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GOVERNMENT NOTICE

DEPARTMENT OF TRADE AND INDUSTRY

No. 379

28 April 2011

Third Edition – Environmental Implementation Plan

DEPARTMENT OF TRADE AND INDUSTRY (the dti)

APRIL 2010-MARCH 2014



the dti

Department:
Trade and Industry
REPUBLIC OF SOUTH AFRICA

**Third Edition - Department of Trade and
Industry Environmental Implementation Plan
2010-2014**

Final

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List of Acronyms

AIS	Automotive Investment Scheme
AU	African Union
BAT	Best Available Technologies
BBBEE	Broad Based Black Economic Empowerment
BPO&O	Business Process Outsourcing and off shoring
BRU	Business Regulation Unit
CAIA	Chemical and Allied Industries Association
CCRD	Consumer and Corporate Regulation Division
CDM	Clean Development Mechanism
CEC	Committee for Environmental Coordination
CIP	Critical Infrastructure Programme
COMESA	Common Market of Eastern and Southern Africa
COTII	Council of Trade and Industry Institutions
CP	Cleaner Production
CSIR	Council for Scientific and Industrial Research
DAFF	Department of Agriculture, Forestry and Fisheries
DEA	Department of Environmental Affairs
DED	Department of Economic Development
DIRCO	Department of International Relations and Cooperation
DoE	Department of Energy
DOT	Department of Transport
DPE	Department of Public Enterprises
DST	Department of Science and Technology
DWCPD	Department of Women Children and People with Disabilities
EAC	East African Community
ECA	Environment Conservation Act
EDC	Experience Delivery Company
EDD	Economic Development Department
EEIP	Equity Equivalent Investment Programme
EIA	Environmental Impact Assessment
EEDD	Enterprise Empowerment Development Division
EIEC	Economic, Investment and Employment Cluster
EIP	Environmental Implementation Plan
EMP	Environmental Management Plan
EMS	Environmental Management System
EMU	Executive Management Unit
EPR	Extended Producer Responsibility
ERPC	Economic Research and Policy Coordination
EWASA	Electronic Waste South Africa
EXBO	Executive Board
FABCOS	Foundation for African Business and Consumer Services
GCOO	Group Chief Operating Officer
GGND	Global Green New Deal

GSSSD	Group Systems and Support Systems Division
IAPs	Interested and Affected Parties
IDC	Industrial Development Corporation
IDD	Industry Development Division
IDZ	Industrial Development Zone
IEM	Integrated Environmental Management
IPAP	Industrial Policy Action Plan
ISO	International Organisation for Standard
ITAC	International Trade Administration Commission
ITED	International Trade and Economic Development
IWF	Isivande Women's Fund
MEA	Multilateral Environmental Agreement
MTEF	Medium Term Expenditure Framework
MTSF	Medium Term Strategic Framework
NCPC	National Cleaner Production Center
NDPW	National Department of Public Works
NEF	National Empowerment Fund
NEMA	National Environmental Management Act
NEPAD	New Economic Partnership for African development
NFSD	National Framework for Sustainable Development
NIPF	National Industrial Policy Framework
OCIO	Office of the Chief Information Officer
ODG	Office of the Director General
OHS	Occupational Health and Safety
PPP	Preferential Public Procurement SADC
RCMASA	Responsible Container Management – SA
SADC	Southern African Development Community
SAWEN	South African Women Entrepreneurs Network
SAWIS	South African Waste Information System
SAR	Situation Assessment Report
SCP	Sustainable Consumption and Production
SDP	Spatial Development Programme
Seda	Small Enterprise Development Agency
SIP	Strategic Industrial Projects
SMEDP	Small and Medium Enterprise Development Programme
SMME	Small, Medium and Micro Enterprise
SPII	Support Programme for Industrial Innovation
SPP	Sustainable Public Procurement
TEO	The Enterprise Organisation
the dti	Department of Trade and Industry
THRIP	Technology and Human Resources for Industry Programme
TISA	Trade and Investment South Africa
UNDP	United Nations Development Programme
UNEP	United Nations Environmental Programme
UNIDO	United Nations Industrial Development Organisation

Definitions and Key Concepts

The following definitions and concepts apply within the context of this document:

Activities

This refers to the definition of “activities” used in the National Environmental Management Act (1998), Section 1. (1) (i) and should be taken to reflect policies, programmes, plans and projects.

Accountability

This refers to the requirement for organs of the state to account for their conduct and decision-making in handling the responsibilities they are charged with. This is in line with Section 33 of the Constitution, which ensures that anyone whose rights have been affected by administrative action has the right to be given written reasons therefore. This culminates in the right to administrative action that is lawful, reasonable and procedurally fair.

Capacity

Capacity implies **the dti**'s capacity in terms of people and budget to perform the priority functions to ensure effective implementation and functioning of the mechanisms, systems and procedures for coordination in line with the principles of cooperative governance as provided in the Constitution and the National Environmental Management Act. This means all resources required to and/or available to achieve the priority functions of cooperative environmental governance. They are the human and the budgetary resources, mechanisms, procedures, etc. to be applied to ensure effective cooperation. A projection of financial and personnel availability is to be made to facilitate the implementation of identified mechanisms, management systems and procedures for cooperative governance. Departments must realistically identify incapacities and inadequacies in resource availability.

Cooperation

Cooperation implies cooperative governance as provided in Chapter 3 of NEMA and Sections 41 and 146(3) of the Constitution. It ensures that the environment is managed in an effective, transparent, accountable and coherent manner by all involved within **the dti** and its family of institutions. It ensures that all involved exercise their powers and perform their functions in a manner that does not encroach on the geographical, functional or institutional integrity of the others but promotes mutual trust and good faith by informing one another and consulting one another on matters of common interest and adhering to agreed procedures to avoid duplication and non-performance.

Coordination

Coordination implies defining the requirements of effective cooperative governance to ensure clarity regarding environmental jurisdiction and elimination of duplication of functions in different spheres of government departments and all stakeholders in the provinces as provided by Section 41(1) (h) (iv) and Section 24(7) (g) of NEMA.

Impact

Impact in this document refers to the direct and/or indirect negative/detrimental effects on the environment of an action.

Benefit

Benefit in this document refers to the direct and/or indirect positive effects and spin-offs on the environmental.

Environment

This refers to the definition of “environment” reflected in NEMA, and means the surroundings within which humans exist and that are made up of –

- The land, water and atmosphere of the earth
- Micro-organisms, plant and animal life
- Any part or combination of (a) and (b) and the interrelationships among and between them
- The physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being.

Green jobs

The definition of the term ‘green job’ is still in development in South Africa via the Strategy Focus Group under the Economic Sectors & Employment Cluster. The term originated through the United Nations Environment Programme (UNEP) who called for the Global Green New Deal to encourage greener economies, jobs, sustainable growth and attainment of the Millennium Development Goals. Green jobs:

- Include work in agriculture, manufacturing, research and development and services which significantly contributes to preserving or restoring environmental quality
- Bring about improved ecosystem and biodiversity protection, efficiency in energy and/or water use
- Decarbonise the economy
- Minimise or avoid generation of all waste and pollution.
- Are decent jobs which cover a wide array of skills, education backgrounds and occupations.

Institutional arrangements

This refers to a well-defined framework, which encompasses all spheres of government to ensure effective implementation of principles in the EIP. This pertains to both internal and external relationships. External relationships with other stakeholders such as civil society structures, commerce and industry and academia, should be established. The internal relationships within **the dti** and its family of institutions should be identified (Section 13(1)(c) of NEMA).

Integrated Environmental Management

This refers to the provision of an integrated approach to environmental assessment, management and decision making, with the aim of promoting sustainable development and the equitable use of resources. Integrated Environmental Management provides for a democratic, participatory, holistic, sustainable, equitable and accountable approach.

Third Edition - Department of Trade and Industry Environmental Implementation Plan 2010-2014

1 Introduction

1.1 Background

The Department of Trade and Industry (**the dti**) is required in terms of Section 11(1) of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA). **the dti** and other departments listed in Schedule 1 of NEMA are required to develop EIPs because they carry out functions which may affect the environment. Departments required to produce EIPs must renew these every fourth year. **the dti** is not listed in Schedule 2 and is thus not required in terms of NEMA to develop an Environmental Management Plan (EMP).

The purpose of the EIP is broadly to promote interdepartmental coordination and cooperative government, secure the protection of the environment and to enable monitoring of a sustainable environment. The completed EIP is submitted to the Committee for Environmental Coordination (CEC) in the Department of Environmental Affairs (DEA), where after it is gazetted. It provides the framework for the bi-annual (twice yearly) report to the CEC.

the dti is a national government department whose core business is to facilitate economic growth in South Africa. Through this growth it aims to create employment and reduce levels of inequality. Its short-term focus is to support small, medium and micro-enterprise (SMME) development, advance black economic empowerment, promote investment, exports and technology, and build skills and infrastructure platforms. There are three central elements to **the dti**'s core business strategy, notably the role played by **the dti** to champion competitiveness through its leadership role in the economic, investment and employment cluster of government departments, establish a set of work programmes to be implemented by **the dti** to promote competitiveness in specific sectors and value chains and the provision of widely accessible broad-based products and services to enterprises aimed at the generic matters that impact upon the efficiency of all enterprises and value chains.

The National Industrial Policy Framework (NIPF), and the Industrial Policy Action Plan (IPAP) which provides the vehicle for implementing the NIPF, have been priorities for implementation by **the dti** since 2007. **The dti** Medium Term Strategic Framework (MTSF) for 2010-2013 now highlights the importance of the IPAP2 as a critical intervention, following the economic downturn, for securing jobs and highlights priority sectors for achieving objectives including automotive and textile production. Other key strategic objectives include the consolidation of trade links in Africa and the strengthening of links with dynamic economies to foster South-South Trade. Support to SMMEs forms a further key focus area. Of further relevance is the King III Report on Corporate Governance which provides guidance on the good governance of organisations.

1.2 Purpose and objectives of the EIP

NEMA outlines the following purposes and objectives for an EIP:

- To co-ordinate and ensure the equilibrium of environmental policy, plans, programmes and decisions made by significant government departments responsible for promoting and maintaining a sustainable environment
- To identify areas of duplication and promote consistency of functions that may affect the environment
- Secure environmental protection on a national level
- Prevent unnecessary provincial action against and within the environment
- Consolidate current integrated environmental management processes
- Improve the level of provincial government co-operation
- Allow the minister of Environmental and Water Affairs to facilitate and track the progress, promotion and protection of a sustainable environment.

1.2.1 Means of information gathering

The content of this EIP has been informed by:

- Key framework and policy documentation, namely the NIPF, MTSF as well as IPAP1 and IPAP2
- the dti 2008/2009 Annual Report
- EIPs for other Schedule 1 departments
- Review of the draft EIP report by stakeholders in the dti divisions.

1.2.2 Impact assessment

The assessment of the possible significance of environmental impacts of programmes and sub-programmes of the dti has incorporated consideration of the nature, extent, intensity, duration and probability of an impact. Criteria for determination of significance of impacts have incorporated potential contravention of key environmental legal requirements (such as principles contained in NEMA) and the potential number of cumulative effects.

2 The dti mandate, environmental obligations and EIP related activities

2.1 the dti mandate

The mandate in respect of core functions of the dti is “to advance the economic growth dimension of sustainable development by accelerating investment in employment-generating production and services, in order to eradicate poverty and meet the increasing needs of a growing and developing population”. the dti’s mandate solidifies the Department’s role in contributing to the social and

economic sectors of sustainable development. The work of **the dti** is guided by an extensive legislative framework which includes 53 Acts covering function and sector specific aspects covering the following broad themes:

- Business Entities, Ownership and Governance
- Fair Trade, Competition and Consumer Protection
- Regulated Industries
- Foreign Trade
- Technical Infrastructure
- Development and Research
- Intellectual Property Protection
- Exports
- Investment (incorporating industrial development, finance and insurance, companies, taxation and exchange control).
-

2.1.1 Vision

As outlined in the 2010-2013 MTSF, **the dti's** vision is *“of a South Africa that has a vibrant economy, characterised by growth, employment and equity, built on the full potential of all citizens. To this end, **the dti** seeks to be an outwardly focused, customer-centric organisation”*.

