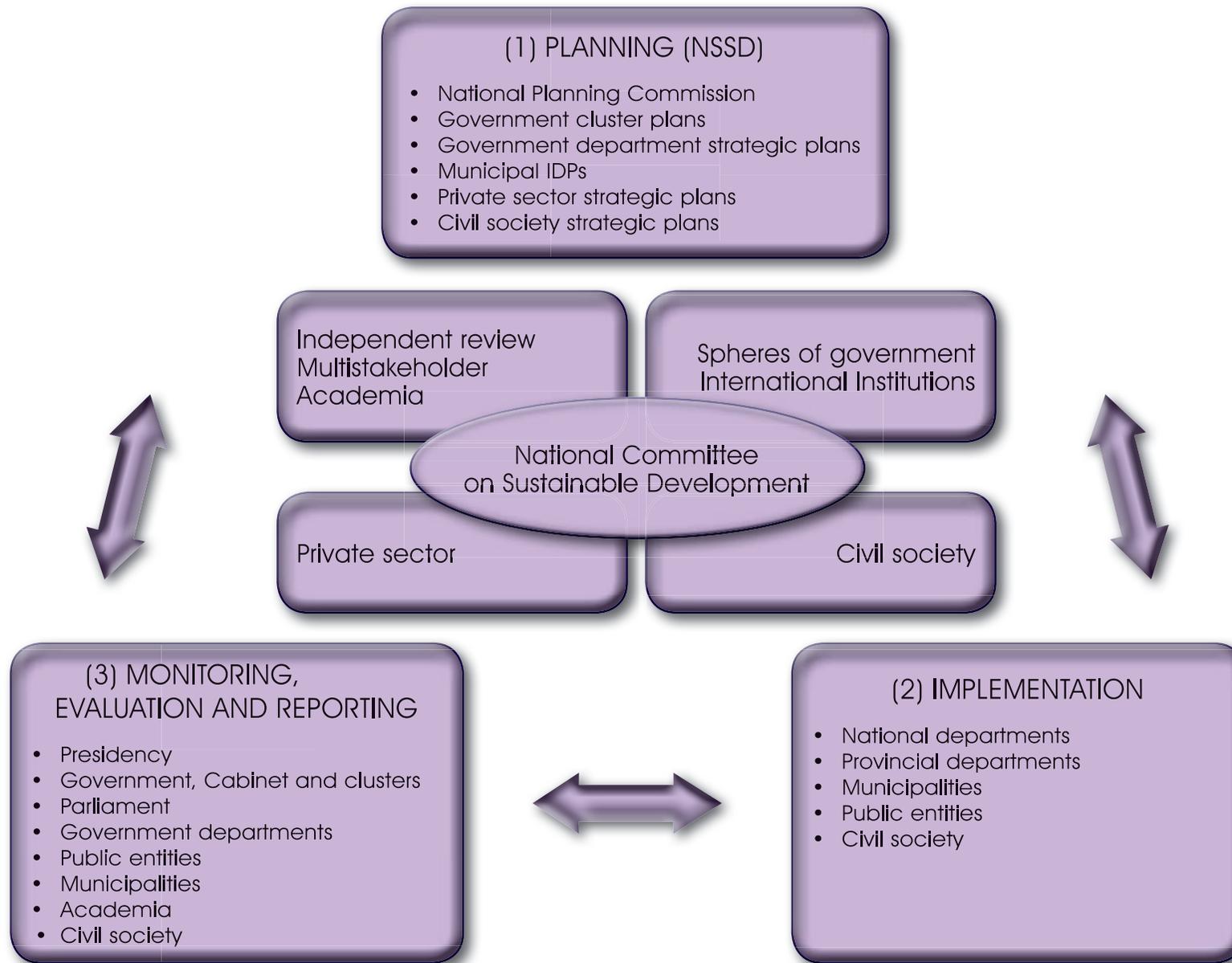


Figure 3: Responsibility matrix

need to align their development plans and spatial development frameworks with the national perspective. In this way, coordination, alignment and integrated action with respect to the development of a spatial economy can be achieved, and the integration of sustainability principles in the national strategic plan, the PGDS and the IDPs of local government will ensure that sustainability is also reflected in spatial planning.

4.2.2 Implementation of sustainable development

The implementation of sustainable development action will be decentralised through the strategic plans of all spheres of government, public entities, civil society, organised labour and business.

4.2.3 Monitoring, evaluation and reporting for sustainable development

The key to effective monitoring, evaluation and reporting will be the establishment of baselines for all sustainability indicators. The performance against sustainability indicators will be monitored through quarterly non-financial reports. These reports will have to be linked to programme outputs or strategic objectives contained in the APPs of government departments, municipalities and public entities.

