Preface

This report contains an account of discussions held at the Green Economy Summit from 18 to 20 May 2010 at the Sandton Convention Centre, Johannesburg, South Africa. The summit was attended by a multi-sectoral stakeholder base comprising of Government officials from all spheres of Government, Business representatives, Labour representatives, various non-governmental organisations, academia as well as members of various international organisations and the diplomatic community. The report mainly provides a summary of issues raised by summit delegates as well as an analysis of how these issues can be taken further in developing a green economy plan but the report does not in any way constitute a policy and/or strategy document.
The 2009 to 2014 Medium Term Strategic Framework (MTSF) highlights the need to ensure implementation of the National Framework for Sustainable Development (NFSD) to ensure that the country follows a sustainable development trajectory for now and into the future. The country’s sustainable development vision is outlined as “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.”

South Africa views a green economy as a sustainable development path based on addressing the interdependence between economic growth, social protection and natural ecosystem. A more formal definition can be regarded as a “system of economic activities related to the production, distribution and consumption of goods and services that result in improved human well-being over the long term, while not exposing future generations to significant environmental risks or ecological scarcities”. It implies the decoupling of resource use and environmental impacts from economic growth. It is characterized by substantially increased investment in green sectors, supported by enabling policy reforms.

In the midst of the global economic crisis, the UNEP called for a Global Green New Deal (GGND) according to which governments are encouraged to support its economic transformation to a greener economy that creates green jobs, promote sustainable and inclusive growth and the achievement of the Millennium Development Goals. To that effect, the subsequent framework for South Africa’s response to the international economic crisis, government recognises the opportunities in the development of industries that combat the negative effects of climate change and urges South Africa to develop strong capacity in green technologies and industries.

Accordingly it urges for the development of incentives for investment in programmes geared at creating a large number of ‘green jobs’, i.e. employment in industries and facilities that are designed to mitigate impacts to the environment and natural systems and the protection thereof. These investments, both public and private, provide the mechanism for the reconfiguration of businesses, infrastructure and institutions, and for the adoption of sustainable consumption and production processes. Such reconfiguration will lead to a higher share of green sectors in the economy, more green and decent jobs, reduced energy and material intensities in production processes, less waste and pollution, and significantly reduced greenhouse-gas emissions. The Green Economy refers to two inter-linked developmental outcomes for the South African economy:

• Growing economic activity (which leads to investment, jobs and competitiveness) in the green industry sector;
• A shift in the economy as a whole towards cleaner industries and sectors with a low environmental impact compared to its socio-economic impact.

The two outcomes are inter-linked because the one supports or enables the other. They are also linked to areas of rural development (since most natural resources are found in rural areas), service delivery (including access to energy, water and sanitation) and security (food and energy).

It is through this background that the Departments of Environmental Affairs, Economic Development, Trade and Industry, as well as Science and Technology under the Economic Sectors and Employment Cluster, in close collaboration with the South African Local Government Association (SALGA) and the South African Cities Network (SACN) hosted a first Green Economy Summit from 18 to 20 May 2010 to gather valuable insights on key areas of focus areas and issues requiring attention in the short, medium and long term. This report pro-
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The summit commenced on the morning of the 18th May with a high level official opening session. The main opening address was given by the honourable President Jacob Zuma who outlined the national policy framework on a Green Economy Growth approach, this was complimented by a number of addresses by Ministers of Science and Technology, Economic Development, Mineral Resources, Environmental Affairs as well as the Deputy Minister of Public Works. A summary of the key points raised in these addresses is contained under sub-section 3.1.

The opening plenary was followed by a number of plenary sessions focusing on critical cross-cutting issues covering; international perspectives by the United Nations Environment Programme (UNEP), Organisation for Economic Cooperation and Development (OECD) as well as the International Union of Conservation and Nature (IUCN); a Finance and Investment plenary considered perspectives from the World Bank, Agence Française de Développement and the National Treasury while the Green Jobs plenary focused on interventions from the International Labour Organisation (ILO), Business Unity South Africa (BUSA), Industrial Development Cooperation (IDC), Labour Constituency (COSATU) as well as Civil Society (Green Peace). The other plenary sessions focused on Industry Development where the National Business Initiative (NBI), Environmental Goods and Services Forum (EGSF) and Department of Science and Technology gave a perspective; and the Sustainable Development perspective which looked at the concept of decoupling by the Sustainability Institute as well as the National Strategy on Sustainable Development (NSSD) by the Department of Environmental Affairs.

The plenary sessions were followed by thirteen breakaway sessions focusing on themes that are considered as key building blocks of a green economy growth paths, these include: Alternative and Clean Energy; Sustainable Transport; Waste Management; Agriculture and Forestry; Water Management; Expanded Public Works Program (EPWP); Policy Framework and Governance; Green buildings and the Built Environment; Sustainable Consumption and Production, Green Cities and Towns; Technology and Innovation as well as Green Economy in practice (Practical actions).

The summit ended with a closing plenary where a broad commitment statement was amended and adopted with amendments through consensus of summit participants. The statement is attached to this report as annex A.

Threats, challenges, and opportunities for action:

The 2008 global economic crisis has led to a wider rethink

vides key issues arising from deliberations at the summit and based on that, the report goes further by identifying elements of a Green Economy Plan for South Africa.

2. Summit Objectives and Structure

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3. Plenary Sessions

3.1 National Policy Statements

Green industries are growing rapidly world-wide, tapping into a sector with a high double digit growth and helping to secure the natural resources (particularly energy sources and water) that underpin economic activity, makes development sense in its own right. The creation of decent sustainable jobs is one of government’s top 5 priorities for the current MTSF period (the other four priorities include, education, health, rural development as well as the fight against crime and corruption). A sustainable way of contributing to this priority can be achieved through stimulating investment in green industries which create jobs, while “job protection” would then be achieved through improving the competitiveness of the economy overall.

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of appropriate economic models across the world, as societies grapple with climate change, unemployment and growing inequalities. In South Africa, the period prior to the recent recession saw significant and robust economic growth. However, there has been a significant challenge in creating enough decent jobs for South Africa’s willing and able to work, in combating poverty and inequality and in ensuring sustainable development for current and future generations.

The country still has unequal access to essential services, including access to energy, transport, water, refuse removal and land. South Africa has a dry climate and a high reliance on dams, with most of our water resource already subscribed. Two-thirds of exports come from energy-intensive industries. The spatial development is characterised by sprawl and segregation. The electricity is carbon-intensive, 93% from coal and our liquid fuels are one-third coal-based.

On the other hand, South Africa has many comparative advantages, some of which remain under-exploited, including: a wealth of biodiversity; a world-leading resource of solar energy; a sophisticated scientific capacity and a history of successful development of new technologies. The opportunities lie in many new areas, ranging from development of new energy-efficient materials, to large solar and wind energy plants, to green industries, green manufacturing operations including of car manufacturing, ecotourism and waste-management.

Possible Policy Interventions identified:

- The Department of Public Works needs to retrofit public buildings to reduce the energy requirements and leads government work to introduce new building regulations to mandate certain energy-saving measures, including solar water geysers in new houses that are being built.
- The Department of Environmental Affairs is developing our national framework around climate change, the nation’s international obligations and the long term strategy for the mitigation of climate change.
- The Department of Energy leads the work on the Integrated Resource Planning and matching the country’s long term energy needs with a sustainable supply, which will include clear targets for renewable energy. These targets will create the key market or demand for green energy that can encourage private sector investment in this area.
- The Department of Higher Education is developing a new skills development strategy more focussed on the needs of the new growth path and in this context will focus on the skills needed for the green economy.
- The Department of Transport is expanding the mass transport system, including through the improvement of inner-city transport and high-speed rail links, all of which are intended to also reduce reliance on car usage and the consequential high carbon-emissions.
- The National Treasury is central to the development of sustainable financing and risk-sharing models in the transition to a low-carbon economy.
- The Department of Mineral Resources have embarked upon a process of multi-stakeholder engagement, involving all the role players in our mining sector to promote modern technologies that minimize carbon emission, maximize energy efficiency and ensure environmental integrity. The Department is revising the framework for environmental rehabilitation to ensure optimal waste management, land use, and post-mining economic activities.

What needs to be done now?

- Transform social behaviour regarding resource use, waste and pollution. This social transformation ranges from our approach to waste, energy efficiency, protection of natural resources, water use efficiency, transportation choices;
- Coordinate government policy and institutions towards achieving the goals of a green economy underpins and enable all our efforts towards this new paradigm;
- Enhance local content in government procurement
- Redesign existing jobs and workers skills or re-skill with green skills including teachers training.
- Stimulate investment in green industries & leverage on international support
- Implement renewable energy target and specific plan for expanding our capacity in renewable energy
- Ambitious targets for boosting electricity generation through alternative and clean energy
- Build partnership between business and labour
- Need for a definitive target for the number of jobs that can
be created or those that can be protected in the green economy
• Explore green growth opportunities outside of energy generation

What needs to be done in the medium to long term?
• Substantial investment in technology research, development and deployment with the primary objective of improving resource use efficiency, reduction of waste and pollution, and seeking alternative solutions to goods and services. Technology innovations provide an opportunity for economic growth through exploitation of new business areas, particularly for climate change mitigation and adaptation;
• There is a growing need for elaborating the economic case for environmental management and sustainable development through valuation of ecosystem goods and services and appreciation of how functioning ecosystems underpin economic and social development.

3.2 International Perspective

Threats, challenges and opportunities:
Most environmental assets don’t have prices often because they’re common property and they’re so plentiful. They seem so plentiful that it’s cheaper and simpler to regard them as free. Air and water have often been in this category.
Electricity pricing in South Africa has, over a period of decades, failed to provide for proper commercial rates of return including the costs of providing new capacity. The result has been a swing from excess capacity and very low prices to energy intensive industries gobbling up cheap power and the country running into serious supply constraints.