2.1.2 Mission

The 2010-2013 MTSF outlines **the dti's** mission as follows:

- *“Provide leadership to the South African economy through its understanding of the economy, its ability to identify economic opportunities and potential, and its contribution to government economic priorities*
- *Act as a catalyst for the transformation and development of the economy*
- *Respond to the challenges and opportunities of the economic citizens, in order to support the government's economic goals of growth, employment and equity to support the government's strategic objectives*
- *Provide a predictable, competitive, equitable and socially responsible environment for investment, enterprise and trade”*.

2.1.3 Strategic objectives

- Strategic objectives presented in the 2010-2013 MTSF include:
- *“Promoting the co-ordinated and accelerated implementation of the government's economic vision and priorities*

- *Promoting direct investment and growth in the industrial and services economy, with particular focus on employment creation*
- *Raising the level of exports and promoting equitable global trade*
- *Promoting broader participation, equity and readdress in the economy*
- *Contributing to Africa's development and regional integration within the New Economic Partnership for African development (NEPAD)''.*
- Over the medium term, **the dti** will undertake programmes and interventions within the above mentioned structural framework along the following themes:
 - Industrial Development : Focus on policies to promote competition, enterprise development and efficient administration within the South African economy
 - Trade, Investment and Exports: Maintain and enhance trade relations with important economies, while fostering African development, in terms of regional and continental integration such as through NEPAD
 - Broadening Participation: Develop strategies that promote an economy with equality, empowerment and growth
 - Regulation: Ensure strategies and programmes which allow for transparency and predictability in terms of the economy and economic services
 - Administration and Co-ordination: Run Departmental programmes which are co-ordinated and have efficient implementation support.

2.2 Obligations in respect of environmental management and governance

2.2.1 Constitution

There is an overarching suite of legislation in place in South Africa that supports the implementation of sustainable development underpinned by the Constitution. The Constitution of South Africa (Act 108 of 1996) enshrines human rights, including human dignity, justice and fairness, and democratic governance. It also guarantees the right to an environment that is not harmful to health or well-being, and the right to have the environment protected while promoting justifiable economic and social development.

2.2.2 National Framework on Sustainable Development

South Africa has made significant strides in placing sustainable development on the political agenda, with the National Framework for Sustainable Development (NFSD) embodying these efforts. The intention of the framework is to 'enunciate South Africa's national vision for sustainable development and indicate strategic interventions to re-orientate South Africa's development path in a more sustainable direction'. The sustainable development vision for South Africa as articulated in the NFSD is presented in Box 1 below. A process for the elaboration of the NFSD is underway under the leadership of the DEA.

- **Box 1: South Africa's Sustainable Development Vision**

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.

Source: Extracted from the National Framework for Sustainable Development in South Africa, 2008

2.2.3 NEMA

- NEMA is the primary legislation which gives every South African and future generations of South Africans the right to an environment that is not harmful to their health and well being. Any law which compromises this right can theoretically be over-ruled by NEMA. The Act entails transparency on environmental aspects of governance. Therefore the following principles of NEMA need to be embodied in the environmental objectives and targets of **the dti**:
 - Public participation in environmental governance, and recognising that people and their needs are most important; youth and women's participation should be promoted
 - Development that is sustainable and non-destructive and which integrates environmental management
 - Pursuing of environmental justice, so that environmental costs are not borne by the poor while the rich get all the benefits
 - Equity regarding access to environmental resources
 - The environmental health aspect of the project must run for the life of the project
 - Decisions must take note of all the concerns of interested and affected parties (IAPs), and conflicts between IAPs need to be resolved
 - Environmental education must ensure empowerment and well being
 - All impacts on the socio-ecological environment must be assessed
 - Laws and policies must be harmonized
 - Global responsibilities must be upheld
 - The environment is held in public trust, and the polluter pays for damages to the environment
 - Sensitive ecosystems must get special attention.

2.2.4 King Code of Governance for South Africa

The King Code of Governance for South Africa deals with the duty of care, skills and diligence, as well as fiduciary duties which make for good governance of organisational structures and processes. It also deals with the establishment of structures and processes along with appropriate checks and balances to strengthen compliance with legislation. This applies to all aspects of governance of **the dti** and its agencies, including environmental governance. The King III Report on Corporate

Governance incorporates changes to the new Companies Act No. 71 of 2008 as well as international governance trends applicable to the operation of **the dti**. The King Code of Governance incorporates the need for sustainability reporting by organisational structures.

2.2.5 International obligations and processes

International environmental governance for the protection of the global environment has been prompted by such problems as climate change and depletion of natural resources. Intergovernmental initiatives fall under the umbrella of the United Nations and incorporate the United Nations Environmental Programme (UNEP) and the United Nations Development Programme (UNDP). South Africa has committed to international environmental governance through means including hosting of the 2002 World Summit on Sustainable Development and through participation in multilateral environmental agreements (MEAs) and protocols. The body of environmental law relevant to South Africa is contained in numerous MEAs, selected ones of which are listed in Appendix A.

South Africa has taken a strong leadership role in the Copenhagen Accord by pledging to 36% reduction in carbon emissions by 2020, and 42% reduction by 2025, contingent on receiving finance and technology from developed countries. South Africa's National Planning Minister has further been appointed as a member of the High-Level Advisory Group on Climate Change Financing. This group, launched by the United Nations Secretary-General is aimed at mobilising financing to assist developing countries with combating climate change.

the dti in partnership with other departments plays an active role in international environmental processes and the MEAs. The environment section within IDD has the role of facilitating the alignment of industrial and environmental policies including the MEAs. The increase of South African exports, particularly of value-added products, can be impacted by environmental non-tariff and technical barriers to trade unless these are well managed. The challenge of balancing trade and the environment is dealt with in the Doha Ministerial Declaration, which determines the relationship between World Trade Organisation rules and MEAs, tariff and non-tariff barriers to environmental goods and services.

2.3 EIP related activities in the dti

National Treasury is rolling out an Environmental Fiscal Reform Strategy, which seeks to merge financial and environmental policy measures and forming a fiscal basis for expanding environmental initiatives. This process will occur over a number of years in order to be in tandem with national industrial development targets. The NIPF is the primary instrument guiding the activities of **the dti**. Although no overt mention is made of the environment in the NIPF, environment implicitly underlies the framework such as through a stable and supportive macroeconomic and regulatory setting, as well as via innovation and technology. In terms of Section 24 of the Constitution and NEMA, **the dti** is required to ensure that a sound balance is maintained between environmental and socio-economic aspects in all policies, plans, programmes and decisions. **The dti** approach mainstreams environmental outcomes in the course of carrying out its core functions (encouragement of investment and granting of incentives) and currently tends to be driven by a 'bottom-up' approach. Environmentally related activities for **the dti** broadly fall into the following themes which are outlined further below:

- Energy and water efficiency, waste minimization, recycling
- Industrial development and investment
- Energy supply
- Trade
- Innovation and technology
- Infrastructure and buildings
- Tourism.

the dti's primary environmental programme is the National Cleaner Production Center (NCPC) established during the 2002 World Summit on Sustainable Development. The NCPC provides technical support to encourage existing industries to implement Cleaner Production (CP), an internationally recognized concept to bring about savings, increase competitiveness and elevate companies to higher levels of resource and energy efficiency. The priority sectors piloted by the NCPC were textiles, agro-processing and chemicals. Through the MTEF process in coordination with IPAP and in line with the Customised Sector Programme (CSP), **the dti** has now increased the NCPC's baseline with the aim of extending CP services to all industry sectors supported by IPAP. In response to the National Climate Change Response Strategy (2004), **the dti** has further conducted a study towards development of an industrial climate change response plan. 'Green jobs' and 'climate change' responses are still in their development stages and will be up-scaled during the 2009-2014 EIP. Actions include the support of several renewable energy initiatives.

the dti plays a key role in providing standards and certification for environmental management in South Africa. Agencies directly involved are the South African Bureau of Standards, South African National Accreditation Systems, as well as the National Regulator for Compulsory Specifications and National Metrological Institute of South Africa.

Although Integrated Environmental Management (IEM) is not necessarily being widely applied within **the dti**, the possibility of introducing environmental management in a comprehensive manner is being explored. Recommendations in this regard are contained in Section 7 of this EIP.

2.3.1 Energy and water efficiency, waste minimization, recycling

The National Cleaner Production Centre is **the dti's** key environmental implementation programme. CP is closely related to Sustainable Consumption and Production (SCP). SCP involves the production and use of goods and services that address basic needs and improve quality of life, while minimising the use of natural resources, toxic materials and release of wastes over the life cycle of the activity. The main objective of SCP is to promote social and economic development within the carrying capacity of ecosystems and to de-couple economic growth from environmental degradation. This initiative is highly relevant to South Africa and the work of **the dti** given the resource intensive nature of production in South Africa

The idea behind CP is to encourage industries to implement more sustainable and efficient production plants and processes and to deliver environmentally responsible products, thus incurring

savings, increasing competitiveness and elevating companies to higher levels of resource and energy efficiency.

NCPC's modus operandi is to engage sector associations and dti CSP desks to introduce the concept of CP. On basis of the multiple benefits to bottom line and to the environment the CSP desks and the sector associations are requested to encourage its members (enterprises) to participate in CP. This opens the door for NCPC to enter into Memoranda of Agreement (MOA) with individual enterprises, conduct CP audits and provide expert advocacy on efficiency improvement options. The role of the NCPC ends with delivering a report of findings along with CP recommendations to the CEO. It is the prerogative of the entity to implement the recommendations fully or in a phased or partial way. NCPC has created a dedicated section for the promotion of recycling, and will follow a participative process for developing terms of reference and an action plan

Energy efficiency

Prompted by the energy crisis in South Africa during 2008-2009 there has been a concerted effort to move towards energy efficiency. The Energy Efficiency Strategy of 2005¹ was the first major step forward in South Africa that linked energy development with national socio-economic development plans. It made clear and practical guidelines for the implementation of efficient practices within South Africa's economy, which includes the setting of governance structures for activity development, promotion and coordination. While the strategy aims to contribute towards affordable energy for all, it is also focused on minimising the negative effects of energy usage upon human health and the environment. The strategy proposes a final energy demand reduction of 12% by 2015 for South Africa.

Greater energy efficiency is being achieved largely via enabling instruments and interventions aimed at reducing energy demand. Some key initiatives include: the Electricity Conservation Programme, National Energy Regulator of South Africa's electricity rationing in terms of the Electricity Regulation Act of 2006² as amended, as well as various Eskom and local government programmes aimed at customer behavioural change such as the use of energy-saving light bulbs and the implementation of a solar water heating programmes. A further energy saving initiative of the Department of Energy is the retrofitting of government buildings to make them more energy efficient.

Renewable energy has been recognised in the Integrated Energy Plan (IEP) of the Department of Energy, so as to balance energy demand with supply resources while considering safety, health and the environment. One key element of this programme is entrepreneurship and innovation of South Africa's industrial and financial sectors. Another is the development by the Government of

¹Department of Mineral Resources (2005). Energy Efficiency Strategy of the Republic of South Africa. Department of Mineral Resources, March 2005

² Electricity Regulation Act [No. 4 of 2006]

appropriate policies and frameworks that would encourage and guide the private sector. These are insufficient at present as renewable energy resource development in South Africa is still in its infancy. Renewable energy development will require financial incentives in order to succeed in South Africa.