The NCSD will participate in the review of the departmental strategic plans and APPs and will conduct a periodic analysis of reports with a view to keeping track of the country's overall progress towards achieving sustainability targets. The NCSD 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 be subject to auditing by the Auditor-General. A special function of audit performance on sustainable development should be established within the office of the Auditor-General, focusing on the monitoring of sustainability outputs, as is done in other countries such as Canada. 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 sustainable development will be the surveys conducted periodically by Statistics South Africa. As the entity responsible for South Africa's official statistics, Statistics South Africa will be tasked with the tracking and reporting of sustainability indicators. (Statistics South Africa is in the process of developing environmental accounting indicators that will cover the different sectors, such

as water and energy) These indicators should be considered in the finalisation of sustainability indicators. The periodic South Africa Environmental Outlook Report (SAEOR), the provincial and municipal State of the Environment Report and other similar reports will be important sources of information.

The NCSD will take responsibility for distilling information from these reports, verifying their accuracy and validity, and producing annual reports to be presented to Parliament and the United Nations (UN). The NCSD will seek certification from Statistics South Africa in accordance with the South African Statistical Quality Assessment Framework. This framework sets criteria for certification, including the relevance, accuracy, timeliness, accessibility, methodological soundness and integrity of produced statistics. The NCSD will be a member of the National Statistics System.

Reporting on sustainable development by the private sector will be encouraged through incorporation of sustainability into the King Code for Corporate Governance, including the triple bottom-line reporting requirement of the Johannesburg Stock Exchange (JSE). The NCSD will initiate discussions with private sector representative organisations to ensure reporting. Industry organisations could be required to produce annual

reports on the contribution of various sectors to sustainable development. Civil society will play a key role in the monitoring of the government and private sector's performance towards the achievement of sustainability targets. Part of this role will be exercised through the establishment of a civil society or NGO forum and other multi-stakeholder consultative forums.

The NCSD will commission regular external evaluations on South Africa's performance in relation to the achievement of sustainability. In addition, sustainability will be included in the periodic development indicator reports and five-year reviews that are conducted by the Presidency. As part of the ongoing evaluation of sustainable development performance, the NCSD will commission periodic spending reviews as spending could be a good indicator of the level of commitment.

In order to ensure that there is learning and adaptation on sustainable development, the NCSD will convene periodic multi-stakeholder sustainable development review conferences. (Canada does these reviews every three years.) In addition, a research network on sustainable development, constituted by research institutions (both government and non-state, including academia), will be established.

4.3 The role of government in sustainable development

The Ministry of Water and Environmental Affairs, specifically the Department of Environmental Affairs (DEA), through dedicated internal units, is the coordinating focal point for sustainable development both nationally and internationally.

National arrangement

The DEA has established a national focal point unit that coordinates the country's implementation of the national sustainability vision and multilateral agreements (MEAs). This unit will work with the NCSD, government departments, civil society, organised labour and business to ensure that there is effective planning and implementation of sustainable development throughout all spheres of government, public entities and the private sector. At the same time, it will promote capacity-building to enhance the effectiveness of government agencies to empower communities on sustainability.

International arrangement

The DEA has established an international focal point unit to coordinate the country's participation in MEAs. The unit is the focal point of the Commission on Sustainable Development (CSD) and participates on

international issues related to sustainable development. The unit has to ensure that international policy decisions and activities are tailored to support and implement sustainable development at the national level. Working with the NCSD, government departments, civil society, organised labour and business, the unit will ensure participation within the United Nations systems on sustainable development issues. The country submits biennial progress reports on concrete progress achieved with the implementation of internationally agreed goals on sustainable development to the CSD.

4.4 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 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 1. In addition, the private sector, via industry bodies, will be encouraged to do the following:

- Identify sustainable development goals and actions that are relevant to their sectors
- Agree on sectoral sustainability indicators and targets in line with those contained in the national strategy
- Discuss and agree on monitoring and reporting mechanisms for sustainable development (This might entail a requirement that companies submit annual progress reports on their activities and progress towards contributing to sustainability targets.)
- Submit annual industry sector sustainable development progress reports to the NCSD
- Contribute to funding sustainable development in partnership with government and donors to support projects and initiatives aimed at supporting sustainable development

4.5 The role of civil society in sustainable development

Civil society, as represented by NGOs, community-based organisations (CBOs) 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.