Policy and governance requirements:
There is a need to support price-based measures like carbon taxes and cap-and-trade schemes with flanking measures. Innovation policies have an important role to play. The OECD is just at a point of publishing an Innovation Strategy and interim insights place emphasis on:
• Clear, consistent, long-term signals to business. Incentives for low-carbon technology research and development will make much more sense in a world with carbon prices than without;
• Incentives offered by governments should be flexible and technology-neutral; Governments don’t know enough to pick winners very often. They should resist the temptation;
• Governments will have to share the risk of developing new technologies by investing in research, development and demonstration projects if they hope for profound technical changes;
• Introduction of tax breaks on fiscal space;
• Feed-in tariffs for costlier renewable shift cost to all users;
• Introduction of industrial policy to develop green markets and technologies;
• Important to rely on comparative advantages for managing market and regulatory uncertainties.

What needs to be done?
• The OECD’s experience is that successful subsidy reform requires high quality information on the size of the subsidies, who benefits from them, who pays for them and who would win if they were reduced or removed. If you can measure them, you can manage them. Public subsidies should be subject to full public transparency. If subsidies can be eliminated, there’s then room to get a clear picture of how environmental taxes or charges could send even clearer signals. Price mechanisms, in the OECD’s view, are vastly more powerful, provide on-going signals for technological innovation and can deliver much cheaper emissions cuts than more bureaucratic regulations.
• Rigorous and responsible attention to environmental limits will become both an economic and a commercial imperative in a world with increasingly pressing environmental pressures
• A Global Green New Deal report, released to coincide with UNEP’s annual gathering of environment ministers in February last year, recommended that one per cent of global GDP or somewhere under a third of the global
stimulus packages, might assist in seeding a process of transformational change. It could make a significant con-
tribution to reducing poverty and expanding the range of economic, social and environmental benefits that our society could generate from a better management of our “natural capital”.

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- Incentives offered by governments should be flexible and technology-neutral; Governments don’t know enough to pick winners very often.
- Governments will have to share the risk of developing new technologies by investing in research, development and demonstration projects if they hope for profound technical changes.
- Spending money on trying to understand and taking steps to encourage efficient resources use is critical in ensuring that we continue to feed ourselves.

3.3 Finance and Investment

The continuing global economic conditions such as increasing oil price, increasing global food prices and protectionist economic policies in developed countries coupled with ripple effect on domestic markets arising from higher interest rates and higher petrol prices have major implications for the South African economy as a whole, this has called for different and innovative ways of making policy decisions.

**Threats, challenges and opportunities:**

South Africa is challenged by the fact that the research and development done to date does not address all questions related to the green economy. While unsure of the solutions, a major challenge is to shift our mindset towards the green economy and to integrate the key elements into the current economic growth model.

A shift towards a green economy will result in higher product prices which will impact the consumer. In addition to this, a shift to the green economy will be expensive if they are not targeted well. As a result, National Treasury may reduce fiscal space through tax breaks and increase tariffs for renewable could be passed onto the consumers. A green economy must be done in the context of improving access for rural poor to credit, transportation, infrastructure, jobs and education. It should be noted that industrial policy to develop green markets and technologies has worked only for certain countries in certain circumstances. It is important to rely on comparative advantages for managing market and regulatory uncertainties.

There is need for a cost effective, market-enhancing eco-
nomic regulation in the energy sector. Tax incentives to coun-
ter impact on externalities is however money that is revenue raised for the government and is not ring fencet for a green economy. It has been acknowledged that the real opportunity of the green economy is that if it is addressed as an economic issue then it has the potential for growth. This growth will comple-
ment technology development and raise current standards. Growth implementation targets can be coupled with pro-en-
vironment, pro-inclusive-growth and create huge economic incentives. Incentives need to be targeted for cost effective-
ness. Most low cost and labour intensive strategies like solar water heating, green building retrofits, off-grid power for remote ar-
eas, the installation of efficient water using devices, transport congestion reduction and recycling that can be used at the inception of implementing a green economy. There is a cur-ent global interest in supporting a green economy through re-
search and development, technical expertise and programme funding.

**Policy and governance requirements**

A solid enforced legal structure is a key element in the develop-
ment of a green economy strategy for South Africa. Polices are needed that should be integrated which go beyond the environment and energy sphere.

Short term policy issues need to address the need for employ-
ment creation, fiscal space, the efficiency of resource use, en-
vironmental threats and a climate for long term sustainability.
What must be done now?

In the face of public policy challenges associated with a green growth model implementation, all stakeholders have to collectively imagine new instruments, rooted in a South African context, and provide adequate financial resources together with the creation of platforms for experience, practices and expertise sharing.

There is a need to address the issues of strong and clear economic incentives. The price signals need to reflect social costs of resource & environmental impacts. The following are the most available, low-cost and labour-intensive opportunities South Africa could start with:

- Solar water heating
- Green building retrofits
- Off-grid power for more remote areas
- Installation of efficient water using devices

Environmental fiscal reform has a role to play to create incentives and encourage the transition to a low carbon, greener economy.

What must be done in the medium to long term?

There is a need for analytically sound and evidence based measures. Furthermore, there is a need for the creation of a monitoring body that will monitor the legal framework of the projects that are being implemented in a move towards a green economy.

Policy coherence is important as well as minimisation of overlaps in policy instruments to address a single externality. Policies developed should have strong focus on the poor and not place disproportionate burden on low income group individuals.

An adequate system for measuring, monitoring and reporting on pollutant emissions is necessary for the implementation of MBIs. Measure, monitor, report and review.

3.4 Industrial Development

Threats, Challenges and Opportunities for Action

The environmental goods and services sector is often described as highly complex, but it can also be seen as an ‘integrative’ sector that generates deep levels of expertise across almost all sectors of the economy. For example, scientists, engineers, laboratory technicians, data capturers, software developers, chemicals processing companies, power producers, farmers and conservation biologists, investment financing companies and insurers, are all being drawn into professions, businesses and jobs related to the Environmental Goods and Services (EGS) sector.

This is a global trend and South Africa has not fully positioned itself to take advantage of it. National, provincial and local government can and should structure environmental targets and then mobilise business, job creation and skills development opportunities around these targets. The starting point could be the traditional waste management sector and then actions...
to move to a low-carbon economic transformation. It is about economic transformation, about production and consumption. If government just focused aggressively, at all three tiers, on meeting environmental targets, the base of skilled workers, engineers and new industrial growth would surge way beyond the growth trajectories of pre-recession levels. Government could also use this platform to ensure sustainable access to eco-system services (e.g. water and food).

Scientists and economists are needed to establish baseline datasets on natural resource stocks, to monitor changes over time in Environmental Satellite Accounts. Many of the developed countries are transforming their economies to perform against ‘net domestic product’ profiles. In simple terms, this involves setting off resource depletion against GDP. This facilitates measures to impose penalties against bad production or consumption practices and to offer incentives for resource efficiencies or resource gains from technological innovation or changes in consumptive behaviour. An economic argument can be mounted for ‘future economic benefits’ associated with land use for conservation purposes rather than for agricultural or manufacturing purposes. This is a defensive cost to the public purse. But it serves as a trade-off against resource losses to the economy or ‘cleaning costs’. Investments in R&D, technology development (e.g. fuel cell technology, solar photovoltaics), and human capital development are key defensive expenditures.

Policy and Governance Requirements

In the absence of integrated planning and implementation this agenda is dead in the water. For this to happen however there is a need to legislate for action. This refers to a myriad of necessary legislating, ranging from sectors such as Planning energy, water, land, economic & rural development, and jobs & technology. This legislative imperative required incentivised collaborative efforts across several government departments. Moreover, the debate on industry development requires policy governance directives regarding the following administrative procurement: Preferential procurement for green industry developmental services needs to be considered so as to create a ‘carrot and stick effect’ to industry. Where there are Public-Private Partnerships government needs to consider introducing fair purchase agreements for energy, water, and waste management facilities. Furthermore the MFMA needs to factor in the necessary green industry development considerations so as to regulate and influence green behaviour by municipalities. There is the added incentive that can be created through public investment and finance institutions whose funding conditionalities must be regulated by government in such a way as to compel industry borrowers to show consideration for the green industrial development imperatives.

What needs to be done now?

• Awareness raising (accessible language and mediums);
• Basic education and skills (re-skilling, up skilling);
• Measurement (data);
• Behavioural Change Strategies;
• Campaign driven job creation;
• Integration within corporations.

What needs to be done in the medium to long term?

• Research and development;
• Carbon pricing and other legislative frameworks;
• Implementation of resource efficiency;
• Investment in green industries and transformation;
• Transitioning economic sectors;
• Transformed energy mix to cleaner Energy;
• Cradle to Cradle production Sustainable Consumption;
• Significantly reduced unemployment;
• Fixing Market Failure: Tax (enviro-) & Tariff (feed-in);
• Standard Offer, Beyond GDP (assists coordination)
• Creating Markets: Standards (Portfolio & Performance), Preferential Procurement, Voluntary Markets (RE+EE)
• Innovation & Competitiveness: International Standards, International & Regional Cooperation, Investment in Strategic Pre-commercial Technologies (Demonstration)
• Industry Development: Public Company Spin-offs, Development Zones, Industrial Finance, Market Information
• Align, co-ordinate and integrate all policy or strategies that are currently under development e.g. IRP, Carbon Tax etc.
It is critical that South Africa finds the right balance between creating employment in labour- and energy-intensive industries while at the same time adopting a more sustainable use of natural resources, which will ensure and secure long term growth. Consequently, the South African economy needs to adopt resource efficient production practices and progressively restructure away from energy-intensive industries towards new green industries, which are financially viable and internationally competitive in the long run. A move to a more sustainable development path will create new green jobs, which may help to offset employment losses experienced in other sectors; open up new investment opportunities and export markets; support the creation of a knowledge-based economy and allow South Africa to set standards and demonstrate thought leadership.