The National Climate Change Response Strategy (2004) addresses issues that have been identified as priorities for dealing with climate change in South Africa. It aims to achieve national and sustainable development objectives while simultaneously responding to climate change. Recent years have seen carbon trading become more viable as a solution to increasing global carbon emissions associated with climate change. Clean Development Mechanism projects have increased substantially and the trade of carbon permits is encouraged in developing and developed nations. Key aspects to note are as follows:

- South Africa has committed a 34% emission reduction below business as usual by 2020 and 42% by 2025. Emissions would peak between 2020 and 2025, stabilize for 10 years and then decline thereafter. The adoption of these commitments are dependent of the outcome of negotiations at the Conference
- The possibility of a carbon tax being imposed on businesses by the South African government. This is being explored by the Ministry of Environmental and Water Affairs in follow-up to the proposal by the previous Minister of Finance
- Prompt action towards a low-carbon economy reduce the number of certain traditional jobs, but new jobs in emerging industries would be created to make up for the earlier losses.

the dti can play a role in energy strategies through its industrial and trade programmes

Water efficiency

The National Water Act (Act No. 36 of 1998) was enacted on the understanding that water is scarce and unevenly distributed in South Africa and has been subjected to unequal access in the past. The ultimate aim of water resource management is recognised in the Act to achieve the sustainable use of water for the benefit of all users. Also fundamental to the Water Act is the emphasis on the need to protect the quality of water resources, by the prevention of pollution at source, including for the benefit of other countries situated downstream of South Africa. These considerations relating to water are clearly central to the issues which must be addressed in **the dti's** EIP.

A NEDLAC process is underway to propose a National Water Efficiency Accord that encourages voluntary industry participation. Water efficiency targets will be pursued on voluntary basis.

Waste minimization

The Waste Act (Act No 59 of 2008) came into effect in 2009 in terms of NEMA. It was enacted to give effect to the protection of the environment and health and well being of South Africans, while promoting justifiable economic development. The Act sets out the approach for the sound management of pollution and waste. It determines the hierarchy for waste management and prioritizes waste prevention, reuse, recycling and recovery, followed by thermal treatment and landfill only to be used as a last resort. Effective waste services are covered in the Act, as are the remediation of contamination and the achievement of integrated waste management and reporting.

Whereas the term 'Waste minimisation' in the Act refers to reducing the volume of waste being land filled, waste minimisation can also refer to prevention of waste at source. CP offers options for implementing waste avoidance, minimization and recycling. As legislation is promulgated / updated, the NCPC aligns its approach in order to stay relevant in South African context.

E-waste is the term used to describe any discarded product which has an electrical power element. Electronic Waste South Africa (or EWASA) is trying to bring attention to the environmental risk of e-waste, which will become more prominent as technology is ever growing. South Africa has yet to develop an e-waste policy, but this is becoming increasingly urgent in the light of the need to combat trafficking of hazardous waste highlighted in the Basel Convention. The donation or sale of old and outdated electronics such as computers poses a huge e-waste risk to South Africa.

The operations both within **the dti** and through its agencies offer an across-the-board opportunity for implementation of the Waste Act in terms of the waste hierarchy, use of waste as a source of energy, and where unavoidable, the sound disposal of waste. Although there is some effort to ensure sound management of waste, there is much that still needs to be done first and foremost to avoid waste and secondly to recover and recycle waste.

Management of air pollution is a key component to waste minimization. The Air Quality Act (Act No. 39 of 2004) was enacted in terms of NEMA. The preamble of the Air Quality Act notes that its purpose is to reform the law regulating air quality so that the environment can be protected by reasonable measures preventing pollution and ecological degradation while allowing justifiable economic and social development. It further provides for national norms and standards regulating air quality monitoring, management and control by all spheres of government, as well as for specific air quality measures. The management of air quality is of key importance to **the dti** projects and agencies such as manufacturing which have an impact on air quality.

With its support to industry in the form of CP audits and advocacy, **the dti** aims to encourage an integrated preventive strategy towards environmentally sustainable processes, products and services. Through CP **the dti** further aims to simultaneously optimise the utilisation of resources thus incurring savings. CP also encourages industry and businesses to become competitive and productive on a greener level of business. The NCPC reports to and is guided by **the dti** Industrial Development Division (IDD) as well as private sector and other public sector entities and events including research, policy making, project financing and implementation. In addition, universities, research institutions and privately owned consulting firms carry out cleaner production related research and create awareness about standards and best practices.

Recycling

In the light of the cost of environmentally sound waste transportation and disposal, the most cost effective approach to waste management is minimisation at source by application of cleaner production principles. Recovery and recycling of recyclables further reduces volumes of waste to landfill. Recycling can be seen as repeated beneficiation of extracted natural resources, therefore taking maximised value addition to higher levels. Recovery and recycling furthermore serve to increase job and export opportunities, as well as extend the useful life of landfills.

the dti have established a Recycling Desk at the NCPC, the aim of which is to contribute to creating an enabling environment for the recovery and recycling of waste. The establishment of the Recycling Desk coincided with the new drive for environmentally related employment through the National Programme of Action for Green Jobs.

2.3.2 Industrial development and investment

In support of the NIPF, the industrial upgrading programme includes the Manufacturing Excellence Programme and the proposed Technological Infrastructure Fund to facilitate specific skills centres and centres for research excellence. These programmes represent further opportunity for mainstreaming environmentally sustainable technologies.

There are a number of green products and services on the global market. Given the momentum on an international scale, it would be in South Africa's interests to grow this sector. Incentives to stimulate the growth of the environmental goods and services (EGS) sector have potential to be rolled out within **the dti's** programmes and projects.

the dti is implementing specific strategies and programmes in an attempt to dull the effects the economic crisis has had on the South African economy. The National Programme of Action (POA) for Green Jobs is operating in association with programmes such as the Expanded Public Works Programmes (EPWP) to promote employment and to reduce illegal imports and fraud which jeopardize local production and jobs. This action also provides further opportunity for the development of achievable environmental objectives, targets and indicators in line with the work of **the dti**.

The IDD's proposed Green Jobs Action Plan is intended as **the dti's** vehicle for green jobs. The introduction of green jobs will allow for environmental goods and services to have greater influence in the economy. A green job in any sector is one which contributes to preserving or restoring the environment. Developed in South Africa as a response to the economic crisis, the green jobs initiative seeks to speed up the growth and transformation of the economy so as to create employment and sustainable livelihoods as well as to explore and develop potential areas where green jobs can be introduced. Green jobs are linked to the United Nations Environmental Programme drive for a Global Green New Deal (GGND). This is encouraging transition into greener economies. The GGND is promoting the transformation towards more sustainable economies.

The NIPF highlights difficulties with price and quality of infrastructure for trade and development. The efficiency of basic rail and port infrastructure, and the availability of broadband telecommunications represent cross-cutting constraints for the country. Themes relating to sustainable environmental management outlined in this report need to be rolled out via upgrades in national infrastructure. The infrastructure and building management activities of **the dti** premises themselves both locally and internationally further represent a major opportunities for mainstreaming of greening including through energy efficiency as well as waste avoidance/minimization. Implementation of these aspects can be achieved through measures such as green accounting, sustainable public procurement and green design.

The IPAP2 tabled at Parliament in February 2010 highlights increasing concerns in relation to carbon emissions and climate change, associated with threats posed via 'eco-protectionism' such as through carbon taxes and restrictive standards. Opportunities are also recognised for the development of 'green' and energy efficient industries, particularly relevant given electricity tariff increases. The high solar intensity in southern Africa is noted to present an important opportunity such as for solar water heating and concentrated solar thermal technologies. Other areas for which Key Action Programmes are set out in the IPAP2 deal with improved industrial energy efficiency, water efficiency, waste management and energy-efficient vehicles.

2.3.3 Energy supply

While South Africa uses approximately 40% of Africa's electricity, the country is in an energy crisis with the reserve margin of electricity supply being unsustainably low. The NIPF stresses the urgency of supplying sufficient and cost-effective energy via a reliable distribution system and the government and Eskom have committed to increasing energy capacity, but improved energy efficiency through the National Energy Efficiency campaign is a critical component to attaining sustainable energy supply. The crisis reached a head in 2008, when the energy supply to mines was drastically reduced for a period. Although the power cuts were detrimental to the economy, they provided impetus to the search for sustainable energy supplies to meet South Africa's medium-term energy supply requirements. The South African industry and the Department for Trade and Industry, in close collaboration with the Department of Minerals and Energy, set in motion the urgent implementation of an industrial energy efficiency project to be achieved through energy management standards. The Eskom Supply Side Management Strategy for power generation was initiated to address constraints in energy supply, is expected to continue until 2012. Eskom's strategy is working to effect a reduction of 3 000MW by March 2011 and a further 5000MW by March 2026. This involves the installation of energy-efficient technologies to alter the load and demand profile of Eskom.

Innovations for the long term in clean coal technologies, nuclear energy, renewable energy and the promise of the hydrogen economy further received a boost through the energy crisis. These developments are in line with South Africa's commitment to the Johannesburg Plan of Implementation developed during the 2004 World Summit on Sustainable Development, *inter alia* to diversify energy supply by developing advanced, cleaner, more efficient & affordable and cost effective energy technologies.

2.3.4 Infrastructure and buildings

Green reporting and accounting

The King III Report gave rise to an initiative of the Johannesburg Stock Exchange (JSE) to make sustainability reporting a compulsory requirement for listed companies. This directive provides industry with clear guidelines for environmentally responsible conduct. A further key initiative is the Carbon Disclosure Programme which although voluntary has made a profound contribution to climate change awareness and understanding of the trade implications of carbon footprint in particular. Other development indicators which could have relevance to **the dti** make use of natural resource accounting.

Sustainable public procurement

Sustainable public procurement (SPP) could contribute to expansion of the environmental goods and services market in the country. In addition to furthering job creation in the form of green jobs, SPP would aid in the attainment of environmental policies, particularly in the fields of environmental conservation, energy efficiency, water stability and waste management. **The dti**, as a custodian of the environmental goods and services sector, can play a critical role in the mainstreaming of SPP in South Africa.

SPP revolves around the acquisition of goods and services in a way which enables maximum efficiency. Inherent in the approach is the achievement of national governmental targets in economic growth, job creation, poverty alleviation, trade and industry growth, as well as in sustainable development. Though effective, there is a general lack of awareness of SPP in South Africa. The best known initiative in the international arena is Preferential Public Procurement (PPP) legislation. This is an initiative similar to BEE in the sense that the project exists socially to uplift previously disadvantaged members of the business world.

The *Green Paper on Public Sector Procurement Reform*³ released in 1997 states that “Organs of State can encourage their suppliers, service providers and contractors to behave in an environmentally friendly way by integrating environmental concerns within their procurement activities. Government is tasked to implement policy to ‘influence the behaviour of vendors to: comply with all environmental legislation; offer less environmentally damaging products and services; and develop products from recycled materials’. Moreover, the Black Economic Empowerment Codes of Good Practice, which were released by **the dti** in 2007, have begun to impact on supply chain management.

2.3.5 Innovation and technology

The NIPF emphasises the importance of pockets of technologies which give South Africa an advantage, along with the need for stronger product support for development of intellectual property. Opportunities exist for development of technologies for energy and water efficiency, waste minimization and recycling including through the Support Programme for Industrial Innovation (SPII) and Technology and Human Resources for Industry Programme (THRIP).

Green design

Green living and design is a grassroots approach to implementing the use of sustainable, environmentally friendly design at all levels of development and operation. Its implementation reduces environmental harm from unsustainable infrastructure and objects. In line with the resource and energy efficiency key focal areas of **the dti**, green design can often prove to be cheaper than conventional design methods in the longer run. Green building, a component of green design

³Ministry of Finance (1997). *Green Paper on Public Sector Procurement Reform in South the Ministry of Public. Africa. (Joint publication). Works, RSA. 1997.*

involves construction of environmentally friendly infrastructure which is sustainable and functional. It has broad application and covers aspects including water harvesting, alternative energy and energy efficiency including passive design measures such as building orientation to minimize heat loss and gain.