The Department of Environmental Affairs (DEA), through dedicated internal units, is the coordinating focal point for sustainable development both nationally and internationally.

Civil society will be represented in the consultative forum and will play the following roles:

- Identify, design and implement community-based sustainable development projects
- Participate in research on sustainable development
- Serve as a watchdog, tracking the performance of government and the private sector against sustainability targets (This role will also include lobbying and advocacy for sustainable development.)

4.6 Science and technology



The National Research and Development Strategy established a new set of technology platforms (biotechnology, information technology, technology for advanced manufacturing, technology for and from natural resource sectors, and technology for poverty reduction) and a new set of science missions (in areas in which South Africa has an obvious geographic advantage, such as astronomy, human palaeontology and biodiversity, as well as in areas in which South Africa has a

clear knowledge advantage, such as indigenous knowledge and deep mining). These missions and platforms were expanded under the Ten-Year Innovation Plan to include “grand challenges” in space science and technology, energy security, human and social dynamics in development, global change, and the bioeconomy. The responsibility for addressing the grand challenges is spread across many government departments.

The Ten-Year Innovation Plan also set long-term goals based on these challenges. These included the following:

- Becoming one of the top three emerging economies in the global pharmaceutical industry, based on the innovative use of South Africa’s indigenous knowledge and rich biodiversity
- Deploying satellites that provide a range of scientific, security and specialised services for all spheres of government, as well as the public and the private sector
- Achieving a 25% share of the global hydrogen and fuel cell market with novel platinum group metal catalysts
- Becoming a world leader in climate science, and responding effectively to the multiple challenges associated with global and climate change
- Meeting the 2014 Millennium Development Goal to halve poverty

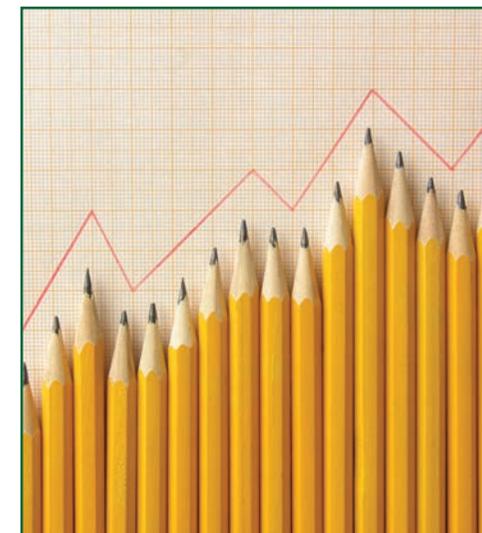
The achievement of sustainable development priorities require targeted science and technology interventions and the development of strategic partnerships with other government departments, industry, research institutions and communities. Interventions include high potential research and development (R&D)-led industrial development programmes, technology support programmes for industry, the introduction of new approaches to government service delivery and planning, strengthening science-based policy development and decision-making, demonstrating technology-led opportunities for creating sustainable jobs and wealth creation, and strengthening the contribution of technology in sustainable human settlements.

The key contributing socioeconomic strategic objectives include the following:

- Technology for poverty reduction
- Science and technology capability for sustainable development and a green economy
- Promoting growth in public and private sector investments in science and technology, and R&D
- Supporting the development of new industries in advanced manufacturing, chemicals, advanced metals and information and communication technologies (ICTs)

4.7 Financing of sustainable development

The financing of sustainable development and its activities will be sourced from the private sector and national fiscus through the national budgeting process. This is because sustainable development will gradually become an integral part of the private sector and government’s planning and spending. In addition to this, other funding mechanisms from the private sector, donors and funds from the economy, for instance, public-private partnerships, will be attracted. National Treasury is already working on the market-based instruments and environmental fiscal reforms that serve as a further source of sustainable development financing.



5. Concluding remarks

Urgent action is required to direct the development path of the country towards sustainability, particularly in light of the potential consequences of climate change, the financial recession, job losses and declining natural resources. It is acknowledged at an international level that the poorest and most vulnerable are likely to be affected most by climate change. For this reason, it is imperative that active and urgent interventions are taken to deliver on social objectives, while ensuring that the natural resources on which a decent quality of life depends are managed to ensure their long-term sustainability. Thus, the NSSD 1 and Action Plan must receive priority, and achievements against its targets must be assessed through the application of the relevant indicators.

This NSSD 1 puts into action the NFSD that requires the nation as a whole to increasingly share in the common vision.

All sectors, including all elements of the government and civil society, organised labour and business, need to take part in the social contract to implement the NFSD, the NSSD 1 and the Action Plan for 2011–2014.