A comprehensive Green Economy strategy would go beyond consideration of the net jobs created to also consider the jobs protected (particularly in resource-dependent and export-based industries) by improving national resource competitiveness and industry development (e.g. carbon, energy and water efficiency) and the livelihoods created (especially by generating incomes, services and wealth for the rural poor).

Challenges, Threats and Opportunities

Two defining challenges of the 21st century were identified as follows:

**Environment:**
- Averting dangerous climate change
- Protecting life-support on earth

**Social challenge:**
- Decent work for all,
- Well-being and dignity for the excluded

The main points made about the challenges for creating green jobs were as follows:

- Public works programmes, failure to create sustainable jobs and the fact that the quality of jobs is often perceived as low end;
- Green Jobs and inclusive development: Social security and anti-poverty schemes – it is imperative to employ a strategy that ensures the development of people and not just build infrastructure;
- Successful models exist, but often lack scale;
- South Africa already has high unemployment rates;
- Weather related disasters account for more than 90% of damage to property and loss of life within South Africa;
- Issues related to displacement of people due to various sociological and natural imperatives;
- Food shortages and malnutrition;
- Inadequate housing and lack of access to energy

Policy and governance requirements

- Map employment/income opportunities and risks. There must be a balance moving forward, (A Just Transition) with regards to job creation and job loss;
- Engage stakeholders in social dialogue, reach social consensus to develop continuity even as governments change. This point was emphasised by the labour constituent that some key government departments are not visible at the summit. The Labour department is key in fostering social dialogue and monitoring legislation for a green economy. The department of Education and training need to engage on how to revolutionize the education system and skills development;
- A co-ordinated policy of internationally legally binding targets and long-term stable domestic support for renewable energy must be implemented;
- Barriers to renewable energy development must be removed and the electricity market must be reformed – a decentralised, energy-diverse system must be implemented;
- Government has to provide substantial incentives to local industry to establish a robust renewable manufacturing sector, capable of meeting South Africa’s needs and boosting job creation through exports.

What must be done now?

- Start with low-hanging fruit and target: youth, women, the poor, SMES;
- RSA needs proactive investment in renewable power generation and energy efficiency by the government on a large scale;
What must be done in the future?

- There needs to be a substantial reduction in South Africa’s reliance on coal and nuclear energy must be phased out;
- RSA should aim to obtain 36% of its electricity from renewable energy by 2030;

Challenges identified with human settlements have been noted to include the following:
- There is widespread use of inappropriate building materials leading to the threat of depleting natural resources while causing unimaginable and irreversible damage to the environment
- There is reluctance within the construction sector to look at more eco-friendly urban design; even less instructive behaviour from National Treasury in this regard means there is no incentive for the construction sector to modify urban design for sustainable development

What needs to be done now?

The human settlement sector is faced with the responsibility to action a couple of steps as a sign of its commitment to the ideals of sustainable development. These include the following:
- There is a need for dialogue within the sector and with the DEA to motivate for a different way of seeing and applying human settlement development. This new way may seek the repealing of old notions of designs and building materials that are currently utilised and which are harmful both to the environment and the people residing in these human settlements. To counter the logic of the standard template, it may be necessary to conduct an educational and exploratory look at international models that debunk the popular myths about green human settlements
- Of utmost importance for the developers would be con-
cerns about the financial viability of the new model. The recommendation above therefore extends to include the need to consistently and honestly demonstrate the financial viability of a new green approach to human settlement development.

There is recognition that National Treasury needs to play a central role in changing the mindset by revisiting and reissuing its funding templates to demonstrate an evolved understanding of sustainable development by government. Through its mandate, National Treasury is best placed to not only prescribe “greener” templates to all sectors of the economy, but can also offer incentives and punitive measures regarding compliance to funding guidelines.

**What needs to be done in the medium to long term?**

- There is a need for closer correlation between the National Strategy for Sustainable Development and the Integrated Sustainable Rural Development Programme (ISRDP) as championed by the Department of Cooperative Governance and Traditional Affairs (COGTA). Cognizant of the fact that the objectives of the ISRDP are to tackle poverty and underdevelopment in a selection of rural areas, focused largely on the former homelands and some urban townships, it is important for the DEA to have a handle on whether that definition of development is in tandem with the ideals of promoting a green economy. Tied to the ISRDP is a massive public works programme which seeks to move people out of state dependence and into sustainable livelihoods through decent employment opportunities. The DEA needed to ensure that the definition of sustainable livelihoods as espoused by the Department of COGTA was appreciative of all components related to sustainable growth and development.

- Where industry and business were expected to deliver against set sustainable development plans and targets, government needed to strengthen the oversight role. There was a view that one of the crucial weaknesses of the strategy could very well be its reliance on voluntarism and good will for impact. This needs to be addressed through the sharpening of tools and instruments to ensure greater compliance and better performance.

- Representatives from the local government sector in many areas municipalities lacked the requisite technical skills to ensure proper absorption and implementation of the objectives of the National Framework for Sustainable Development and Strategy. This problem is even direr in rural areas where there is a high turnover of technical staff and may very well require the creation of technical hubs within regions to ensure that national and corresponding departments are able to channel support where it is most needed.

The Economic Development Department has defined a New Growth Path that would include a focus on manufacturing, infrastructure development, rural development and agro-processing, and the green economy. The National Planning Commission has defined a vision for a 25-year strategic plan for the country in the Cabinet approved Green Paper, the plan has significant relevance to the Green Economy growth path, especially as it acknowledges that a long term plan has to be informed by breaking down the country’s high level aspirations into focused strategies. These would deal with such issues as economic development, human resource development, building a developmental state, enhancing regional stability and so forth. A plan has to take into account environmental factors such as the global economy, climate change, demographic trends and regional peace and stability. Long term cross cutting issues such as food, energy and water security would also have to be factored in.

The National Framework for Sustainable Development provides a valuable step in defining key sustainable development principles for the country, while being mindful of global challenges and growth ideals. Due to the complex development considerations, that include the worrying increase in the gap between the rich and poor populations in the country, a simple “triple bottom line” approach to sustainable development is insufficient. This realisation led to the broader definition of sustainable development. The country’s approach asserts that social, economic and ecosystem factors are embedded within each other, and are underpinned by systems of governance.
This session explored the relationship between the different policy framework and identified a number of challenges which included:

- The perceived lack of a coherent long term national plan that has impacted on the country’s ability to provide clear and consistent policies. This might have resulted in the difficulty to prioritise resource allocations and to accelerate implementation of government’s objectives and priorities.
- There is a need to provide an enabling policy framework for the creation of a viable green economy and coordination of government policy and institutions towards achieving the goals of a green economy.

Possible interventions identified during the session include:

- A need for a concerted effort in the management of stakeholder relations between government and the private sector, pre and post legislation, to ensure the representation of a broad myriad of views and aspirations in resultant policies and strategies.

Furthermore, there is a need to conduct a survey of current policy and legislation within the green economy space, so as to assess gaps and avoid duplication. Policy issues need to address the potential of the economy to make the shifts and transitions.

- A review should of all sectoral policies and work towards an integration of policies. Policies related to behaviour change are critical. Some examples of the policies/strategies that must be considered include:
  - the National Climate Change Response policy.
  - the National Strategy for Sustainable Development.
  - a Discussion Document on Carbon Tax and the Green Economy Strategy

All of these policies frameworks/tools have a substantial overlap and all are scheduled to be completed during the course of 2010.

There are probably some immediate short-term gains to be made with regard to policy and legislative work and that these low-hanging fruit could score some quick and effective victories for the green economy agenda, thus contributing to the management of the perception about this agenda.

What must be done in medium to long term?

South Africa has an export base market, where approximately 66 percent of export base is carbon intensive. South African exports are in the mining and mineral related products. There is a need to address the issue of whether a green economy and its shift to low carbon growth will result in job losses. This is a question that needs further exploration so that the transitional costs related to the green economy are well quantified. More research needs to be done to analyse what will happen to the labour currently reliant on the mining industry.

4.2 Innovation and Technology

Threats, challenges and opportunities

On the domestic science and technology policy front, there a number of important opportunities that can, directly and indirectly, support the growth of green industries and sectors and which ultimately support a greening of the economy. This includes the introduction of generic long-term measures aimed at supporting and enhancing green technology commercialisation in South Africa. The Department of Science and Technology put in place the Technology Innovation Agency (TIA) in 2009. The TIA will fill an important gap in the commercialisation of promising research and development results and will play an important role in supporting the development of new business enterprises. Another important generic long-term measure is government support to Centres of Competence that will support the growth and development of specific industrial development opportunities which have a strong innovation or technology component. The Centres of Competence provide a framework for long-term co-operation between government, research institutions and industry.
In a number of important green sectors and industries, government has committed to increase resourcing for research, development, and innovation over the medium to long-term. This includes energy, environmental monitoring, water, waste, and green manufacturing. Some measures have already been introduced including the introduction of research chairs and research networks that will support the long-term capacity development in these important areas. However, this needs to be combined with greater interaction with industry including the development of strategic partnerships and joint financing.

Internationally, current negotiations under the United Nations Framework Convention on Climate Change (UNFCCC) also offer opportunities for South Africa. Appropriate arrangements for technology transfer, combined with appropriate financing arrangements and capacity-building, are crucial to the successful conclusion of a new climate change agreement. Finalising these arrangements remains an outstanding issue at the climate change negotiations.

Therefore, challenges and opportunities for action need to be considered by looking at two separate but associated areas of focus. These are:

- technology and innovation requirements that support South Africa’s own efforts in greening its economy and support the objective of effective natural resource management
- Industrial development opportunities where South Africa can take advantage of the global growth in the demand for green technologies.

**Policy and Governance Requirements**

- Alignment, coherence, clarity, and consistency of policy are necessary to enable private capital investment in green technology solutions;
- Public investment in energy innovation needs significant up-scaling and better governance;
- Governance of public procurement needs reshaping in order to ensure it is leveraged for advancing green economy objectives.