2.3.6 Tourism

The important economic role played by the tourism sector has prompted the prioritization of tourism within South Africa. **the dti** has introduced the Tourism Support Programme (TSP) to incentivize the development of tourism to stimulate jobs and promote geographic spread of tourism investment. Conditions of approval relate to employment creation, Broad Based Black Economic Empowerment (BBBEE), location and investment. The sustainability of the tourism industry can be further promoted by **the dti** such as through the promotion of green jobs, as well as through mainstreaming of energy and water efficiency, waste minimization and recycling.

2.3.7 the dti's involvement in environmental legislation

As indicated in the 2005-2009 EIP, **the dti** has no environmental policies and legislation directly under its control, and does not have a mandate to develop formal environmental policies and legislation. **the dti** relies on other government departments to develop environmental policy and legislation, and where necessary, participates in the development of these policies and legislation. **the dti** respects the role of the DEA as the lead agent in the development of environmental policy in South Africa, and has participated in development of multilateral and bilateral agreements as well as DEA policy and legislation including:

- Signing and ratifying by South Africa of the Stockholm Convention, as well as South Africa's acceding to the Rotterdam and Basel Conventions, as well as the Montreal Protocol. These are the Multilateral Environmental Agreements relevant to the trade of chemicals and waste. In this regard, **the dti** is a central role-player on the National Committee for Chemicals Management.
- The development of Integrated Waste Management policy
- Environmental Impact Assessment legislation
- Policy regarding the use of substances such as lead in paint and use of asbestos in South African industry.

3 Policies, strategy, structure and programmes that may have environmental implications

3.1 Policy

The South African economy has shown significant signs of growth since the beginning of the new millennium which can be attributed to a positive political transition, sound macro-economic policies and favourable global economic conditions. To ensure sound employment and sustainable gross domestic product (GDP) growth, **the dti** has contributed to the coordinated implementation of the National Industrial Policy Framework (NIPF) and its implementation strategy, the IPAP.

3.1.1 The National Industrial Policy Framework

The NIPF was developed by **the dti** in order to address binding constraints to growth, particularly regarding sector development strategies and development of new enterprises. The NIPF's core

objective is to set out government's approach to South Africa's industrialization path via alignment of private and public sector initiatives. The Framework aims to facilitate diversification beyond South Africa's current reliance on traditional commodities and non-tradable services. One key objective is to identify potentially competitive non-traditional tradable goods and services and to increase employment through value-addition in these industries. The NIPF also seeks to promote the intensification of South Africa's industrialization, emphasizing tradable labour-intensive goods and services to catalyze employment creation. Historically disadvantaged economic citizens are prioritized with a strong emphasis on building regional productive capabilities. The primary focus is on the relatively low-skill intensity industries, goods and services in the primary, manufacturing and services sectors of the economy.

3.1.2 The Medium-Term Strategic Framework

Key aspects of the MTSF for 2010-2014, and which are pertinent to the EIP include:

- The current challenging context brought about by the global financial melt-down and economic melt-down, and hence the urgent need for job creation with interventions provided through the IPAP2
- Roll-out of various financial support programmes including the Automotive Production and Development Programme, the Clothing and Textile Production Incentive and the Enterprise Investment Programme
- The need for South-South Trade to be boosted so as to diversity and increase South Africa's exports, along with the consolidation of the SADC Free Trade Area and the trilateral SADC, East African Community and Common Market for Eastern and Southern Africa
- Improving support for SMMEs including through the assistance provided by the Co-operatives Development Agency.

The Tables in Section 3.4 below integrate these aspects into the environmental objectives contained in this EIP.

3.1.3 Response to the economic downturn

The prevailing global economic crisis has threatened the industrial base of South Africa's economy and resulted in a jobs crisis. Manufacturing production has significantly decreased, including for chemicals, mining, automotive, textiles and steel production sectors. This has prompted the development of a framework which provides for urgent interventions to buffer the South African economy and society. This framework covers public investment in infrastructure to support private and public job preservation and creation, as well as the deployment of aggressive macroeconomic policies. While necessary for ensuring economic growth, this approach could have major ramifications for environmental management and opportunities need to be sought to integrate sustainability. **the dti** has endeavoured to achieve this via initiatives including 'green jobs'.

3.2 Strategies

The NIPF focuses on identifying and addressing the cross-cutting and sector-specific constraints and opportunities relevant to the industrial economy through thirteen strategic programmes as follows:

SP1: Sector Strategies

SP2: Industrial Financing

SP3: Trade Policy

SP4: Skills and Education for Industrialisation

SP5: Competition Policy and Regulation

SP6: Leveraging Public Expenditure

SP7: Industrial Upgrading

SP8: Innovation and Technology

SP9: Spatial and Industrial Infrastructure

SP10: Finance and Services to Small Enterprises

SP11: Leveraging Empowerment for Growth and Employment

SP12: Regional and African Industrial and Trade Framework

SP13: Coordination, Capacity and Organisation.

Principles for industrial and sector strategies for **the dti** are set out in the NIPF and have far-reaching implications (both direct and indirect, positive and negative) on environmental management. The principles represent best-practice and lessons such as those learned from the Newly Industrialized Countries (NICs) and identify the need for:

- Diversification of the economy from the mineral and agricultural base
- Sustainable stable, well-run and supportive macroeconomic policy and an investor-friendly business environment
- Intensive and customised research to develop a strong understanding of the industrial environment
- Industrial financing to address specific constraints and opportunities within the WTO rules.
- Much stronger systems for incentive design, implementation, performance monitoring, enforcement of compliance, regular reporting, periodic review and adaptation and impact assessment has been identified.

- Government departments to take account of the possible impact of policy measures on the industrial policy objectives for the economy. Further, the design and implementation of government regulations should take into account both of the intended and unintended requirements and costs it may impose on the private sector.
- The department leading the implementation of strategy skills, infrastructure and technology development must have a sufficiently strong leadership and coordination capacity.

In accordance with its mandate **the dti** has prioritised a number of economic sectors for focused intervention for accelerated development. These sectors are identified in the Integrated Manufacturing Strategy as: Clothing and Textiles; Agro-processing; Metals and Minerals; Tourism; Automotive and Transport; Crafts; Chemicals and Biotechnology, and Knowledge Intensive Services.

3.3 Structure

the dti structure is composed of programmes (divisions), public entities and development finance institutions. Approximately 40% of **the dti** budget is transferred to **the dti** Group which comprises a range of statutory institutions including development finance, regulatory agencies and specialist service providers. The Council of Trade and Industry Institutions (COTII) comprises **the dti** Executive Board, COOs and Chairpersons of each of the institutions to ensure the alignment of the activities of **the dti** Group with departmental objectives. The structure of **the dti** has recently been revised to include the Group Chief Operating Officer who has oversight of all divisional operations. Each division has its own Deputy Director General who reports to the Director General.

3.4 Programmes

To achieve its mandate, **the dti** is divided into 8 programmes (divisions), each with its own strategic objectives. The objectives serve to allocate responsibilities for the development of the national economy and **the dti** itself. The programmes are further divided into 26 business units responsible for delivery by **the dti**. These programmes are further sub-divided into focused sub-programmes (Sections) which are agenda-specific. Each programme has been assigned a specific budget, measurable objectives, projected outcomes and annual targets for the 2009/2012 reporting period. Figure 3-1 depicts the structure of **the dti** as relates to the programmes. Tables 4-1 to 4-8 outline the sub-programmes, impacts, environmental objectives, and indicators for the programmes. Environmental objectives, targets and indicators have been closely modelled on the objectives for divisions contained in the 2010-2013 MTSF. As such they are in line with the core work of the dti. Further information provided relates to the relevant legislative requirements. It should be noted that all of the principles contained in NEMA apply to the environmental impacts of the programmes and sub-programmes, and the tables below only highlight those that are of particularly high relevance.

3.4.1 Administration

The Administration Programme provides strategic leadership to **the dti** and its agencies. Administration of **the dti** is carried out by the following departments which are not divisions and as such do not have tables with objectives and targets defined in the MTSF:

- Office of the Director General (ODG)
- Group Chief Operating Officer (GCOO)
- Strategy Unity
- Agency Management
- Impact Assessment Unit
- Chief Audit Executive
- Economic Research and Policy Coordination (ERPC) Unit.
- The Group Systems and Support Services Division (GSSSD) is a further key component to the Administration Programme, and as a division has objectives and targets defined in the MTSF.

The ODG has not up until now taken a strong lead on directing environmental strategy within **the dti**, although along with the GCOO, the Strategy Unit and ERPC there is growing recognition of the role which can be played in guiding future environmental progress. The GSSSD has a clear role to play with the facilitation and management of environmental reporting. The Impact Assessment Unit can lead the determination of the effectiveness of the environmental policy, projects and objectives of **the dti** while the Chief Audit Executive could extend its mandate to include audit of reporting in terms of the EIP.

Below outlines the sub-programmes of the **the dti** divisions and provides an outline of potential environmental impacts arising from the sub-programmes. Environmental objectives, timeframes and indicators are identified to address the impacts.

Table.4-1: Environmental impacts, objectives, timeframes and indicators for sub-programmes of ODG

Office of the Director-General (ODG)										
Sub-programme/ project	Potential environmental impacts	Environmental objective	Applicable legislative requirement	Expected outcomes	Responsibility	2010/2011 Target	2011/2012 Target	2012/2013 Target	2013/2014 Target	Performance indicator/measure
Strategy/ Sustainability	Lack of comprehensive and overarching environmental framework and policy for the dti could result in uninformed and ad hoc decision-making which could increase the risk of environmental impacts	Develop a Departmental Sustainability Framework and Environmental Policy for the dti, as well as a strategy which informs the implementation of the EIP	NEMA: S 2 (4) (b) ; (k); (l); (m); (o)	Improved coordination and coherence of environmental policy	GCOO	Draft business case model and Capacity building	Conceptualise Departmental Sustainability Framework and Environmental Policy	Develop the Departmental Sustainability and Environmental Policy	Roll out the framework and the policy	Departmental Sustainability Framework and Environmental Policy developed

Table.4-2: Environmental impacts, objectives, timeframes and indicators for sub-programmes of the GSSSD

Group Systems and Support Systems Division (GSSSD)										
Sub-programme/ project	Potential environmental impacts	Environmental objective	Applicable legislative requirement	Expected outcomes	Responsibility	2010/2011 Target	2011/2012 Target	2012/2013 Target	2013/2014 Target	Performance indicator/measure
Corporate governance and risk management	Inadequate monitoring, evaluation, reporting and review of functions and sub-programmes could increase the risk of environmental impact through the activities of the dti	Incorporate environmental issues into risk management and reporting systems	NEMA: S2. (4) (e); (k); (p)	Reduced and better management of environmental risk	COO/DDG	Sensitise divisions to environmen tal risks and managemen t thereof	Conceptualise incorporation of environmental risk into the risk management reporting system	Develop the integrated risk management system	Implement the integrated risk management system	Evaluation report which identifies gaps and opportunities for integrated environmental management
Accommodation services and space	Inefficient use of resources (energy) by the dti will increase the environmental footprint of the dti and contribute to degradation of the environment	Enhance and strengthen the implementation of sustainable energy technologies in the dti's national and international offices	NEMA : S4(a) (iv); (v); (vi)	Reduced energy consumption on dti premises	COO/DDG	Monitoring of energy consumption and review of targets based on current baseline	Achievement of determined target	Achievement of determined target	Achievement of determined target	Monitoring of energy consumption and review of targets based on current baseline
Accommodation services and space	Inefficient use of resources (water)	Continue to implement water-saving measures in the dti's national and international offices		Improved water use efficiency on the dti premises	COO/DDG	Investigate and implement mechanism for audit, target- setting & monitoring of water	Meet determined water-saving target	Determined water saving target met	Determined water saving target met	Monitoring of water consumption in place and achievement of reviewed targets

