Development Dialogue
TIPS, Pretoria, South Africa
21 November 2019

Green Economy and South Africa's Industrial Policy

Gaylor Montmasson-Clair
Trade & Industrial Policy Strategies (TIPS)

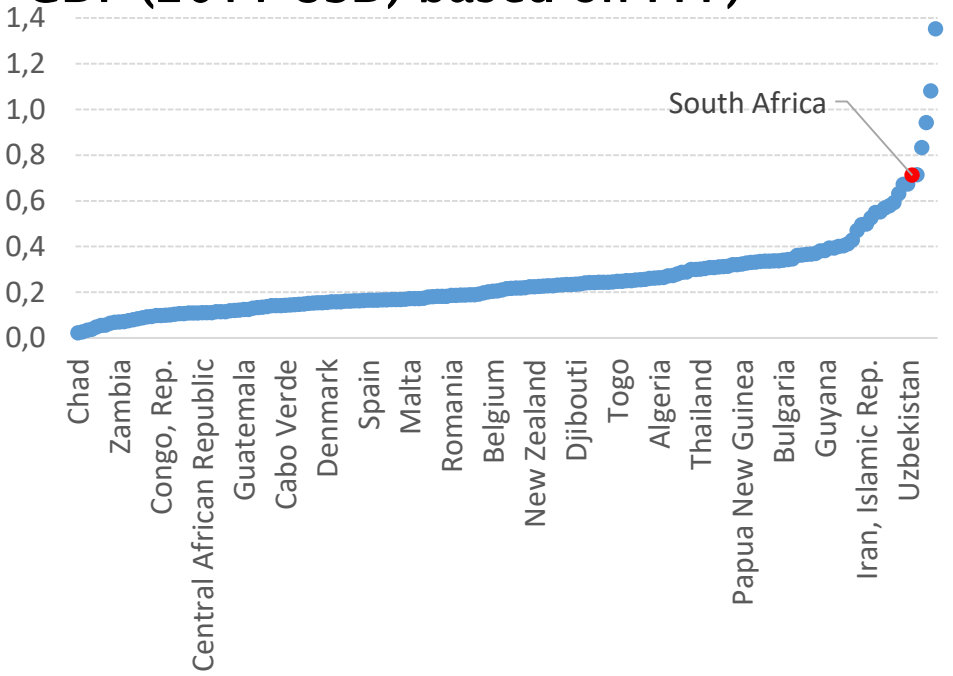
Outline

1. Introduction
2. Policy design and process
3. Policy implementation
4. Policy implications
5. Conclusion

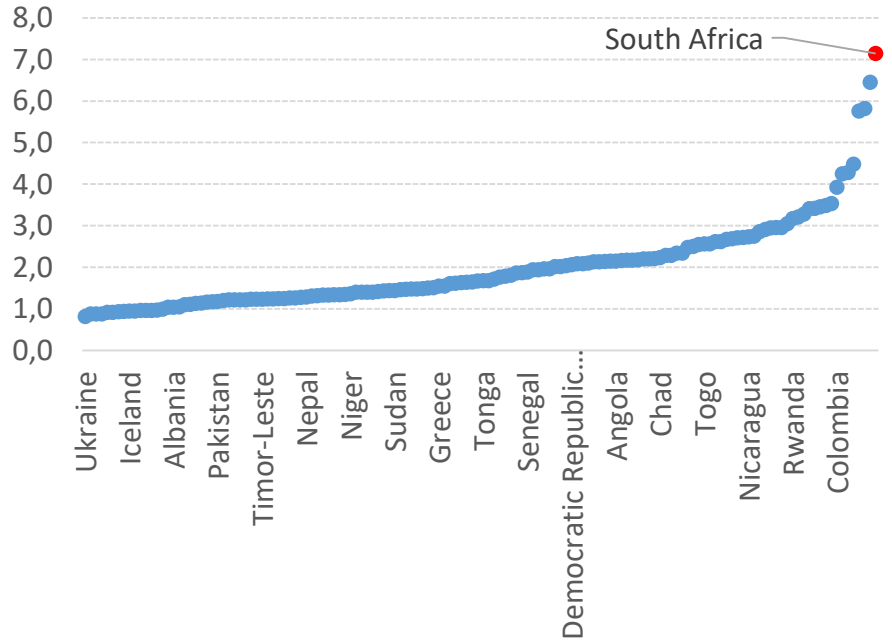
Introduction

- South Africa, in line with global trends, aims to transition to an inclusive green economy, combining economic development, social progress and environmental preservation.
- Both the economy and society remain however highly unsustainable.

Carbon intensity in 2013 (in kgCO2e per GDP (2011 USD) based on PPP)