**What must be done now?**

- Design long-term, realistic, and sustainable technology and roadmaps that will guide future investment decisions, support human capital development and build the required government-industry partnership;
- Define a future energy system that will enable a green economy;
- Entrepreneurial support from national government;
- Information and experience exchange;
- Redesign existing jobs and workers skills or re-skill with green skills;
- Stimulate investment in green industries & leverage on international support;
- Need to know how to expand the current capacity and what it should be in three years and how much should be invested to be able to reach that capacity.

**What must be done in the medium to long term?**

- Invest in the necessary skills;
- Leverage government procurement for the benefit of a green economy;
- Initiating collaborative technology or product development / technology transfer;
- Leverage support from international agencies and organisations e.g. Clean Technology Fund.

**4.3 Sustainable Consumption and Production**

Although South Africa has progressed well in encouraging and promoting sustainable consumption and production (SCP) there are a number of challenges that need to be addressed. In many instances the challenges presented below present opportunities for strengthening SCP efforts in the country:

- Gaps in environmental data remain, which greatly hamper efforts to make better policy decisions. There is also a general need to improve the availability of quantified data on the environmental, economic and social costs and benefits of implementing cleaner production practices.
- The low cost of resources such as water and electricity has in the past contributed to patterns of production and consumption. In these sectors, innovation is needed to address the need for reducing resource use and waste generation.
consumption that are wasteful and inefficient. This situation has been exacerbated by the generation and treatment of waste which are costly from a financial and health perspective.

• South Africa is faced with low rates of academic achievement in mathematics and science and a severe shortage of entrepreneurial and technology transfer skills and mechanisms.

• The skills shortage has been compounded by weak cohesion in research programmes, shortage of market-focused research and a relatively low tendency among academics to commercialize research.

• The SCP initiatives remain fragmented. Insufficient co-ordination in government departments regarding the triple bottom line for sustainable development means that there is a lack holistic approach to the entire production and consumption cycles.

• Inadequate enforcement of legislation and implementation of policy is a key constraint to promoting SCP in South Africa.

• Limited funding through government revenue structures as well as a lack of appropriate incentives such as economic instruments has constrained the implementation of SCP related projects.

• Inadequate education about energy efficiency and waste minimization and recycling, to name just two key SCP objectives, has resulted in high rates of consumption by consumers.

• The lack of incentives and penalties has meant that unsustainable patterns of consumption have been encouraged.

Policy and Governance Requirements

There is need for macro-economic analysis, research, global and national support which will translate to meeting demands of consumers in terms of improving efficiency while at the same time making business sense. Cleaner production need to be driven from national economic strategy.

What must be done now?

• Build awareness on the benefits of SCP

• Encourage more players to adopt SCP practices in order to develop a competitive market and create job opportunities;

• Provide a clear, credible and independent guide to consumers;

• Embark on education campaigns that would encourage consumers to purchase products with lower environmental impacts;

• Embark on campaigns that would assist behavioural change as part of implementation of various technologies to work successfully;

• Enhance local content in government procurement.

4.4 Green Buildings and the Built Environment

Threats, challenges, and opportunities for action

The green buildings can have a dramatic impact on reducing energy consumption and production of greenhouse gases because 30% of the world’s greenhouse gasses are produced by buildings; more than the transport sector. Furthermore, 40% of the world’s energy is consumed by buildings through direct consumption and via ‘embodied energy’ in products which consumed energy in the production and transport. Other than energy, buildings are estimated to use 15% of the world’s potable water supplies and produce 40% of the world’s waste.

An opportunity that therefore exists proposes that green buildings can reduce consumption by 30 – 70% by addressing the issue of resource depletion, pollution of land, water and air, and addressing the current unsustainable pattern of development. According to the Green Building Council of South Africa a range of independent studies confirm that buildings certified by Green Building Councils can consume 85% less energy and 65% less potable water and send 69% less waste
to landfill than non-certified buildings. So, if buildings consuming 40% of the world’s energy can cut that amount by 85%, it is clear that they can have a huge impact both on climate change, and (highly topical in South Africa) on reducing electricity demand.

The building sector is regarded as the area where the most cost-effective, quickest and easily-attainable cuts in CO2 can be achieved.

There is also the challenge of getting the property industry to buy into the concept of green building. This challenge seeks to tackle the more conservative views on building, by offering explanations and arguments for why the sector needs to adopt the green building approach. This requires investment in awareness-raising and lobbying. The perception that green building costs more than conventional building further complicates this issue; and experience has shown this to be a fallacy. Green buildings reduce cost over the lifecycle and show reduction in operational cost, compared to business as usual. Another benefit is that while much can be achieved without additional cost and using standard technologies, even more can be achieved with newer, often very basic, technologies that deal with energy-saving, water-saving, materials, etc., and this can have a stimulatory effect on the local economy.

The sector has an opportunity to retrofit old buildings with green materials and technologies. This is a necessary evil because there are currently older “non-green” buildings than there are green buildings, and therefore a need to redress the damage caused by these buildings on the environment and its people.

South Africa currently has to import most green materials and technologies but now has the opportunity to start producing its own through deliberate and earmarked government incentive scheme. It is however heartening to note that local manufacturers and suppliers are beginning to respond to the call for green materials and technologies, but still require private and government funding to grow this response. There is also a need for a more creative approach in making decisions on the alternative options available for green buildings overcoming preconceptions.

The above threats and challenges however present a myriad of opportunities for the South African economy thus re-orienting our building sector and industry towards a low-carbon economy, with shared responsibility between the following stakeholders:

- Government departments with a stake in the green economy can demonstrate leadership in this area by proposing legislation that will compel the sector to behave appropriately within the green economy;
- The private sector is hereby directly challenged to invest in the necessary production and acquisition of materials and technologies that support the green buildings agenda;
- The private sector and government also have the joint responsibility to stimulate the local economy thus creating job opportunities for the people of South Africa within the building sector;
- Local government has the responsibility to show leadership in this regard by developing new building specifica-

tions for its suppliers in line with green building standards.

Policy and governance requirements

There was a need for an integrated sustainability strategy for the built environment which would be supported by policies and implementation mechanisms that ensure sustainability is integrated into planning, design, construction and management of the built environment. There was need for the building councils to set minimum standards to support sustainability. This legislative and planning work however needed to be coupled with effective support and incentives to implement, and not rely on the will of building sector for implementation and interpretation. Effective policing would have to be coupled with enforceable penalties for non-compliance. Furthermore, there is a need to legislate minimum sustainability standards for existing and new buildings, using internationally recognized standards regarding energy, water, daylight, ventilation, etc. These standards would be enforced for existing buildings through reporting, for example the issuing of Energy Performance Certificates on intervals. In new buildings, these would be enforced through stringent building
What must be done now?

• The state of some buildings in South African towns and cities presents an opportunity for the government and the private sector to launch a retrofitting programme that seeks to ensure that these older buildings are renovated in an environmentally suitable manner, while preserving the great historical value held by these buildings.

• There is dire need to educate both the industry and consumers of the benefits of green building so as to create demand and investment into green buildings thus enthusing the sector regarding the commercial, economic and financial benefits of green building.

• The Green Buildings Council in collaboration with other built environment councils needed to encourage building companies to approach for voluntary ratings so as to compile a reliable and up-to-date record of which companies were compliant with the green building movement.

• Government needed to lead by example in the move towards green building by examining its current building specifications and the impact these had on climate change. Furthermore government needed to re-examine its list of preferred service providers ensuring that those building professionals who are willing to transform to green building are positively reinforced in this regard, while those resisting change are penalized or incentivized to change behaviour.

• Investment to unlock local technology required for green buildings

Effective legislation enforcement requires trained, motivated building inspectorate in all municipalities. Government needs to address understaffing at national, regional and local level and alignment of national provincial and local bylaws in support of Green buildings.

What must be done in the medium to long term?

• Government needs to lobby stakeholder opinion and develop the necessary legislation to compel behavioural change within the building sector towards green building. There is further a need for the Green Building Council to set minimum green standards as part of building consensus on the delivery timeline for zero carbon homes. Furthermore, the Green Buildings Council needs to also set overall performance targets for the sector, ensuring that - with government - there is regulated policing on performance against these targets.

4.5 Sustainable Transport

The transport industry has taken several steps to reduce CO2 emissions and other environmental impacts, notably those associated with fossil-fuel combustion. Combined with growing demands for mobility, many eco-innovation initiatives have focused on increasing the energy efficiency of vehicles and other forms of transportation, while at the same time improving safety.

Threats, challenges, and opportunities for action

• Whereas the taxi industry continues to show disgruntlement with new arrangements like the BRT, therein lies an opportunity to move operators from second to first economy (i.e. from taxi owners to bus owners/operators);

• New jobs created through bus operation like maintenance, fare collection, security can be quite sustainable moving into the future;

• Testing next generation climate friendly buses including ethanol, CNG, and biodiesel buses in order to gain operational, environmental, and financial data on their impact;

The major challenges and opportunities in this area could be derived from the understanding of the problem statement regarding the industry itself. In this regard, the issues of structural fragmentation related to land usage, infrastructure, regulations and operations are key drivers in understanding the obstacles and at the same time deduce strategies to tackle them. The bottom line however is that the implantation of a sustainable transportation programme has a much bigger potential for the sector in terms of contributing to the agenda for the green economy on the one hand and also create sustainable jobs on the other. The following were listed as areas that pose both the challenges and opportunities for the sector:
• The Expanded Public Works Programme has secured funding for infrastructure projects, specifically road projects and it is envisaged that some funding will be used to create green jobs within these projects;
• Development of NMT infrastructure and green jobs around 2010 roads projects;
• Promotion of regional and international collaborations through structures like SADC and AU engagements and protocols, International Civil Aviation Organization and International Maritime Organization, including the International agreements across all modes of transport;
• Development of new policy direction around issues like climate response strategy for the transport sector, energy efficiency framework for the transport sector including cleaner fuel technologies & alternative fuels;
• Putting more emphasis on the introduction of electric and hybrid vehicles to mitigate climate change;
• Develop comprehensive rail policy and programmes aimed at addressing inefficiencies in the rail sector thus promoting it as viable option for transportation of both goods and passengers;
• Conduct a complete review of Civil Aviation Policy to address emission reduction on the air space thus taking a lead in the global arena;
• Compile an updated Green House Gas inventory;
• Enhance the use of existing infrastructure like the natural gas pipelines, existing distribution channels of LPG, existing petrol/diesel stations for biodiesel/bioethanol blends, including charging EVs at home or shopping malls or airports;
• Promotion of modal shifts, favouring transport modes with high transport and fuel efficiency, e.g. high-speed passenger trains or rail such as the Johannesburg to Durban high speed passenger train as well as shifting freight from road to rail.