Group Systems and Support Systems Division (GSSSD)										
Sub-programme/ project	Potential environmental impacts	Environmental objective	Applicable legislative requirement	Expected outcomes	Responsibility	2010/2011 Target	2011/2012 Target	2012/2013 Target	2013/2014 Target	Performance indicator/measure
						use				
Accommodation services and space	Waste generation and minimization	Ensure the environmentally sound reuse/recycling/ disposal of waste generated by the dti's national and international offices in accordance with the waste hierarchy	NEMA 2. (4) (a) i-viii; (b); (e); (f) NEM: Waste Act: S16; S17; S18	Improved management of waste on the dti campus in accordance with the waste hierarchy	COO/DDG DEA and Business	Conduct audit to determine the volume of paper and waste paper generated on the dti campus	Ensure proper management of waste	Effective management of waste	Effective management of waste	Monitoring of paper consumption in place and achievement of review targets set based on current baseline
Procurement	Develop and implement green procurement strategy for the dti	Improved environmental footprint of the dti premises arising from green procurement		Improved environmental footprint of the dti premises arising from green procurement	COO/DDG DEA and CSIR	Develop a phased strategy for green procurement for the dti	Implement the phased green procurement strategy	Implement the phased green procurement strategy	Implement the phased green procurement strategy	Green procurement strategy developed and implemented maintenance and retrofitting programmes implement sustainable technologies
Procurement	Increased carbon footprint of the dti	Improved environmental footprint of the dti premises arising from green procurement		Improved environmental footprint of the dti premises arising from green procurement	COO/DDG DOT All Government Departments	Review of transport tender in consultation with DOT to incorporate technical requirements for green procurement	Review of transport tender in consultation with DOT to incorporate technical requirements for green procurement	Review of transport tender in consultation with DOT to incorporate technical requirements for green procurement	Review of transport tender in consultation with DOT to incorporate technical requirements for green procurement	Improve the environmental footprint of the dti

Group Systems and Support Systems Division (GSSSD)

Sub-programme/ project	Potential environmental impacts	Environmental objective	Applicable legislative requirement	Expected outcomes	Responsibility	2010/2011 Target	2011/2012 Target	2012/2013 Target	2013/2014 Target	Performance indicator/measure
Information technology services	Waste generation and minimization	Promote avoidance and minimization of waste including ongoing use of a paperless system in the dti's national and international offices	NEM: Waste Act: S16; S17; S18	Improved natural resource use efficiency on the dti	COO/DDG SALGA, DEA and COGTA	ECM training and awareness sessions . Formal endorsement of ECM by Executives. Roll out of the tool to all international offices	ECM Training and awareness	ECM Training and awareness	ECM Training and awareness	Service level agreement with waste removal service requiring appropriate reuse/recycling and safe disposal
Information technology services	Waste generation and minimization	Ensure the environmentally sound reuse		Improved natural resource use efficiency on the dti	COO/DDG Business	Donation of old computer equipment to schools, needy organisations, etc.	Donation of old computer equipment to schools, needy organisations, etc.	Donation of old computer equipment to schools, needy organisations, etc.	Donation of old computer equipment to schools, needy organisations, etc.	
Human Resources	Insufficient promotion of environmental awareness amongst employees at all levels within the dti will increase the environmental footprint of the dti and contribute to the degradation of the environment	Promote environmental awareness and understanding of all staff levels and in relevant divisions through targeted training programmes	NEMA 2.(4) (a) i-viii; (b); (e); (f)	Improved environmental awareness	COO/DDG	Liaison with academic institutions on developme nt of course materials on trade & industry in relation to the environmen t	Liaison with academic institutions on development of course materials on trade & industry in relation to the environment	Liaison with academic institutions on development of course materials on trade & industry in relation to the environment	Liaison with academic institutions on development of course materials on trade & industry in relation to the environment	Documented ongoing liaison with academic institutions on the development of new course materials on trade & industry in relation to the environment

Table 43-3: Environmental impacts, objectives, timeframes and indicators for sub-programmes of the IDD

Industrial Development Division (IDD)									
Sub-programme/project	Potential environmental impacts	Environmental objective	Expected outcomes	Responsibility	2010/2011 Target	2011/2012 Target	2012/2013 Target	2013/2014 Target	Performance indicator/measure
Quality Infrastructure and regulations for energy efficiency	Energy-expensive technologies and products can result in inefficient resource use which can cause impacts on the environment	Develop quality infrastructure and regulations for energy efficiency	Energy-efficient technical support and regulations	COO/DDG DoE/ NRCS	Finalize energy-efficient building regulations and compulsory specifications for energy-efficient lamps	Finalise compulsory specifications for appliances Facilitate and advocate for local government implementation of the new energy-efficient building regulations with the NRCS, Dept of Environmental Affairs and local government	Finalise compulsory specifications for equipment Facilitate and advocate for local government implementation of the new energy-efficient building regulations with the NRCS, Dept of Environmental Affairs and local government	Finalise compulsory specification for industrial Motors	Publication in the Government Gazette of energy-efficient building regulations for new buildings including: - Compulsory requirements solar water heaters in new buildings -Energy-efficient lamps - Household appliances and equipment

Industrial Development Division (IDD)									
Sub-programme/project	Potential environmental impacts	Environmental objective	Expected outcomes	Responsibility	2010/2011 Target	2011/2012 Target	2012/2013 Target	2013/2014 Target	Performance indicator/measure
Creation of Renewable and nuclear energy	Reduce reliance on fossil fuels	Reduce reliance on fossil fuels	Local production capacities created/identified and developed to support use of alternative energy sources	COO/DDG DoE, DPE, Eskom	Finalise strategies and source funding to support local production of identified components	Initiate local production of nuclear and renewable energy components	Roll out the local production of renewable and nuclear energy components	Roll out the local production of renewable and nuclear energy components	New industries created in the nuclear and renewable energy sectors
Implementation of Cleaner Production measures	Inappropriate technology is used by industry resulting in inefficient use of resources and higher volumes of pollution	Implementation of cleaner production measures	More industry sectors understanding and adopting cleaner production	COO/DDG DEA and DoE	105 audits in IPAP sectors	130 audits in IPAP sectors	170 audits in IPAP sectors	Continue implementing cleaner production measures	Cleaner production audits and advocacy

Table.43-4: Environmental impacts, objectives, timeframes and indicators for sub-programmes of the CCRD

Consumer and Corporate Regulation Division (CCRD)									
Sub-programme/project	Potential environmental impacts	Environmental objective	Expected outcomes	Responsibility	2010/11 Target	2011/12 Target	2012/13 Target	2013/14 Target	Performance indicator/measure
Disposal and destruction of counterfeit goods by SAPS, with assistance of OCIPE Unit	Possibility of disposal or incineration in non-permitted disposal or incineration facility could impact the quality of air, soil and water	Inform waste disposal teams of the requirements for disposal of counterfeit goods in a suitably permitted waste disposal facility, and to advise them of where these are located	Identification of sites and permits Better controlled environment for disposals Compliance by well informed team	COO/DDG DEA and Municipalities	Allocation of permits and sites Enforcement	Monitoring and evaluation Enforcement	Monitoring and evaluation Enforcement	Monitoring and evaluation Enforcement	List of permitted waste disposal sites by category (dependant on hazard level of waste) and location
		Update the guidelines on responsible waste disposal and incineration for use by SAPS counterfeit goods division	Reduction in non-compliance Informed stakeholders	COO/DDG DEA and Municipalities	Adoption of guideline Consultations	Implementation	Implementation	Implementation	Updated guideline document submitted to SAPS
Consumer protection and awareness	By enhancing consumer protection and awareness, negative behaviours regarding consumption and production can be changed	Build the capacity of dti staff dealing with consumer protection and awareness regarding sustainable consumption and environmental responsibility	Better informed staff able to raise awareness and educate stakeholders	COO/DDG	Education and awareness	Education and awareness	Education and awareness	Education and awareness	Training module on sustainable consumption and environmental responsibility developed and implemented as part of staff induction programme

Consumer and Corporate Regulation Division (CCRD)									
Sub-programme/project	Potential environmental impacts	Environmental objective	Expected outcomes	Responsibility	2010/11 Target	2011/12 Target	2012/13 Target	2013/14 Target	Performance indicator/measure
	Without effective programmes aimed at consumer protection and awareness, people and the environment could be at risk (e.g. unsafe disposal of energy-saving light bulbs)	Ensure that are built into information – sharing and consumer outreach activities (especially to SMMEs)	Educated and compliant stakeholders	COO/DDG	Education and awareness Monitoring and evaluation Compliance	Education and awareness Monitoring and evaluation Compliance	Education and awareness Monitoring and evaluation Compliance	Education and awareness Monitoring and evaluation Compliance	Consumer sharing and outreach presentations include the principles and practices of sound environmental management

Table.4-5: Environmental impacts, objectives, timeframes and indicators for sub-programmes of the EEDD

Empowerment and Enterprise Development Division (EEDD)										
Sub-programme /project	Potential environmental impacts	Environmental objective	Applicable legislative requirement	Expected outcomes	Responsibility	2010/11 Target	2011/12 Target	2012/13 Target	2013/14 Target	Performance indicator/measure
Co-operatives Development Programme	Environmental impacts could result from the unsustainable operation of co-operatives	Co-operatives within the Development Programme are made more environmentally sustainable	NEMA S 2 (4) (f);(p); (q); (r)	Existing self-employment and income generation opportunities for under-privileged communities focus on green jobs and waste recycling	COO/DDG	Training material cooperatives to include a section on waste recycling	Training material cooperatives to include a section on waste recycling	Training material cooperatives to include a section on waste recycling	Training material cooperatives to include a section on waste recycling	Training material cooperatives to include a section on waste recycling
Foundation of African Business and Consumer Services (FABCOS) Academy	Environmentally unsustainable practices by enterprises will result in impacts on the environment	Provision of cleaner production on-site business skills training and mentoring	NEMA S 2 (4)(e); (f);(p); (q); (r)	Cleaner production incorporate into business skills training and mentoring	COO/DDG	Investigate the possibility of including cleaner production training in modules	Investigate the possibility of including cleaner production training in modules	Investigate the possibility of including cleaner production training in modules	Investigate the possibility of including cleaner production training in modules	Module available and up to date
Development of emerging franchise businesses	Environmental and health impacts could result from unsustainable farming and food production processes	Emerging organic food franchise developed	NEMA S 2 (4)(e); (f);(p); (q); (r)	Provision of support and development assistance to emerging franchise support programme	COO/DDG DAFF	Three year strategic and business plan incorporate organic food franchising and finding is sourced	Identify possible organic food franchise system	Identify possible organic food franchise system	Identify possible organic food franchise system	Functional emerging organic food franchise support programme

Empowerment and Enterprise Development Division (EEDD)										
Sub-programme /project	Potential environmental impacts	Environmental objective	Applicable legislative requirement	Expected outcomes	Responsibility	2010/11 Target	2011/12 Target	2012/13 Target	2013/14 Target	Performance indicator/measure
Support Programme for Industrial Innovation (SPII)	Environmentally unsustainable practices by industries will result in impacts on the environment	Enhance support for cleaner technology innovations via the SPII	NEMA S 2 (4)(a) i-viii: (b); (i)	Competitive innovations on cleaner technology assisted via the SPII	COO/DDG	Assist 2 new projects to the total value of R1 million SPII support to develop cleaner technology and green jobs ⁴	Assist 2 new projects to the total value of R1 million SPII support to develop cleaner technology and green jobs ¹	Assist 3 new projects to the total value of R1.5 million SPII support to develop cleaner technology and green jobs ¹	Assist 3 new projects to the total value of R1.5 million SPII support to develop cleaner technology and green jobs ¹	Number of green jobs via SPII support Total value of SPII support to projects assisted with implementation of cleaner technology and green jobs
Technology and Human Resources for Industry Programme (THRIP)	Environmentally unsustainable practices by enterprises and industries will result in impacts on the environment	Implementation of THRIP to include green jobs and cleaner technology	NEMA S 2 (4)(a) i-viii: (b); (i); (j)	Projected outputs for THRIP environmental projects	COO/DDG	8 projects	10 projects	15 projects	20 projects	Number of projects
Technology and Human Resources for Industry Programme (THRIP)	Environmentally unsustainable practices by enterprises and industries will result in impacts on the environment	Implementation of THRIP to include green jobs and cleaner technology		Projected outputs for THRIP environmental projects	COO/DDG DEA/ DST and DED	80 students	100 students	150 students	200 students	Number of students