Simple actions need to be promoted on a large scale. As understanding of sustainable development increases, and it becomes clear that this is the key mechanism for building capacity and governance to achieve human development based on sustainable production and consumption systems, government and society across all spheres and sectors will approach and address the issues identified in this strategy with the seriousness they deserve.

When deciding on resource allocation and in making policy choices, the executive should seek to give effect to the vision of sustainability. The strategic plans, priorities and commitments should be clearly articulated. While sustainability concerns impact on all facets of life, we should keep our focus on mainstreaming the five identified priority areas for strategic intervention:

- Enhancing systems for integrated planning and implementation
- Sustaining our ecosystems and using natural resources efficiently
- Towards a green economy
- Building sustainable communities
- Responding effectively to climate change

These priority areas should, over the coming three to five years, serve as catalysts for policy change that will facilitate the achievement of the desired ideal state as articulated in the national vision for sustainable development.

Annex A: Links between environmental and other threats and key socioeconomic variables

THREATS	GLOBALISATION AND CURRENT DEVELOPMENT MODEL	CLIMATE CHANGE	WATER SCARCITY	ECOSYSTEM DEGRADATION	POLLUTION	DEPLETION OF NATURAL RESOURCES	SOCIAL INEQUITY (INCLUDING GENDER) AND POVERTY	POOR GOVERNANCE AND LACK OF CAPACITY
SOCIOECONOMIC IMPERATIVES	IMPACTS							
Food security	Rising food prices are caused by multinational monopolies, increasing prices of inputs, reduced agricultural subsidies and competing land-use options.	Crop yields (e.g. maize) are likely to decrease up to 50% in some African countries.	Crop failures and livestock deaths occur because of drought and/or depleted water resources.	Loss of e.g. agricultural potential occurs due to soil erosion and the decreased availability of water.	Reduced productivity due to the contamination of the air, water and soil.	Loss and reduction of natural food sources (fish stocks, forest resources, wild fruit and nuts)	Inability to purchase food on the markets, limited access to land for growing food. 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.	South African rainfall patterns to change – drier in some areas and less predictable.	Water demand exceeds availability.	The natural water storage capacities of wetlands and aquifers are lost.	Lack of water of an adequate quality for human consumption.	Water demand exceeds availability.	Lack of access to water supply networks/affordability issues.	Insufficient investment in infrastructure and lack of operational skills.
Energy security	Rising oil and energy prices lead to reduced affordability.	Growing pressure to reduce the use of fossil fuels.	Limits on hydro-power as an alternative to fossil fuel.	Continued mining for new fossil fuels. Climate change impacts.	Pressure to phase out highly polluting energy sources. Health impacts from the continued use of coal.	Depletion of coal and oil reserves.	Lack of access to electricity supply networks/affordability issues.	Poor forward planning – inadequate supply and limited development of renewables.
Shelter and related infrastructure (including transport)	The current model favours single-unit dwellings, private rather than public transport, etc., which are all unsustainable.	Increase in damage (and costs) due to extreme weather events. Buildings are not suitable for hotter weather.	Places limits on suitable locations for settlements and/or high prices for water transfer schemes.	Loss of amenities from public use areas and ecosystems such as rivers.	Impacts on health and quality of life in poorly located settlements.	Increased housing costs.	Major affordability concerns. Increased crime and other social problems.	Construction of sub-standard facilities and lack of maintenance. Communities not cohesive, stable or safe.
Social services (health, security, cultural resources and education)	Demand for social services exceeds capacity, for example, the high costs of imported medicines.	Spread of diseases such as malaria, increase in natural disasters such as floods and decreased water availability.	Decreased health and wellbeing. Deaths from poor sanitation and poor hygiene increase.	Loss of aesthetic, spiritual and recreational resources.	Pollution-related health problems overload the health system.	Reduced availability of traditional medicines, biomass, building materials and livelihood support resources.	Large percentage of the population is dependent on social services. This means that demand exceeds capacity.	Lack of service delivery, declining education standards.
Sustainable livelihoods and jobs	Promote jobs that are not sustainable in the longer term. High unemployment and social unrest.	Impacts on livelihoods due to dwindling natural resources (including tourism as a livelihood support activity).	Limits on all jobs and industries that require water.	Loss of ecosystem services, including the benefits provided by natural systems for climate change mitigation and adaptation.	Resources degraded though pollution, making them unavailable for livelihood support.	The decline of options for sustaining livelihoods.	People without skills or resources are disadvantaged in terms of jobs or livelihood opportunities.	Inability to create sufficient jobs or livelihood opportunities.

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