Policy and governance requirements

In order to promote faster development in this sphere, there is a need for a more user friendly policy and government intervention to enhance competition for new innovations, business ideas and strategies to manage the environmental impact on the transportation system. Some of the issues requiring the aforementioned intervention are:

• Consideration of subsidising cost to convert a vehicle to an aftermarket alternative fuel system;
• Consideration of exempting taxis and buses powered by alternative fuels from paying road tax;
• Consideration of exempting import duties and encouraging the setting up of manufacturing facilities in South Africa for things like toolkit development, dispensers, cylinders, batteries, etc;
• Highly accessible and flexible loans to start up refuelling stations and related industries;
• Availability of land in industrial areas at below prevailing market prices;
• Reducing the cost and time required to acquire licenses/approvals;
• Enforcement of higher emissions standards and getting polluting vehicles off the road;
• Guide to financing and technology choices nationally;
• Land use requirements for nodes;
• Densification programme on BRT routes through urban design;
• Package of investment portfolios for developers within the corridors;
• Secondary policy interventions like, non-motorised interventions and greening.

What can be done now?

• Continued investment and maintenance of transport infrastructure;
• Foster and enhance Private and Public Partnerships;
• Transport policies that take into consideration land use patterns and environment to promote sustainability;
• Promote network design and network systems management as opposed to isolated routes or “corridors”;
• Monitor transport costs continuously and consistently.
What can be done in the medium and long term?

• Develop transport policies that take into consideration land use patterns and environment to promote sustainability;
• Localise manufacturing, innovation and promote export products and services;
• Promote network design and network systems management as opposed to isolated routes or “corridors”;
• Update old transport infrastructure and systems design standards;
• Introduce new transport infrastructure and systems design standards.

4.6 Clean Energy and energy efficiency

4.6.1 Threats, challenges, and opportunities for action

The Fossil fuels dominate the energy sector, with coal providing 75% of the fossil fuel demand and accounting for more than 90% of electricity generation. In 2009, the energy sector contributed 80% of the country’s greenhouse gas emissions (DEA, 2009). Growing awareness of the threat of climate change, rising prices for fossil fuels, growth concerns over energy supply security and recent electricity price increases will be driving factors to increase an interest on making renewable energy more and more competitive in South Africa.

To couple with that, the National Energy Regulator of South Africa (NERSA) approved Renewable Energy Feed-In Tariffs (REFIT) to stimulate the development of renewable energy sector. Evidence of climate change has become more compelling and the South African Cabinet has strengthened its commitment by approving a Long Medium Term Mitigation Scenarios which provides various scenarios for the deployment of clean and renewable energy technologies. Renewable Energy Technology can also be implemented in decentralized off-grid applications, which simply means that more jobs can be created in rural areas of South Africa to alleviate poverty and increase energy security of supply. Jobs in construction, fabrication (SWH), installing, operating, and maintaining renewable energy systems tend to be more local in nature and can thus benefit unemployed rural poor in South Africa.

Based on the cabinet approved long-term mitigation scenarios (LTMS), the most stringent of which inter alia suggests that around 50 per cent of South Africa’s energy would have to come from renewable sources in 2050. Assuming this equates with a target of 15 per cent of electricity from renewables in 2020, 36,400 new direct jobs and 109,100 indirect jobs could be created. In addition, as many as 700,000 people could be employed in biofuels.

If South Africa generates just 15% of total electricity use in 2020 using Renewable Energy Technology, it will create 36,400 new direct jobs, without taking any jobs away from coal-based electricity. Over 1.2 million direct and indirect jobs would be generated if a portion of South Africa’s total energy needs, including fuels, were sourced with Renewable Energy Technologies by 2020.

Policy and Governance Requirements

Clean energy alternative a cross-cutting issue among various sectors and need coordination. In addressing policy and governance issues the following should be emphasized:

• Strengthen LTMS and linkages to other policy mechanisms e.g. IRP2, IPAP;
• Enforce energy efficiency & savings targets;
• Incentivise switch to cleaner technology;
• Behaviour change through fiscal interventions e.g. tax policy, measures;
• Set aggressive long term targets to stimulate industrialisation, set-up of local manufacturing.

What can be done now?

• Build awareness on the benefits of Clean Energy and Alternative technologies country wide;
• Promote and encourage the development of renewable and environmentally sound electricity generation technologies;
• Encourage more players to enter the generation industry.
Threats, challenges and Opportunities for action

As carbon intensive cities, developing in a manner well beyond our ecological footprint it will be a mammoth task to transform the current models and designs of South African cities into green cities. Currently there are single houses, each on its own plot, the earth stripped bare prior to construction, a reliance on coal-fired electricity, a wasteful approach to resource-use and engineering systems that support a single-minded focus on consumption. Cities are serviced by expensive tarred roads catering for private cars rather than public transport. After consumption unwanted waste is removed, effluent piped away and the storm water is channelled away.

For the current projects like retrofitting and the installations of SWH, the implementation rate is very slow and there are challenges to find ways to accelerate this implementation. There is much resistance currently to the new ideas for the implementation on clean energy solutions to buildings. Another significant development is densification also has much resistance to this new recommendation. There have been some policies and plans developed to address the challenges of renewable energy, however the national policy process has a long way to go in ensuring the appropriate policies in place with specific regulations that can be implemented in an integrated and systematic way involving the stakeholders from national to local government.

Political commitment to the green economy is not widely established and this is due to the fact that there is not enough information that outlines the impact of a green economy on the social and economic issues. The environmental benefits seem to trade off benefits for socio-economic factors. A key challenge therefore in addressing a green city is to address the concerns and perception that are being held by politicians and general public about the costs and benefits of a green economy.

Investing in skills and knowledge creation to apply green technologies to the cities is an urgent challenge. There is the opportunity to unlock economic opportunities through new industries - solar, urban agriculture, water harvesting, transport (bicycle highways, rental), recycling and tourism. The South African National SWH Strategic Framework and Implementation Plan include targets to install 1 million SWH in the next 5 years. There is a potential to remove 1-2 power stations from the grid if a national roll out of SWH is achieved. This in turn has a positive outlook for the creation of jobs within a green economy strategy.

What can be done in the medium to long term?

• A need to address skills shortages in the sector;
• Stimulate the development of new and renewable sources of energy through various mechanisms such as incentives, etc.;
• More support to Research and Development in the sector;
• Embark on campaigns that would assist behavioural change as part of implementation of various technologies to work successfully.

4.7 Green Cities and Towns

As carbon intensive cities, developing in a manner well beyond our ecological footprint it will be a mammoth task to transform the current models and designs of South African cities into green cities. Currently there are single houses, each on its own plot, the earth stripped bare prior to construction, a reliance on coal-fired electricity, a wasteful approach to resource-use and engineering systems that support a single-minded focus on consumption. Cities are serviced by expensive tarred roads catering for private cars rather than public transport. After consumption unwanted waste is removed, effluent piped away and the storm water is channelled away.

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A bus rapid transit, light rail, metro rail, bike paths and pedestrian walkways result in reduced congestion (not green congestion), lower maintenance and operation costs of the transport network. This will in turn lower pollution and health costs. There can be synergies found with water, energy and waste.

Successful urban development programmes that address environmental issues are based on public awareness but rely on the fact that there is a need to combine integrated planning and the delivery of infrastructure with regulation and fiscal interventions to create markets for green products and services.
South Africa however needs an integrated approach to green growth that will stimulate the development of green cities and towns. Regulations for urban planning is critical as well as the regulation for new buildings. All of these will be a catalyst for the green city concept.

Policy documents need a clear financial benefit case for the end user if legislation is to be uncontroversial and a proper monitoring and evaluation framework must be created and communicated intergovernmentally. Local municipalities need to be given the mandates to enforce these regulations.

What can be done now?
• Install SWH in all new houses;
• There is a need for awareness raising and up skilling on solutions to green cities;
• There is a need for clear guidelines on legislation / regulations that address the issues of rebates/subsidies/grants, low-interest loans, tax concessions, import duties, quality control, government & industry support and awareness programmes;
• National Framework required which will assist roll out and creative initiatives ( better evaluation in land use management plans, higher density and move from car to public transport)
• Establishing meaningful Public Private Partnerships (PPP) to support green economy interventions through common synergies
• Identify lever to provide the resource to make the economic change possible ( e.g. Lolland’s Green Growth Policy identified increase in taxes as first step towards a green economy revival)
• Opportunity to unlock economic opportunities through new industries - solar, urban agriculture, water harvesting, transport (bicycle highways, rental), recycling, tourism
• Apply efficient spatial development frameworks which supports public  transport, pedestrian and cycle routes, production-orientated cities’ reuse of resources such as stormwater and grey-water, green buildings with lower electricity and water demand, appropriate technology such as solar water geysers and photovoltaic panels that feed the grid and supply electricity to a mixed-use city environment, waste minimised, reused, recycled, infrastructure based on green engineering services, incentives for densification and/or productive use of land, eradicating legacies of sprawling apartheid city. Make use of buffer strips for densification or urban agriculture and promote mixed-use and mixed income communities – bring people closer to work opportunities to reduce need for transport, align land-uses with public transport and pedestrian routes.
• Focus not only on carbon and emissions but also on the very pressing issue for South Africa of water security
• Price ecosystem goods and natural systems as part of infrastructure that supports society/life – “custodian” jobs become economically important, especially compared against cost of cleaning up later.
• Municipalities as custodians of the environment should focus not on service delivery only but on custody of the environment (waste collection and disposal or water provision vs integrated approach that involves protection of resources, collection, sorting and reselling of waste, closed-looped water system.