Palma ratio per country over the 2010-2015 period



Introduction

- Targeting the transition to an inclusive green economy therefore signifies a massive and disruptive shift, commanding a new model of development.

- Industrial policy is core to this process
  - ensure a 'just transition'
  - manage a balancing act, consisting of
    - maximizing the benefits of the transition
    - and minimizing the risks associated with not transitioning;
    - but in line with SA's capabilities in order to minimise the short-term trade-offs and threats.

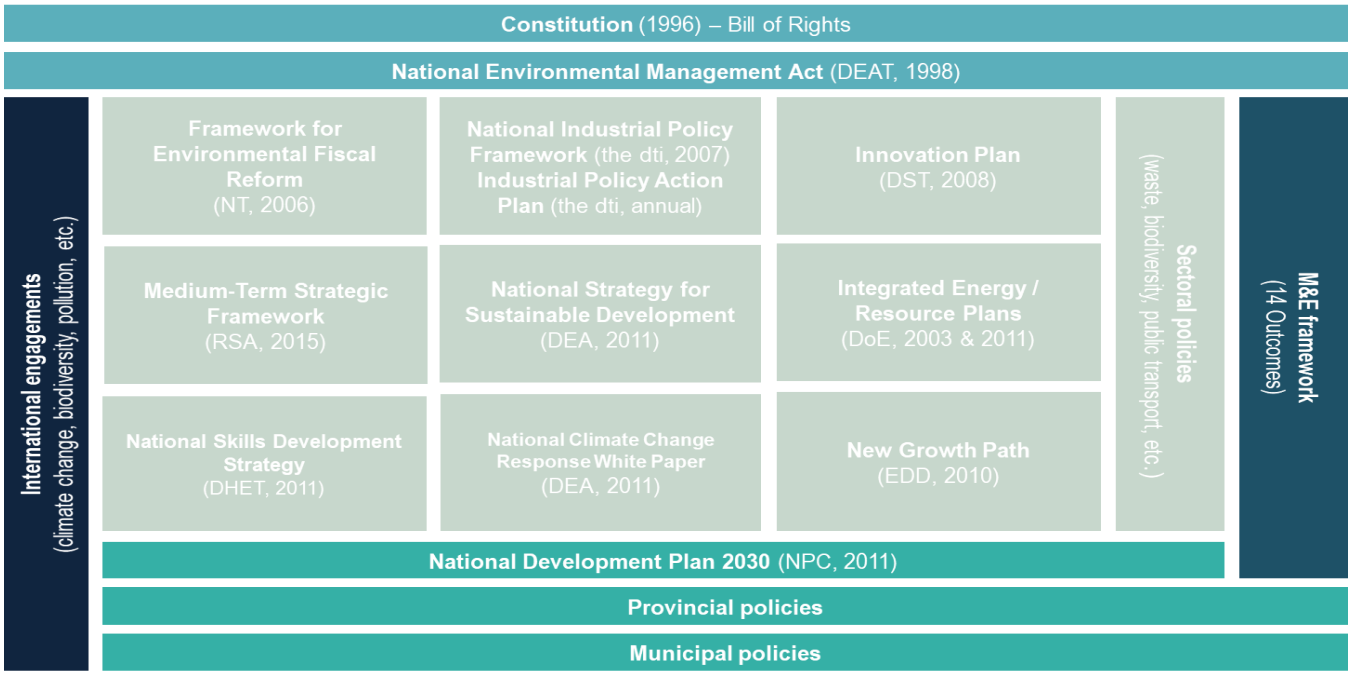
- Requires a careful alignment of SA's industrial policy with the IGE paradigm to support the country's green industrial development.