Empowerment and Enterprise Development Division (EEDD)										
Sub-programme /project	Potential environmental impacts	Environmental objective	Applicable legislative requirement	Expected outcomes	Responsibility	2010/11 Target	2011/12 Target	2012/13 Target	2013/14 Target	Performance indicator/measure
Equity Equivalent Investment Programme (EEIP)	Environmentally unsustainable practices by enterprises will result in impacts on the environment	Mainstream green jobs and cleaner production by multinational firms operating in South Africa	NEMA S 2 (4)(a) i-viii: (b); (i); (j); (n)	Increased participation of and compliance by multinational firms to implementing green jobs and cleaner production	COO/DDG DEA/ DST /DPE and DED	Provide information to multinational firms to focus them on green jobs and cleaner production	Provide information to multinational firms to focus them on green jobs and cleaner production	Provide information to multinational firms to focus them on green jobs and cleaner production	Provide information to multinational firms to focus them on green jobs and cleaner production	Number of multinational firms engaged
Isivande Women's Fund (IWF)	Environmentally unsustainable practices by enterprises will result in impacts on the environment	Financial support for women enterprises through IWF focuses on green jobs and cleaner production	NEMA S 2 (4)(a) i-viii: (b); (i); (j); (q)	Increased financial support from IWF for women enterprises focused on green jobs and cleaner production	COO/DDG DWCPD	Engaging the IDC as Fund manager to support one green project with funding	Engaging the IDC as Fund manager to support two green project with funding	Engaging the IDC as Fund manager to support three green project with funding	Engaging the IDC as Fund manager to support three green project with funding	Number of loans approved
Capacity- building for women in arts and crafts through the Bavumile Programme	Without implementing reuse of waste, there could be increased impacts on the environment	Provide capacity –building for women on use of waste in arts and crafts through the Bavumile Programme		Skilled women entrepreneur in arts and crafts through the Bavumile Programme	COO/DDG DWCPD	Include cleaner production in training material	Include cleaner production in training material	Include cleaner production in training material	Include cleaner production in training material	Training course to include cleaner production

Empowerment and Enterprise Development Division (EEDD)										
Sub-programme /project	Potential environmental impacts	Environmental objective	Applicable legislative requirement	Expected outcomes	Responsibility	2010/11 Target	2011/12 Target	2012/13 Target	2013/14 Target	Performance indicator/measure
Technology for Women in business (TWIB)	Current incubation for technology transfers pays little regard to cleaner process with potential hazardous results	Refine the program to incorporate environmentally friendly approaches.		TWIB Awards will include environmentally friendly criteria	COO/DDG DWCPD	2% of criteria weighting	4% of criteria weighting	6% of criteria weighting	8% of criteria weighting	Percentage of TWIB incubated projects environmentally friendly
Centre for Entrepreneurship Programme	Entrepreneurs who have not undergone training on environmental protection during their training at the Centre will not run companies that sustain the environment	Modify and expand the Centre for Entrepreneurship Programme to incorporate an environmental awareness programme in their curriculum	NEMA S 2 (4)(a) i-viii: (b); (h); (j); (q)	Centre for Entrepreneurship to produce entrepreneurs who are environmentally conscious and friendly	COO/DDG	Investigate possibility to include environmentally friendly training programme in Entrepreneurship programme	Investigate possibility to include environmentally friendly training programme in Entrepreneurship programme	Investigate possibility to include environmentally friendly training programme in Entrepreneurship programme	Investigate possibility to include environmentally friendly training programme in Entrepreneurship programme	Amended Entrepreneurship programme

Empowerment and Enterprise Development Division (EEDD)										
Sub-programme /project	Potential environmental impacts	Environmental objective	Applicable legislative requirement	Expected outcomes	Responsibility	2010/11 Target	2011/12 Target	2012/13 Target	2013/14 Target	Performance indicator/measure
Workplace Challenge Programme	Environmentally unsustainable practices by industries will result in impacts on the environment	Strengthen the implementation of cleaner technologies and production via the Workplace Challenge Programme		Increased implementation of cleaner technologies and production via the Workplace Challenge Programme	COO/DDG Dept of Labour	Workplace Challenge programme to consider to include possible support for cleaner technologies and production , where appropriate	Workplace Challenge programme to consider to include possible support for cleaner technologies and production , where appropriate	Workplace Challenge programme to consider to include possible support for cleaner technologies and production , where appropriate	Workplace Challenge programme to consider to include possible support for cleaner technologies and production , where appropriate	Amendments to the Workplace Challenge

Table.4-6: Environmental impacts, objectives, timeframes and indicators for sub-programmes of TISA

Trade and Investment South Africa (TISA)									
Sub-programme/project	Potential environmental impacts	Environmental objective	Expected outcomes	Responsibility	2010/2011 Target	2011/2012 Target	2012/2013 Target	2013/2014 Target	Performance Indicator/measure
Investment promotion for advanced manufacturing	Manufacturing of technologies reliant on unsustainable energy sources results in pollution which caused impacts on the environment	Investment promotion for manufacturing of cleaner energy/ alternative energy technologies and generation of green jobs	Increased manufacturing of advanced alternative energy technologies Carbon credits	COO/DDG National Treasury and SARS	R6bn Develop strategy for implementation of carbon credits	R12bn Implement strategy for carbon credits	R15bn Implement strategy for carbon credits	R19bn Implement strategy for carbon credits	Value of the projects in the investment pipeline focused on advanced alternative energy sources Strategy for implementation of carbon credits developed and implemented
Investment promotion for manufacturing	Manufacturing of technologies reliant on unsustainable energy sources results in pollution which cause environmental impacts	Investment promotion for manufacturing of alternative energy technologies and generation of green jobs	Increased manufacturing of alternative technologies including solar heating systems and batteries for electric vehicles	COO/DDG	Develop strategy and targets for increased manufacturing of alternative technologies	Implement targets for increased manufacturing of alternative technologies	Implement targets for increased manufacturing of alternative technologies	Implement targets for increased manufacturing of alternative technologies	Value of the projects in the investment pipeline focused on alternative energy sources

Trade and Investment South Africa (TISA)									
Sub-programme/project	Potential environmental impacts	Environmental objective	Expected outcomes	Responsibility	2010/2011 Target	2011/2012 Target	2012/2013 Target	2013/2014 Target	Performance Indicator/measure
Promotion of investment	Regulatory environment not conducive to promotion of sustainable technologies and practices can prolong and promote technologies and practices which are harmful to the environment	Identify and address South African issues which regulatory is preventing environmental targets from being met, and put in place strategy to address these barriers	Improved regulatory environment to allow environmental targets to be met	COO/DDG National Treasury	Identify regulatory issues in south Africa preventing environmental targets from being met, and formulate policy to address these	Roll out of policy	Roll-out of policy	Roll-out of policy	Strategy for addressing barriers to implementation of environmental targets produced and implemented
Promotion of resource-based industries (including mining and metal-based industries, agro-processing and bio-fuels)	Reliance on natural resources can result in natural habitat destruction, as well as pollution of, as well as soil, air, surface and ground – water. It can further result in	Evaluation of the environmental costs and benefits of potential resource-based projects. Improved application of cleaner production Number of	Full accounting , including of opportunity costs, needs to be taken into account during evaluation of investment potential. Increased implementation of cleaner production during manufacturing Shift to green	COO/DDG DAFF COO/DDG	Conceptualise procedure for accounting of costs and benefits of resource-based industries Increased implementation of cleaner production during manufacturing Develop strategy	Implement targets Implement targets for cleaner production Implement targets for	Implement targets Implement targets for cleaner production Implement targets for	Implement targets implement targets for cleaner production Implement targets for	Number of potential investors evaluated using procedure which includes evaluation of environmental risk Number of companies implementing cleaner production Number of green jobs

Trade and Investment South Africa (TISA)									
Sub-programme/project	Potential environmental impacts	Environmental objective	Expected outcomes	Responsibility	2010/2011 Target	2011/2012 Target	2012/2013 Target	2013/2014 Target	Performance Indicator/measure
	reduced land-use potential , for example, due to generation of mine dumps a	green jobs created	economy and Increased number of and jobs in course of promotion of resource-based industries		and targets for generation of green jobs	creation of green jobs	creation of green jobs	creation of green jobs	created
Promotion of services including tourism, logistics and infrastructure, as well as information, communication and technology	Risk of facilitating investment in services including tourism that is not environmentally compliant or sustainable	Improved awareness of the environmental legislative requirements nationally and internationally	Companies and potential investors are aware of the environmental legislative requirements nationally and internationally Increased value of environmentally sustainable projects committed	COO/DD DOT COO/DDG	Develop capacity-building strategy on national and international environmental requirements Conceptualise requirements for promotion of environmentally sustainable projects Brochure on South Africa and sustainable technologies developed and targets for	Implement targets for capacity-building Implement promotional activities Targets for distribution of brochure implemented	Implement targets for capacity-building Implement promotional activities Targets for distribution of brochure implemented	Implement targets for capacity-building Implement promotional activities Targets for distribution of brochure implemented	Presentations and customised sector profiles include national and international environmental legislative requirements Number of promotional activities based on cleaner technology, green jobs, sustainable procurement and environmentally sustainable

Trade and Investment South Africa (TISA)									
Sub-programme/project	Potential environmental impacts	Environmental objective	Expected outcomes	Responsibility	2010/2011 Target	2011/2012 Target	2012/2013 Target	2013/2014 Target	Performance Indicator/measure
					distribution set				practices Number of brochures distributed
Provision of Investment Information: General	Risk of facilitating investment including technology transfer that is not environmentally compliant or sustainable	Publications covering obligations and policy on cleaner technology, green jobs, and environmentally sustainable practices printed and distributed to South African missions, Provincial Investment Promotion Agencies and potential investors	Improved awareness among South African missions, Provincial Investment Promotion Agencies and potential investors	COO/DDG Provincial Economic developments	Environmental obligations incorporated into: Investors Handbook, publication Cost of doing business in South Africa, publication Geared for growth publication Emerging market series by March 2011	Distribution of publications containing environmental obligations	Distribution of publications containing environmental obligations	Distribution of publications containing environmental obligations	Proof of incorporation of environmental obligations into publications and number of these publications distributed

Trade and Investment South Africa (TISA)									
Sub-programme/project	Potential environmental impacts	Environmental objective	Expected outcomes	Responsibility	2010/2011 Target	2011/2012 Target	2012/2013 Target	2013/2014 Target	Performance Indicator/measure
National Pavilion participation	Jobs generated through promotion of unsustainable technologies increase pollution and result in environmental impacts	Generate green jobs through the National Pavilion	Increased number of green jobs generated through the National Pavilion	COO/DDG DIRCO	8 green jobs generated	9 green jobs generated	10 green jobs generated	10 green jobs generated	Total number of green jobs generated
Financial assistance to companies	Support of companies using unsustainable technologies will cause pollution which results in impacts on the environment	Provide financial assistance to companies implementing cleaner production	Increased financial assistance to companies implementing cleaner production	COO/DDG National Treasury	8 companies implementing cleaner production assisted	9 companies implementing cleaner production assisted	10 companies implementing cleaner production assisted	11 companies implementing cleaner production assisted	Number of companies assisted with implementing cleaner technologies
Promotion of South African products	Risk of facilitating employment, trade and industry that is not environmentally sensitive and skilled	Promote South African products manufactured through cleaner technology by conducting 4 Trade Missions	4 Trade Missions focused on cleaner technology and production	COO/DDG Proudly South African	1 environmentally focused trade mission	1 environmentally focused trade mission	1 environmentally focused trade mission	1 environmentally focused trade mission	Number of committed cleaner technology/production projects
Export Credit Reinsurance	Risk of SA enterprises involved in	Environmental compliance	Reduced risk of SA enterprises	COO/DDG	Develop strategy for reduction of risk of	Implement strategy for reduced risk	Implement strategy for reduced risk	Implement strategy for reduced risk	Inclusion of environmental compliance