• There is a need for development of natural capital indicators and defining the carbon sync value of ecosystems within our cities. Unleash carbon financing for sustainable energy interventions in RDP households
• Focus on long term plan and short term achievements

4.8 Resource Conservation and management

Threats, challenges and Opportunities for action

The human demand on natural ecosystems has had an adverse impact. It is thus critical that the human footprint on natural eco systems be reduced. These are key areas of challenges that could also be opportunities to introduce strategies that mitigate these adverse effects.

• The current scenario on the preservation of the ecosystem comes with perverse incentives that are more harmful than what they are intended to achieve. There is an absence of standards to determine what is “conservation” friendly. For instance, increased price charged for “organ-
products, the markets is not yet ready for biodiversity friendly products;
• The Human Development Index illustrate that demand exceeds supply in the mining of minerals. The waste production in South Africa poses both a challenge and an opportunity for viable economic ventures;
• Target setting remains a challenge, there are no clear targets outlined;
• Science base to measure impact is not yet conclusive, Scientists and economists need to generate the base lines;
• Defining incentives for resource efficiencies or resource gains. There needs to be a split from conservation gain to conservation control. e.g. the issue on hunting in a protected area is an issue for further discussion in legislation;
• Defensive cost – cost of non-action, meaning that the cost structure for business is not well managed by the government;
• Future economic gains from conservation need to be articulated clearly.

The value of biodiversity and ecosystem services is not adequately captured by current economic instruments, ecosystem service assessment need to be reviewed. A connected landscape where different elements are clustered together lead to rapid urbanization which puts pressure on basic facilities. As a result the resilience of landscape is decreased and this poses risks for floods, sand transport, storms, etc. The opportunity here is in mainstreaming and enhancing biodiversity friendly production landscapes that are well planned.

The invasion of alien species poses a big threat to the ecosystem. Climate change implications are not accounted for in figures and the projected future could be more. More emphasis needs to be placed on prevention work. There needs to be comprehensive funding mechanism to cater for entire ecosystem functioning.

**Policy Governance Requirements**

South Africa as a developing country needs to generate its own perspective for a green economy paradigm. The country needs stable policies for the longer term (unaffected by changes in government) to make a green economy possible. The following are policy governance requirements.

• Enhance regulatory systems for improved synergy between conservation and production industries. Split commercial game output management from regulatory control. Commercial wildlife ranching proposes a model that is separate from biodiversity and conservation. They are two models but are congruent to each other;
• Global competitiveness for biological products.

*What can be done now?*

- Interdisciplinary knowledge generation on embedded systems;
- Knowledge transfer into planning instruments that ensure landscape sustainability and maintenance;
- A more engaged civil society;
- The government should provide an empowering framework for conservation of the ecosystem and biodiversity;
- Expedite the National Land Degradation Fund as a vehicle for enabling civil society support for green economy restoration and conservation initiatives;
- Expand funding partnerships between conservation and development funds for implementation demonstrations.

**4.9 Waste Management**

**Threats, challenges, and opportunities for action**

The business sector indicate that although there was appreciation for the enabling policy environment within the waste management discourse, there was rising concern about government’s ability to enforce adherence to the policies. Furthermore, according to business sector there was a tendency for government to be too interventionist through red tape and inflationary business costs for implementing green waste management. These interventions tended to digress from business’ drive to ensure that it does business in an efficient manner, while contributing to the agenda of green waste management.

Some businesses were doing more than others, and were not getting the recognition they deserved. Furthermore, the
introduction of the waste management hierarchy presents the added challenge of managing the transition in business practise from the current waste management system while ensuring that waste management measures are environmentally sustainable.

Waste management also presents an opportunity to address climate change. The recycling industry for example typically creates new products with a lower use of energy, and hence carbon emissions, than the use of virgin material. Therefore support to the recycling sector is typically a GHG mitigation action. The removal of organic materials from the waste stream for use as aerobic composting material will also reduce methane emissions due to anaerobic digestion and is typically a job creating process. Similarly, the use of waste as fuel in cement kilns or other waste-to-energy processes both displaces fossil fuels and also reduces landfill gas formation.

The relevance of the waste management sector in the alleviation of poverty is unquestionable, but the contribution of this sector needs to be upscale in order to maximize the impact.

Policy and governance requirements

The current legislative framework was permissive of greater impact with regard to the green waste management agenda, but could benefit from further engagements between the DEA and several stakeholders, especially business and local government. The Act, and its effective functioning, could be sufficiently encapsulated in the review of the strategy document. The biggest policy and regulatory challenge was ensuring that the green waste management agenda took into account the need for a capital and labour intensive approach thus ensuring job creation and associated poverty alleviation and community ownership of the agenda.

What must be done now?

• There is need for government to improve efficiency of the legislation by intervening for impact and less intervening where the green waste management does actually work. Monitoring that business and other stakeholders are compliant with existing waste management legislation also means reinforcing good “green waste management” practise by introducing an incentive scheme, couple with penalties for poor green waste management.
• There is further a need for government to allow, through administrative and funding support, for the private sector to innovate in green waste management thus inculcating ownership of the waste management hierarchy.
• The extent of ownership and practise of the green waste management agenda by municipalities is cause for concern and speaks to poor communication lines between national government and municipalities on this imperative. Through existing structures at SALGA, the DEA needed to ensure representation of the green waste management agenda thus accessing the complex and efficient network afforded by organised local government. This network would not only allow for effective messaging with municipalities, but would further provide a network for the sharing of positive lessons and models from elsewhere in the world and the country.

4.10 Agriculture and Food Security

Threats, challenges and opportunities for action

The agriculture and forestry sub-sectors utilize large proportion of the South Africa’s land for food and timber production. Nearly 25% of land in the magisterial districts of South Africa is already badly degraded. The environmental footprint of food systems is extremely large. There is lack of incentives to promote sustainable use of natural resources. Furthermore, invasive alien species will result in the destruction of much of our wildlife and this will have a knock on effect with regard to poverty as more jobs will be threatened. There is skill shortage, limited research and development and regulatory supportive legislation to advance green agriculture.

Policy and governance requirements

Effective implementation of government priorities requires that all spheres of government work together in terms of the cooperative governance implementation framework. This may include the alignment of government delivery and sup-
4.11 Water Management

**What must be done now?**

- Communication from National to local levels needs co-ordination and local government should participate in the inter-governmental technical committees. It is important to establish the roll out of the policies by local government.
- There needs to be a proper awareness raising strategy created and the extension services workers trained in awareness rising on the green economy.
- Initiate the incentive schemes for the initiatives contributing to positively to the green economy.

**What must be done in medium to long term?**

- The legislation governing invasive species need to be reviewed as this has the potential to create more jobs.
- There is a need to create a body to monitor the use of resources and enforcement of the law.
- There is a need to increase research and development to support the green economy.

**Disproportionate distribution of water resources:**
- The agricultural sector consumes 62% of the total water resource. It is concerning to note that this sector is not yielding benefits in proportion with consumption patterns.
- In the domestic area (27%) the urban area far outweighs the proportion which the rural areas consume the resource with 23% and 4% respectively.

**Inter-basin water transfers are expensive - cost recovery of water services serve as a barrier to access to safe water by poor people;**

**Ageing water infrastructure and limited access – costly to maintain infrastructure;**

**Some economic activities are impacting negatively on water quality and the environment (acid mine drainage) – due to resource constraints and lack of capacity, it is often difficult to monitor and assess the quality of water with more emphasis placed on water quantity instead;**

**Unlawful use of water – in certain areas people make illegal connections while others use water intended for domestic use for agricultural purposes;**

**Demand outweights supply – demand of water usage has over the years increased in all sectors, making it difficult to provide good quality water to consumers;**

**Human settlements – with increased urbanisation and movement of people to areas close to work opportunities, a number of settlements have surfaced as result. Often these settlements have no adequate reticulation systems or are sometimes of poor quality making it easy for groundwater to be polluted resulting in, groundwater not being a viable option;**

**Abundance of ocean water – some areas are experiencing drought despite an abundance of ocean water;**

**Insufficient data, data limitations and poor information about the cultural, social, and political norms of the existing population often hinder development of an effective planning strategy;**

**Disparities in intellectual capital and technological innovation which are essential for sustainable management.**

**Physical;**
- The physical nature of a river basin can confound efforts to manage the basin’s resources.
- Because basins are irregular and receive water flows from multiple sources, difficulties are often encoun-
tered when attempting to divide a basin into discrete, manageable subunits;
> Further, the stochastic nature of rainfall forecasting makes prediction and control of the water problematic;
> Limited potential for further resource development in most areas.

The following are potential areas where action could be taken:

• Use national development goals or water-related challenges as a starting point;
• Secure commitment at the highest level, but ensure a broad base of support which reaches down to the grass-roots;
• Involve high-level officials in water-related sectors from the outset and assign the task of developing a strategy to a multi-sectoral steering group;
• Stakeholders awareness of the scarcity of water can lead to meaningful involvement in the different process;
• Create adequate knowledge base to make informed decisions;
• Acknowledgement that water is an integrator of all sectors when it comes to sustainable development;
• Ensure a realistic plan of implementation that includes a clear definition of roles and responsibilities, a sound financing strategy, provision for capacity-building and systems to monitor progress and make adjustments as needed;
• Optimising the contribution of water for growth and development requires the consideration of complex links between activities that influence and are influenced by how water is developed and managed and how a more efficient use of the water as a limited resource can be secured;
• Preparing the second edition of the country’s National Water Resources Strategy (NWRS) is one of the premises for setting and steering a course towards sustainable management of the water resource for economic growth and development.