- Ultimately, this requires the shift from industrial policy to **green** industrial policy.

Policy design: Green shoots in SA's industrial policy

- A number of policy documents have called for the transition.
  - Touch on and support (at least in principle) a green industrial transition, but they do not constitute a strategic, coherent vision.
  - Still largely see the green economy as a sector, failing to paint the picture of a cross-cutting transformation.

- The NPC has embarked on a process to develop 2050 pathways which may provide the platform to establish a vision for GID (and beyond).



Policy design: Green shoots in SA's industrial policy

- Despite some 'green shoots', SA's industrial policy has not shaped a green industrial development vision.
  - Development of green industries (RE, EE, CE, e-mobility)
  - Increasing focused on aligning industrial policy with envir. objectives.
  - Design and implementation of a 'just transition'

- SA's overall industrial policy vision remains fundamentally entrenched on a 'business-as-usual' trajectory from a GE perspective.
  - Consider the transition as an add-on to other developments
  - Links between GE and IG, and between GE, competitiveness and industrial development, have not been adequately done.

- Going forward, industrial policy will be structured around the development of Master Plans for key industrial value chains, as coordinated by the Presidency's framework
- The Presidency's approach has not, however, overtly embraced a GE lens and focusses on traditional sectors and activities.

Policy design: Policy coherence

- The underpinning, rationale and LT objectives of SA's industrial and GE policy frameworks are well aligned
- But no double mainstreaming of GE considerations into economic policy and of socio-economic development issues into GE policy.

- A general coherence seems to emerge, in theory, from national policy documents
- In practice, a number of issues lack consensus or clarity (energy tech).
- Broader misalignment persists between SA's GE objectives and other policies and priorities (support to energy- and carbon-intensive sectors)

- Similar situation when considering the alignment with the 17 SDGs.
- Key areas of alignments, where industrial policy makes positive contribution towards all SDGs.
- In contrast, many interventions remain in contradiction of some key SDGs.

Policy design: Inter-governmental coordination

- The cross-cutting nature of the transition to a GID leads to responsibilities being scattered among multiple entities and levels.
- Ultimately, elements of GIP are conducted by a wide array of stakeholders
- Multiple official channels aimed at facilitating the coordination and alignment of public policy exist

- The management of the transition to a GID remains a key challenge
  - instances of uncoordinated work,
  - contested responsibilities and
  - duplication.
- At the industrial policy level, the dti identifies lead and support departments and agencies
- but internal annual processes could be leveraged
- A strong push for GID from the Presidency could effectively require departments to be more pro-active.
- The Climate Change Bill also makes provision for additional coordination mechanisms at national and provincial levels.

Policy design: Stakeholder engagement

- Social dialogue is a central aspect of the transition to GID
- Historically vibrant in SA (e.g. Nedlac)
- But attempts at creating a social compact in favour of the transition (GE Accord and the DWCP) have however failed to deliver their promises.
- Social partners are pushing for improving the coordination of the (just) transition (NPC process + PCCCC)

- The degree of stakeholder engagement varies vastly from one industry to the next.
  - More reactive than proactive
  - Stakeholders often do not consider their views to be taken into account
  - Not often leveraged to bring in a GID lens.
- The Master Plan approach may provide the adequate platform for pro-active, forward-looking planning and implementation in this respect.

Policy design: M&E

- No move beyond GDP despite early acknowledgement in NSSD that
  - a development path based "primarily on maximising economic growth – as measured by GDP […] has resulted in an energy-intensive economy and an erosion of the resource base: a situation that is clearly unsustainable"

- The knowledge base necessary for evidence-based decision-making and effective implementation of a GID agenda, although growing rapidly, remains largely incomplete.
- The '14 Outcomes' framework remains problematic from a GID perspective.