Trade and Investment South Africa (TISA)									
Sub-programme/project	Potential environmental impacts	Environmental objective	Expected outcomes	Responsibility	2010/2011 Target	2011/2012 Target	2012/2013 Target	2013/2014 Target	Performance Indicator/measure
Scheme	contracts that are not environmentally compliant	There should be an element of each contract	involved in contracts that are not environmentally compliant		environmental non-compliance	of environmental non-compliance	of environmental non-compliance	of environmental non-compliance	requirements in contracts
Export development and promotion	Risk of facilitating exports that are potentially harmful to the environment and which are not compliant with national and international legislation, norms and standards (including Multilateral Environmental Agreements)	Ensure that export products and services that are being promoted are compliant with national and international legislation, norms and standards (including Multilateral Environmental Agreements)	Improved level of environmental compliance by exporting industries Liaison with Team Exports South Africa (TESA) and Export Council Movement	COO/DDG ITAC	Develop and implement strategy for database on environmental compliance for exports Brochures developed and disseminated	Maintain database Brochures distributed , presentations given and articles published	Maintain database Brochures distributed , presentations given and articles published	Maintain database Brochures distributed , presentations given and articles published	Maintain database of quality information about environmental requirements guiding export of products and services, and their specifications Number of brochures presentations and articles produced on environmental requirements for dissemination to exporters
International operations	International operations (foreign economic offices) of the dti can cause carbon emission and	Ensure that foreign economic offices are run in an environmentally efficient	Improved level of environmental sustainability of foreign economic offices	COO/DDG DIRCO	Conceptualize approach for ensuring minimized travel, waste generation and improved energy efficiency	Implement approach for improved environmental efficiency	Implement approach for improved environmental efficiency	Implement approach for improved environmental efficiency	Report on environmental performance of operations

Trade and Investment South Africa (TISA)									
Sub-programme/project	Potential environmental impacts	Environmental objective	Expected outcomes	Responsibility	2010/2011 Target	2011/2012 Target	2012/2013 Target	2013/2014 Target	Performance Indicator/measure
	waste	manner, including minimization of travel, waste avoidance and energy efficiency							
National and international operations	Local and international travel by dti personnel and their visitors has a significant impact on carbon emissions which can contribute to climate change	Institute alternative means of communication to minimize travel wherever possible, and determine means of offsetting carbon emissions from travel	Reduced carbon footprint for national and international operations	COO/DDG DIRCO	Carbon footprint analysis undertaken Develop policy on prioritizing travel	Roll-out of policy Offset project for carbon emissions identified	Roll-out of policy Offset project for carbon emissions implemented	Roll-out of policy Offset project for carbon emissions implemented	Guideline on prioritizing travel Carbon footprint analysis undertaken Verifiable implementation of offset project for carbon emissions

Table.4-7: Environmental impacts, objectives, timeframes and indicators for sub-programmes of ITED

Sub-programme/project	Potential environmental impacts	Environmental objective	Expected outcomes	Responsibility	2010/2011 Target	2011/2012 Target	2012/2013 Target	2013/2014 Target	Performance indicator/measure
Africa economic relations	Insufficient consideration of environmental costs and benefits in the selection/identification of priority areas of trade and investment can lead to inappropriate nature and location of enterprises. This can increase the risk of environmental impact.	Alignment of, and coordination on sustainable development and trade in Africa in combination with common approach to SDC regional integration and Minimum Integration Programme	Increased alignment of sustainable development in Africa	COO/DDG DED	Develop a joint strategy for incorporating environmental considerations into the South Africa position paper on the establishment of the Trilateral FTA, and NEPAD Spatial Development Programme (SDP)	Apply environmental strategy to projects implemented for the FTA and NEPAD SDP	Apply environmental strategy to projects implemented for the FTA and NEPAD SDP	Apply environmental strategy to projects implemented for the FTA and NEPAD SDP	A joint strategy on sustainable development and trade in Africa is developed and applied to FTA and NEPAD SDP projects
		Identification and planning of regional spatial development initiatives (SDIs) is informed by strategic environmental assessment	SDIs informed by SEA	COO/DDG	Commission strategic environmental assessments as part of reprioritisation of SDIs in SADC	Implementation of SDI projects in line with SEAs	Implementation of SDI projects in line with SEAs	Implementation of SDI projects in line with SEAs	Strategic environmental assessments are completed prior to detailed planning and infrastructure development
		Promote eco-labelling initiatives amongst African trade partners	Increased application of eco-labelling amongst African trade partners	COO/DDG Indalo Yethu/DEA	Develop strategy for promotion of ecolabelling amongst African trade partners	Apply strategy for eco-labelling	Apply strategy for eco-labelling	Revise and apply strategy for eco-labelling	Number of eco-labelling projects

Table. 4-8: Environmental impacts, objectives, timeframes and indicators for sub-programmes of TEO

Sub-programme/project	Potential environmental impacts	Environmental objective	Expected outcomes	Responsibility	2010/11 Target	2011/12 Target	2012/13 Target	2013/14 Target	Performance indicator/measure
New incentive developments	If environmental issues are not considered at the earliest stage (prefeasibility), impacts may not be avoided or minimized. This could be costly to mitigate in the later phases of project development	Enterprise Investment Programme (EIP) provides for investments in clean technology and creation of green jobs	Policy for incentives incorporate IEM Investments in clean technology Green jobs generated	COO/DDG National Treasury	Conceptualize Incentives for investments in clean technology and creation of green jobs	R0,447bn 600 jobs	R0,447bn 600 jobs	R0,447bn 600 jobs	Policy for incentives incorporates IEM Projected investment leveraged No. of green jobs created
		Automotive Investment Scheme (AIS) provides for investments in clean technology	Policy for incentives incorporate IEM Investments in clean technology and production	COO/DDG	Conceptualize Incentives for investments in clean technology and production	R0,2bn	R0.2bn	R0.2bn	Policy for incentives incorporate IEM Projected investment leveraged
Industrial Development Zones	Environmental impacts could result from IDZ's being developed without proper environmental	Ensure that the funding model for IDZ's factors in environmental risk management	Management of environmental risk	COO/DDG	Conceptualise framework for the IDZ funding model to integrate environmental risk	Business plan analysis	Business plan analysis	Business plan analysis	Quarterly reports and financial statements

Sub-programme/project	Potential environmental impacts	Environmental objective	Expected outcomes	Responsibility	2010/11 Target	2011/12 Target	2012/13 Target	2013/14 Target	Performance indicator/measure
	planning and assessment	Evaluation report to include status of EIA, and EMP implementation	Designation of suitable IDZs dependent on environmental authorization	COO/DDG DEA	IDZ applications for Mafikeng, Bloemfontein, Durban, Saldana, OR Tambo and Secunda have approved EIAs	Implementation according to environmental management programme as incorporated into the EIA	Implementation according to environmental management programme as incorporated into the EIA	Implementation according to environmental management programme as incorporated into the EIA	Environmental impact assessment reports for IDZs
		IDZs provide for investments in clean technology and creation of green jobs	Policy for incentives incorporate IEM clean Investments in technology Green jobs generated	COO/DDG Municipalities/ Business	Conceptualize Incentives and targets for investments in clean technology and creation of green jobs	Business plan analysis	Business plan analysis	Business plan analysis	Policy for incentives incorporates IEM Projected investment leveraged No. of green jobs created
Critical Infrastructure Programme with focus on rural, labour-intensive and green projects	Environmental impacts could result from the development of infrastructure without proper environmental planning and assessment	Ensure that funding for CIP factors environmental risk management	Management of environmental risk	COO/DDG DEA	Conceptualise framework for the CIP funding model to integrate Environmental risk	Business plan analysis	Business plan analysis	Business plan analysis	Quarterly reports and financial statements

Sub-programme/project	Potential environmental impacts	Environmental objective	Expected outcomes	Responsibility	2010/11 Target	2011/12 Target	2012/13 Target	2013/14 Target	Performance indicator/measure
		Evaluation report to include status of EIA, and EMP implementation	Designation of suitable CIPs dependent on environmental authorization	COO/DDG	CIP applications to have approved EIAs	Implementation of approved EIAs according to environmental management programme as incorporated into the EIA	Implementation according to environmental management programme as incorporated into the EIA	Implementation according to environmental management programme as incorporated into the EIA	Environmental impact assessment reports for CIPs
		CIP provides for investments in clean technology and creation of green jobs	Policy for incentives incorporate IEM Investments in clean technology Green jobs generated	COO/DDG DST	Conceptualize incentives and targets for investments in clean technology and creation of green jobs	Business plan analysis R0,2bn 105	Business plan analysis R0,2bn 105	Business plan analysis R0,2bn 105	Policy for incentives incorporates IEM Value of investment No. of green jobs created
Enterprise Investment Programme guidelines		Enhancement of green jobs in the Enterprise Investment Programme guidelines and align with industry outputs	Investment for green jobs leveraged Green jobs creation	COO/DDG DEA/NDPW	Submission of revised guidelines for Ministerial Approval	Implement and monitor	Continued implementation and monitoring	Continued implementation and monitoring	Collate internal policy proposal, submission for approval by minister, technical support

Table. 4-8: Environmental impacts, objectives, timeframes and indicators for sub-programmes of TEO

Sub-programme/project	Potential environmental impacts	Environmental objective	Expected outcomes	Responsibility	2010/11 Target	2011/12 Target	2012/13 Target	2013/14 Target	Performance indicator/measure
New incentive developments	If environmental issues are not considered at the earliest stage (prefeasibility), impacts may not be avoided or minimized. This could be costly to mitigate in the later phases of project development	Enterprise Investment Programme (EIP) provides for investments in clean technology and creation of green jobs	Policy for incentives incorporate IEM Investments in clean technology Green jobs generated	COO/DDG National Treasury	Conceptualize Incentives for investments in clean technology and creation of green jobs	R0,447bn 600 jobs	R0,447bn 600 jobs	R0,447bn 600 jobs	Policy for incentives incorporates IEM Projected investment leveraged No. of green jobs created
		Automotive Investment Scheme (AIS) provides for investments in clean technology	Policy for incentives incorporate IEM Investments in clean technology and production	COO/DDG	Conceptualize Incentives for investments in clean technology and production	R0,2bn	R0,2bn	R0,2bn	Policy for incentives incorporate IEM Projected investment leveraged
Industrial Development Zones	Environmental impacts could result from IDZ's being developed without proper environmental	Ensure that the funding model for IDZ's factors in environmental risk management	Management of environmental risk	COO/DDG	Conceptualise framework for the IDZ funding model to integrate environmental risk	Business plan analysis	Business plan analysis	Business plan analysis	Quarterly reports and financial statements

Sub-programme/project	Potential environmental impacts	Environmental objective	Expected outcomes	Responsibility	2010/11 Target	2011/12 Target	2012/13 Target	2013/14 Target	Performance indicator/measure
	planning and assessment	Evaluation report to include status of EIA, and EMP implementation	Designation of suitable IDZs dependent on environmental authorization	COO/DDG DEA	IDZ applications for Mafikeng, Bloemfontein, Durban, Saldana, OR Tambo and Secunda have approved EIAs	Implementation according to environmental management programme as incorporated into the EIA	Implementation according to environmental management programme as incorporated into the EIA	Implementation according to environmental management programme as incorporated into the EIA	Environmental impact assessment reports for IDZs
		IDZs provide for investments in clean technology and creation of green jobs	Policy for incentives incorporate IEM clean Investments in technology Green jobs generated	COO/DDG Municipalities/ Business	Conceptualize Incentives and targets for investments in clean technology and creation of green jobs	Business plan analysis	Business plan analysis	Business plan analysis	Policy for incentives incorporates IEM Projected investment leveraged No. of green jobs created
Critical Infrastructure Programme with focus on rural, labour-intensive and green projects	Environmental impacts could result from the development of infrastructure without proper environmental planning and assessment	Ensure that funding for CIP factors environmental risk management	Management of environmental risk	COO/DDG DEA	Conceptualise framework for the CIP funding model to integrate Environmental risk	Business plan analysis	Business plan analysis	Business plan analysis	Quarterly reports and financial statements