Policy and Governance Requirements

Water policy impacts economic development and in turn macro-economic policy impacts sustainable water use. Upstream land use decisions impact downstream water availability and water management decisions impact land degradation. Given the numerous and complex links between activities that influence and are influenced by how water is developed and managed, a more coherent and integrated approach makes good sense.

Effective coordination among various government departments need to be promoted. This will in turn improve resource management and scientific understanding of the water cycle through cooperation in joint observation and research, and for this purpose encourage and promote knowledge-sharing and provide capacity building and the transfer of technology.

What needs to be done now?

• Mainstreaming water— it is critical that water is put at the forefront of planning, not an after-thought;
• Strengthening sectoral co-operation;
• Strengthen institutional and regulatory capacity;
• Improve water management;
• Addressing service backlogs— assess persistent backlogs and devise strategy for service delivery;
• Changing water use behaviour - effect change in behaviour by regulation, self-regulate, use of market-based instruments and awareness and education.

4.12 Expanded Public Works Program

Threats, challenges and opportunities for action

The major challenges and opportunities in this area could be derived from the understanding of the problem statement regarding the industry itself. In this regard, the main issue here has been the lack of cooperation and understanding between the role players (i.e. the industry manufacturers and suppliers on the one hand and the government and private sector on the other). The following were listed as areas that pose both the challenges and opportunities for the sector:
• Sustainable Energy Society of Southern Africa (SESSA) lacks capacity to ensure proper implementation of programmes and policies that have been identified as key in ensuring the success of the industry and this is due to lack of funds to employ staff and procure infrastructure;

• Lack of capacity in local authorities or willingness to implement renewable energy projects, fearing loss of revenue from electricity sales;

• Rural installers of solar home systems loosing hope that the project could be a sustainable one;

• SHS concessions have a history of being a stop and start process for the last ten years;

• Explaining and convincing rural population to use solar home systems like PV, solar cooking or more efficient cooking fuels;

• Lack of interest by Government to provide regular and sustainable funding for the solar systems industry;

• Complexity of process and the creation of a plethora of institutions (e.g. SANERI, ESCO’s etc) in line with the implementation strategy of the Department of Energy;

• Problems related to the quality of South African water thus prompting speculation that if this is not addressed it would corrode the elements of imported heaters thus reducing its life-span;

• Lack of clarity on whether the incentive system for the consumer would take the form of subsidy or rebate;

• Loss of biodiversity and ecosystem services due to things like globalization of commodities, national food security and climate change;

• Lack of access to credit, health, education and support services to ensure sustainable infrastructure and appropriate policy and regulation/legislative tools.

**Policy and governance requirements**

• Clarity on the ownership of SWH and SHS policies;

• Ensure that SANS 204 becomes mandatory for all new built environments, including the replacement of all failed geyzers by energy efficient water heaters;

• Cooperation between the Department of Energy, ESCOM, local authorities and private concession, including other organs of state;

• Removal of restrictive policies and development of legislation that makes it compulsory to install solar water heaters in all newly built homes and buildings;

• Provide tax breaks for green orientated supply chains;

• Creation of national standards for sustainable production;

• Fast tracking of the registration process for green investments (creation of a national clearing house);

• Development of a clearer policy on how to deal with the issue of import duties in relation to solar water heaters in order to determine whether a stringent or relaxed regime is required to stimulate the growth of local production.

**What can be done now?**

• Government needs to commit short, medium and long term funding towards the support of SESSA;

• Set implementation time frames with penalties for late delivery;

• Convene an Indaba with municipalities which include non-electrified areas for Solar Home Systems and Solar Water Heaters;

• Identify and train relevant local authorities’ officials on various technologies related to the industry.

• Consult with ESCOM and other stakeholders on grid status;

• Involve institutions like UNEP and others to optimize learning from international experience;

• Create awareness and educate the public on the viability of green goods and products (solar energy products).

**What needs to be done in the medium to long term?**

• Create a central body to coordinate rebates/subsidy, including the establishment of a coordinating body for all donor and state funding to administer “soft” loans to financial service providers;

• Develop an inclusive framework for residential, commercial and industrial when installing new or retrofits/replace-ment of alternative timers, heaters and gas;

• Create risk enhancers to promote start-up heater distributors;

• Promote and strengthen market based instruments like certification, which can lead to sustainable management of production landscapes;

• Institutionalize agricultural best practices within the national policy.
Threats, challenges and opportunities for action

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Policy and governance requirements

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- Ensure that SANS 204 becomes mandatory for all new built environments, including the replacement of all failed geyers by energy efficient water heaters;
- Cooperation between the Department of Energy, ES-KOM, local authorities and private concession, including other organs of state;
- Removal of restrictive policies and development of legislation that makes it compulsory to install solar water heaters in all newly built homes and buildings;
- Provide tax breaks for green orientated supply chains;
- Creation of national standards for sustainable production;
- Fast tracking of the registration process for green investments (creation of a national clearing house);
- Development of a clearer policy on how to deal with the issue of import duties in relation to solar water heaters in order to determine whether a stringent or relaxed regime is required to stimulate the growth of local production.

What can be done now?

- Government needs to commit short, medium and long term funding towards the support of SESSA;
- Set implementation time frames with penalties for late delivery;
- Convene an Indaba with municipalities which include non-electrified areas for Solar Home Systems and Solar Water Heaters;
- Identify and train relevant local authorities’ officials on various technologies related to the industry;
- Consult with ESKOM and other stakeholders on grid status;
- Involve institutions like UNEP and others to optimize learning from international experience;
- Create awareness and educate the public on the viability of green goods and products (solar energy products);
The transition into a green economy needs to be managed carefully, ensuring that all the aspirations of the different stakeholders are managed, and that roles and responsibilities are assigned. This arose out of the concern that there are currently too many green plans that are hardly linked to performance management. As part of managing the transition it was felt it is also important to look at existing case studies of good green behaviour in the South African context; an investigation of who is doing what, where and what the inspirational lessons to be learnt for the rest of the economy are. This, it was argued, would give the message that indeed the green economy already lives in South Africa but needs further enhancement.

What needs to be done in the medium to long term?

• Create a central body to coordinate rebates/subsidy, including the establishment of a coordinating body for all donor and state funding to administer “soft” loans to financial service providers;
• Develop an inclusive framework for residential, commercial and industrial when installing new or retrofits/replace ment of alternative timers, heaters and gas;
• Create risk enhancers to promote start-up heater distributors;
• Promote and strengthen market based instruments like certification, which can lead to sustainable management of production landscapes;
• Institutionalize agricultural best practices within the national policy.

5. Managing the transition into the green economy

5.1 Green Jobs and the Extended Public Works Programme

The Summit emphasised the need to move away from the tendency to think of green jobs as mainly semi-skilled and unskilled jobs. It was felt that all professions can point to green jobs within their own professions and that these could be highly skilled and technical jobs in fields such as science and technology, academia, other technical services like engineering and even in local government administration. The Summit further expressed the desire for the EPWP to look at improving the quality of the jobs it offers, especially within rural communities, focusing on job protection.

The tendency to rely on the EPWP and other job creation initiatives by government was noted and the Summit highlighted that there was a need to put pressure on business to take some of this responsibility thus giving relief to the public purse. The EPWP is not the desired end state in relation to job creation in South Africa and should not be relied upon to provide highly skilled and technical jobs, especially for a green economy.

5.2 Policy and Regulatory Imperatives

It was felt that there is needed for a concerted effort in the management of stakeholder relations between government and the private sector, pre and post legislation, to ensure the representation of a broad myriad of views and aspirations in resultant policies and strategies. Furthermore, summit impressed on the DEA to conduct a survey of current policy and legislation within the green economy space, so as to assess gaps and avoid duplication. The Summit felt that there were probably immediate short-term gains to be made with regard to policy and legislative work and that these low-hanging fruit could score some quick and effective victories for the green economy agenda, thus contributing to the management of the perception about this agenda.

The DEA was challenged to further start thinking about the introduction of trade-offs for sustainable development, with particular reference to the value attached to any sector-specific efforts at creating green jobs.
There is currently insufficient mechanisms for the government to track and monitor progress re the transition into the green economy. The Summit argued that the State of the Environment Report was not sufficient for this task and needed to be boosted by other tools and mechanisms for monitoring.

The following are the additional sector-specific issues raised:

5.3.1 Energy

The Summit acknowledged that by all indications, the high carbon trajectory would soon enough become a trade issue and that if South Africa does not act urgently and decisively in lowering its carbon footprint, it would be vulnerable to the dictates of developed and “greener” economies of the world. The DEA was challenged by the Summit to review its 2030 targets by agreeing to ensure that by 2030 50% of South Africa’s energy comes from renewable energy resources, especially in light of the number of coal-fired power stations facing closure in the next ten years. There was furthermore a call that in light of our communities’ entrenched reliance on fossil fuels, the DEA and its partners needed to launch a massive awareness raising and educational campaign targeting civil society. This campaign would also seek to take lessons from South Africa’s poorest communities who are resilient in the face of poverty on how even renewable energy resources could be given an even longer life; resilience that might be needed in the future.

The monopoly of Eskom as the single buyer of energy was noted with some concern with the resultant suggestion that there needed to be space and funding made available to encourage the creation of competitive green and non-renewable energy resource buyers. At this point the DEA did indicate that government was already in the process of investigating this possibility. There was also a feeling that it was perhaps necessary for South Africa to consider the diversification of renewable resources by looking at utilising nuclear energy. The problems around the disposal of this alternative (waste management) were considered but the Summit acknowledged that in that it is carbon free, it needed to be given closer attention.

The Summit also felt that South Africa needed to look at its energy storage systems so as to ensure that there would be sufficient energy supply on and off peak seasons.