Sub-programme/project	Potential environmental impacts	Environmental objective	Expected outcomes	Responsibility	2010/11 Target	2011/12 Target	2012/13 Target	2013/14 Target	Performance indicator/measure
		Evaluation report to include status of EIA, and EMP implementation	Designation of suitable CIPs dependent on environmental authorization	COO/DDG	CIP applications to have approved EIAs	Implementation of approved EIAs according to environmental management programme as incorporated into the EIA	Implementation according to environmental management programme as incorporated into the EIA	Implementation according to environmental management programme as incorporated into the EIA	Environmental impact assessment reports for CIPs
		CIP provides for investments in clean technology and creation of green jobs	Policy for incentives incorporate IEM Investments in clean technology Green jobs generated	COO/DDG DST	Conceptualize incentives and targets for investments in clean technology and creation of green jobs	Business plan analysis R0,2bn 105	Business plan analysis R0,2bn 105	Business plan analysis R0,2bn 105	Policy for incentives incorporates IEM Value of investment No. of green jobs created
Enterprise Investment Programme guidelines		Enhancement of green jobs in the Enterprise Investment Programme guidelines and align with industry outputs	Investment for green jobs leveraged Green jobs creation	COO/DDG DEA/NDPW	Submission of revised guidelines for Ministerial Approval	Implement and monitor	Continued implementation and monitoring	Continued implementation and monitoring	Collate internal policy proposal, submission for approval by minister, technical support

Table. 4-8: Environmental impacts, objectives, timeframes and indicators for sub-programmes of TEO

Sub-programme/project	Potential environmental impacts	Environmental objective	Expected outcomes	Responsibility	2010/11 Target	2011/12 Target	2012/13 Target	2013/14 Target	Performance indicator/measure
New incentive developments	If environmental issues are not considered at the earliest stage (prefeasibility), impacts may not be avoided or minimized. This could be costly to mitigate in the later phases of project development	Enterprise Investment Programme (EIP) provides for investments in clean technology and creation of green jobs	Policy for incentives incorporate IEM Investments in clean technology Green jobs generated	COO/DDG National Treasury	Conceptualize Incentives for investments in clean technology and creation of green jobs	R0,447bn 600 jobs	R0,447bn 600 jobs	R0,447bn 600 jobs	Policy for incentives incorporates IEM Projected investment leveraged No. of green jobs created
		Automotive Investment Scheme (AIS) provides for investments in clean technology	Policy for incentives incorporate IEM Investments in clean technology and production	COO/DDG	Conceptualize Incentives for investments in clean technology and production	R0,2bn	R0.2bn	R0.2bn	Policy for incentives incorporate IEM Projected investment leveraged
Industrial Development Zones	Environmental impacts could result from IDZ's being developed without proper environmental	Ensure that the funding model for IDZ's factors in environmental risk management	Management of environmental risk	COO/DDG	Conceptualise framework for the IDZ funding model to integrate environmental risk	Business plan analysis	Business plan analysis	Business plan analysis	Quarterly reports and financial statements

Sub-programme/project	Potential environmental impacts	Environmental objective	Expected outcomes	Responsibility	2010/11 Target	2011/12 Target	2012/13 Target	2013/14 Target	Performance indicator/measure
	planning and assessment	Evaluation report to include status of EIA, and EMP implementation	Designation of suitable IDZs dependent on environmental authorization	COO/DDG DEA	IDZ applications for Mafikeng, Bloemfontein, Durban, Saldana, OR Tambo and Secunda have approved EIAs	Implementation according to environmental management programme as incorporated into the EIA	Implementation according to environmental management programme as incorporated into the EIA	Implementation according to environmental management programme as incorporated into the EIA	Environmental impact assessment reports for IDZs
		IDZs provide for investments in clean technology and creation of green jobs	Policy for incentives incorporate IEM clean Investments in technology Green jobs generated	COO/DDG Municipalities/ Business	Conceptualize Incentives and targets for investments in clean technology and creation of green jobs	Business plan analysis	Business plan analysis	Business plan analysis	Policy for incentives incorporates IEM Projected investment leveraged No. of green jobs created
Critical Infrastructure Programme with focus on rural, labour-intensive and green projects	Environmental impacts could result from the development of infrastructure without proper environmental planning and assessment	Ensure that funding for CIP factors environmental risk management	Management of environmental risk	COO/DDG DEA	Conceptualise framework for the CIP funding model to integrate Environmental risk	Business plan analysis	Business plan analysis	Business plan analysis	Quarterly reports and financial statements

Sub-programme/project	Potential environmental impacts	Environmental objective	Expected outcomes	Responsibility	2010/11 Target	2011/12 Target	2012/13 Target	2013/14 Target	Performance indicator/measure
		Evaluation report to include status of EIA, and EMP implementation	Designation of suitable CIPs dependent on environmental authorization	COO/DDG	CIP applications to have approved EIAs	Implementation of approved EIAs according to environmental management programme as incorporated into the EIA	Implementation according to environmental management programme as incorporated into the EIA	Implementation according to environmental management programme as incorporated into the EIA	Environmental impact assessment reports for CIPs
		CIP provides for investments in clean technology and creation of green jobs	Policy for incentives incorporate IEM Investments in clean technology Green jobs generated	COO/DDG DST	Conceptualize incentives and targets for investments in clean technology and creation of green jobs	Business plan analysis R0,2bn 105	Business plan analysis R0,2bn 105	Business plan analysis R0,2bn 105	Policy for incentives incorporates IEM Value of investment No. of green jobs created
Enterprise Investment Programme guidelines		Enhancement of green jobs in the Enterprise Investment Programme guidelines and align with industry outputs	Investment for green jobs leveraged Green jobs creation	COO/DDG DEA/ NDPW	Submission of revised guidelines for Ministerial Approval	Implement and monitor	Continued implementation and monitoring	Continued implementation and monitoring	Collate internal policy proposal, submission for approval by minister, technical support

Appendix A

1. Alignment of policies, plans and programmes with environmental legislation

In the previous editions of the EIP, **the dti** viewed the EIPs as the main tool for ensuring that its policies, plans and programmes will comply with the NEMA principles, norms and standards envisaged under section 146(2)(b)(i) of the Constitution, as well as other relevant national and international environmental legislation. **the dti**, including the staff of the divisions where these policies are developed, has identified the need for new policies and programmes to be reviewed from an environmental point of view during the development of these policies. Due to limitations on capacity, this cannot be the case for existing policies but should be implemented in future. This 3rd Edition places emphasis on:

- The vital need for the development of a sound environment framework and policy for **the dti** to provide the context and direction ensuring that the EIP is aligned to national frameworks (notably the National Framework for Sustainable Development)
- The need to ensure that **dti** policy complies with legislative and requirements at the international, national, provincial and local levels (see Recommendations contained in Section 7)
- Most of **the dti**'s line function divisions are to a greater or lesser degree involved in policy formulation. No formally established system is in place to ensure that **the dti** policies will not carry unacceptable environmental risk, and thus pose potential environmental impacts. As identified in the 2nd Edition EIP, this results in uncertainty around appropriate measures that should be in place in order to avoid and mitigate potential environmental impacts resulting from **the dti** policies.
- The EIP as the key means for identifying impacts and setting environmental objectives, timelines and indicators. Based on review of the potential significant environmental impacts associated with **the dti**'s policies, programmes and projects, **the dti** proposes to implement the environmental objectives as outlined in the Tables 3-1 to 3-7 of this EIP. The Tables identify how the programmes and sub-programmes of **the dti** comply with the NEMA principles, Section 146(2)(b)(i) of the Constitution along with the objectives, timeframes and indicators (a quantitative or qualitative measurement of the implementation of the objective) for ensuring that these will be achieved. The objectives have been grouped according to **the dti**'s divisions

- Where **the dti**'s policies clearly have a major influence on the mandates of DEA and the nine provincial environmental authorities, **the dti** will continue, as it has done before, to consult with these authorities through the Committee for Environmental Coordination.

2. Co-operative governance

Cooperative governance is very important for establishing roles, responsibilities for activities which have a bearing on environmental programmes. It applies to both the public sector, as well as to public/ private partnerships and civil society. Requirements for cooperative governance include:

- Compliance with the NIPF which identifies that insufficient coordination around industrial initiatives amongst and between the three tiers of government, as well as uneven development and roll-out of high-quality industrial policy interventions has hampered implementation. It can also be argued that this is applicable to the development and implementation of environmental policy in **the dti**.
- Alignment with the EIPs of other departments, as well as provinces, necessary for ensuring cooperative governance.
- Identification of gaps on governance structures and ensuring that these are filled effectively and speedily.
- Alignment at the department (institutional) level to ensure mainstreaming and follow-through of environmental policy and objectives.
- Adherence to the King III Report on corporate governance in order to ensure compliance for sustainability reporting and responsible corporate governance throughout **the dti**.
- The NIPF identifies that intensive coordination across a range of government departments is necessary for promotion of trade and industry, in particular through the government's EIEC. The EIEC plays an important role with regard to coordination in relation to sector-specific policies and projects. Cooperation is further required for:
 - A strong and supportive macro economic and regulatory environment

- Development of skills education systems which are increasingly integrated with the needs of the industrial economy.
- Sufficient, reliable and competitively priced traditional and modern infrastructure.
- Adequate support for various forms of technological investment within the economy.
- Industrial growth and development strategies have been developed and implemented at the sub-national, provinces and in certain areas, as the local level. Provinces and metros (where applicable) need to be involved in industrial policy research and development processes, so as to ensure geographic spread of finance and non-financial services. Means of improving coordination within **the dti**, as identified in the NIPF, include the drawing in of sectoral capacity from COTII and the Industrial development Corporation (IDC), universities and research organizations, drawing on international expertise. This is also relevant to the building of the environmental sustainability component of trade and industry development. Synergies to maximize roll-out of environmentally sustainable innovation and technology, financing mechanisms as well as staff development need to be maximized.

3. Manner in which policies, plans and programmes will exercise integrated environmental management

IEM is an approach which sets out to balance development and the environment, and to ensure that the consequences of proposed development proposals are understood and appropriately considered. The DEA has published a set of guidelines on IEM in order to ensure that the environment is considered in all stages for the full life cycle (from 'cradle to grave') of a project, programme or policy. IEM is further written into NEMA, and as such has legal status. It further sets out to avoid or minimize negative environmental impacts and to enhance project benefits. The principles underpinning IEM will be carried out as follows:

- Proactive planning through processes such as the review of objectives contained in the EIP, and ensuring the alignment of, and coordination on sustainable development and trade in Africa.
- Informed decision-making through use of IEM tools and consultation with key stakeholders, including other government departments, and through such processes such as strategic environmental assessment used to inform identification and planning of SDIs.
- A participatory approach involving IAPs in the application of IEM tools.

- Accountability for decisions and the information upon which these are based. Practices such as the incorporation of environmental outputs in the service level agreements of senior management will enhance accountability for environmental decision-making. Careful documentation of processes including EIAs will further enhance accountability for decisions.

It is identified in the recommendations contained in Section 7 of this EIP that consideration should be given to the development of an Environmental Decision Support System in line with that developed as part of the IEM series produced by Department of Water Affairs. This will ensure a coherent and consistent application of IEM principles in the work of **the dti**. An outline of the tools including EIA, which can be applied to the practice of the IEM are outlined in Section 6 below. Recommendations are provided in Section 7 to further enhance and mainstream IEM and the application of sustainable technologies and practices within **the dti** and through the work of its agencies.