5.3.2 Waste Management

The Summit cautioned that the definition of waste management should not see waste as something to dispose of necessarily but should rather see it as another possible renewable resource that can be converted into energy while also adding the benefit of creating more green jobs.

5.3.3 Green Buildings

There is fact in the assertion that green building is in fact costly. Experience dictates that in the South African context, the initial capital investment is high due to the fact that there is lack of competition in the green building materials sector and merchandise is therefore sold at a much higher price than is the case in Europe and the USA where there is tough competition among suppliers. The Summit therefore felt that government needs to regulate in such a way that service providers across sectors are compelled to invest in green technologies, creating healthy business competition and therefore affordable prices.

5.3.4 Agriculture and Forestry

The main challenge in this sector is the evident insufficient research and development funding for research and development. This necessitates a conversation between the DEA, the Department of Agriculture, Forestry and Fisheries, the Department of Science and Technology (or its research institutes) and the Department of Higher Education and Training (or its individual universities).

5.3.5 Finance and Fiscal Considerations

There was broad recognition of the fact that South Africa has the opportunity to access international public finance like that which is available from the Copenhagen Accord. South Africa
however needs to urgently look at what programmes it wishes to prioritise and how these should be packaged to access funding. Furthermore it was felt that there was need to start identifying and defining the key fiscal elements of a green economy growth path.

The fact that municipal revenue in South Africa continues to rely on the volume of sales of services based on non-renewable resources was identified as key in influencing behavioural change towards adopting a green economy at the local government level. Summit submitted that because the reduction of profits would never be in the interest of business or municipalities, government needed to encourage, incentivise and mainstream the sale of energy derived from renewable resources. Furthermore it was felt that some of the market reforms necessary included subsidy reforms such as the removal of state subsidies from fossil fuels, thus influencing behavioural change.

Considering that the whole South African economy is geared towards chasing the Gross Domestic Product (GDP), summit felt that there may very well be a need to augment GDP indicators to bring value to environmental and natural capital. In so doing there would further be a need to therefore identify and measure the amount of natural capital needed by various sectors of the South African economy, thus also making these sectors responsible for natural capital preservation.

Two main factors underpin the demand and rationale for green growth. First, there are growing concerns about the environmental unsustainability of past and current economic growth patterns and the risk of irreversibly altering the environmental base needed to sustain economic prosperity. Increased awareness of a potential future climate crisis has made it clear that the environment and the economy can no longer be considered in isolation. These concerns point to the need for substantial transformation of consumption behavior, industry structures and technologies. South Africa has listed its Nationally Appropriate Mitigation Actions (NAMAs) with the associated commitment to reduce greenhouse gas emissions by 37% in 2020 and 42 % by 2025. A Green Economy plan would need to complement these actions and ensure a drive towards the achievement of this commitment.

Moving towards green growth will require targeted government intervention across a number of policy areas in order to address the existing externalities and market failures characterizing environmental goods and services as identified during the summit, this would assist in accelerating green innovation, and to manage the transition to a green economy. This will help to put green growth on an even playing field with conventional growth. It will establish the market certainty and incentives that businesses need to make long-term investment decisions. It will also assist in providing stable, long-term support for research, development and deployment of clean energy, for innovation throughout the economy, and for the sustainable use of natural resources while supporting the rise of household and private sector demand for green products and services. A broad range of policies can and have already been introduced to this end. Based on deliberations during the 2010 Green Economy Summit, key elements of a National Green Economy Plan can be highlighted as follows:

- A Green Economy Definition in a South African Context
- Linkages with legislative environment/state of policy
- The New Growth Path – A Green Economy Contribution
- Key Drivers of a Green Economy Paradigm
- Short, Medium and Long Term Policy imperatives
- Green Jobs Potential (employment & jobs impact)
- Road to change (Transition plan/roadmap)-
- Alignment with existing/cross cutting processes/policies
- Areas for Strategic Action, incorporating current and new areas
- Means of Implementation
- Capacity to implement
- Enabling factors, policies and measures
- Institutional framework
- Roles and responsibilities
- Financial requirements
- Monitoring & evaluation framework
We, the South African government, business, civil society and non-governmental organizations', gathered here at the Sandton Convention Center in Johannesburg, South Africa, from 18 to 20 May 2010, for the first summit considering the development of a job intensive green economy.

1. Noting and Accepting the address of the President of the Republic of South Africa, Jacob Zuma that Ecosystem failure will seriously compromise our ability to address our social and economic priorities. Natural resources are national economic assets, and our economy depends heavily on energy and mineral resources, biodiversity, agriculture, forestry, fishing and tourism. In short, we have no option but to manage our natural resources in a sustainable way. We have no choice but to be eco-friendly. We have no choice but to develop a green economy.

2. Acknowledging that the global threat of climate change and national and international sustainability requires that green industries be developed and that Countries globally are supporting the development of such industries for among others, positive employment outcomes, and that South Africa must be a global leader in international green advocacy and leader in the growth of green industries;

3. Concerned that current pattern of production and consumption could lead to the unsustainable utilisation and collapse of natural ecosystems which underpins our social (considering livelihoods, jobs and health risks) and economic growth (considering industrial, trade and future cost risks);

4. Emphasizing the importance of building on existing processes, programmes and initiatives in key sectors to shift South Africa's new growth path towards a resource efficient, low carbon and pro-employment one;

5. Agreeing that government alone cannot manage and fund a just transition to a green economy and that the private sector and civil society play a fundamental role.

6. Aspiring within the principles contained in the national framework for sustainable development, to develop a sustainable, resilient, economically prosperous and self-reliant nation state that safeguards our democracy by meeting the fundamental human needs of our people, through managing our 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;

7. Committed to ensuring that the Country’s new growth path lead to a more equitable economy, resource efficient, far less carbon intensive and more labour absorbing and also mobilises and further develops the significant scientific and technological capacities of society at large;

8. Asserting a need for individual and collective rights and responsibilities towards sustainable development and the need for a new paradigm that includes values and principles in our development plans, social spending and building awareness of the climate change challenge and a better understanding of the costs and benefits.

We commit to work together on the following cross cutting areas:

9. Develop a Green Economy Plan by end of July 2010 that outlines the work required to develop key elements, including early actions and long-term plan to address key policy:

9.1. A supportive regulatory framework to enable the development of sector action plans and related green markets and industries

9.2. Market based instruments (MBIs) to complement regulatory measures and incentivise the...
use and production of cost effective cleaner and low carbon products. Putting a price on carbon and other pollution or on the over-exploitation of a scarce resource through mechanisms such as taxes, natural resource charges or tradable permit systems. MBIs are a central element of the policy mix, most notably to provide clear and credible price signals necessary to encourage investments in less carbon activities.

9.3. Information and awareness raising initiatives including recognition of the national eco-labelling system which could play a supplementary role to MBIs and regulatory policy measures

9.4. Greater localisation of job-intensive green industries and those in which South Africa has a comparative advantage, in manufacturing of products and materials in key sectors, including in the low carbon energy, consumer products, building and transport sectors

9.5. Increase new knowledge and skills towards development, deployment and commercialisation of innovative science and technology solutions aimed at advancing a green economy

9.6. Integration of the different work streams and programmes to maximise benefits from investment and finance opportunities arising from the shared efforts between the public and private sectors

9.7. Define the job creation and job protection potentials of a green economy growth path per sector, small business development and participation in green economy, youth employment, job quality and the associated skills development needs and programmes including teachers training


9.9. Scale up and expand the implementation of environmental sector of the Expanded Public Works Programme to ensure the creation of more green and decent work opportunities

We further commit to work together on these specific focus areas:

10. Sustainable consumption and production: the 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

11. Policy, Fiscal and Regulatory Framework: Develop Green growth policies and regulations which supports and enables an integrated strategy that effectively covers demand and supply aspects, both economy-wide and at sector level to ensure coherence in policy design and implementation as well as to maximise the synergies among different policy actions Policies to accelerate the development and diffusion of clean technologies and related knowledge. Innovation will be a critical driver of a green economy and job creation.

12. Financing: Mobilise financial resources, domestic and international, from both private and development finance institutions to back our bold efforts to green economy. While we will need to rely on traditional financing instruments, we should work to assess the potential of a green development bond

13. Green Buildings and the Built Environment: Public and commercial buildings are substantial consumers of energy and water. The activities inside such buildings generate large volumes of waste. Green building regulatory, enforcement program, awareness and capacity building programmes need to be developed and implemented, particularly at local level

14. Sustainable Transport: The transport sector has great potential to reduce its 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

15. Clean energy and energy efficiency: The diversification of energy sources and the implementation of energy efficiency programmes are crucial for ensuring green growth. Investment in renewable energy on a scale sufficiently large to justify localisation of competitive technologies, along with active support for local renewable
technology manufacturing presents an opportunity for sustainable economic development and has significant job creation potential.

16. Green Cities and Towns: Local Government is ideally placed to implement green economy interventions. Communication, education and regulation will be necessary to ensure local level green growth and job creation. Intervention to further include urban infrastructure, sustainable land use management, spatial planning and the efficient use of natural resources.

17. Resource Conservation and management: Our natural capital must be measured, managed, protected, enhanced and restored. Ensure the conservation, sustainable management and rehabilitation of natural and ecosystem services and assets (such as fresh water, marine environments, grasslands, landscapes) as well as work to improve the productivity of agriculture including management through safe pesticides, reductions in energy and water use.

18. Sustainable Waste Management Practices: Presently the waste management sector constitutes 80% of the country’s green industry and can generate a large number of jobs, albeit of lower quality than some other green industry sectors. The Waste Management Act calls for the implementation of waste hierarchy and the ambition to minimize waste and where unavoidable, recycle and reuse waste or turn it into energy.

19. Agriculture, Food Production and Water Management: Integrated Water and Land Resources Management should be adopted as a model framework for the sound and equitable allocation of water as a public good among all users to be implemented in a sustainable way at all levels, including catchments. Support programmes to ensure protection of agricultural land, sustained food security and local economic development.