- Industrial policy indicators remain quite high-level and do not allow to track progress effectively.
- At the SDG level, initial tracking efforts provide a view of SA's progress but many indicators remain unavailable
- Information gaps also persist on firm-, sector- and community-level dynamics.

Policy implementation: Mix of measures

- Mirroring the multitude of plans and strategies, numerous measures have already been implemented in SA to foster the transition to GID

Category	Sub-Categories	Key measures (Lead entity)
Regulatory measures	Legislation Plans Standards	Standards for specific technologies or processes (the dti-SABS); Energy management systems (DMRE); Pollution Prevention Plans (DEFF); Carbon budgets and Sector Emissions Targets (DEFF)
Economic measures	Taxes Offsets or Tradable Allowances Subsidies	Carbon tax (NT); 12L tax incentive for energy efficiency (DoE-SANEDI); Demand-side management programmes (Eskom); 12I incentives (the dti); Manufacturing Competitiveness Enhancement Programme (MCEP) grant component (the dti), Green Fund (DEFF-DBSA)
Direct government action	Government Procurement of Public Goods or Services Direct Infrastructure Investment	Procurement and investment in the public transport and modal shift (DoT); Renewable Energy Independent Power Producer Procurement Programme (DMRE-NT-DBSA); Industrial Symbiosis programmes (the dti-NCPC-SA and GreenCape)
Support measures	Government Support for Voluntary Actions Support for Research and Development	MCEP loan component (the dti); concessional finance (IDC, DBSA and other DFIs); Resource Efficiency and Cleaner Production assessments and Industrial Energy Efficiency programmes (the dti-NCPC-SA); Direct funding for R&D centres (DSI); Tax incentive for R&D expenditure (DSI)
Information Programmes	Public / Private programmes	Energy efficiency labelling programme (DMRE), Training programmes for energy management (NCPC-SA)

Policy implementation: Mix of measures

- While far-reaching, the mix of measures appear to lack clarity and coherence, and certainty:
  - No agreement on the preferred instruments and their design
  - No clarity on the role, scope and impact of the mix of measures and the interaction of its many components.
  - In some cases, like the carbon tax and carbon budgets, the integration remains weak.

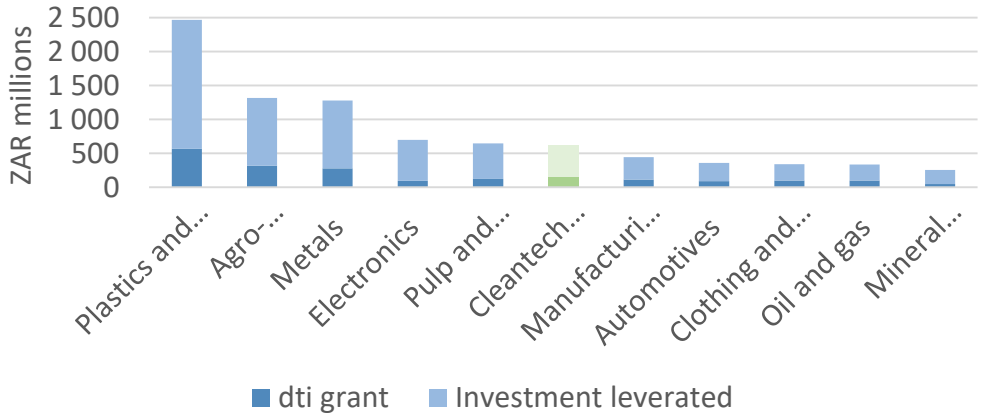
- The mix of measures does not adequately capture the diversity of industrial situations vis-à-vis the transition and fails to propose tailored solutions.

- **All industrial policy tools have however been used to some extent to foster the transition.**

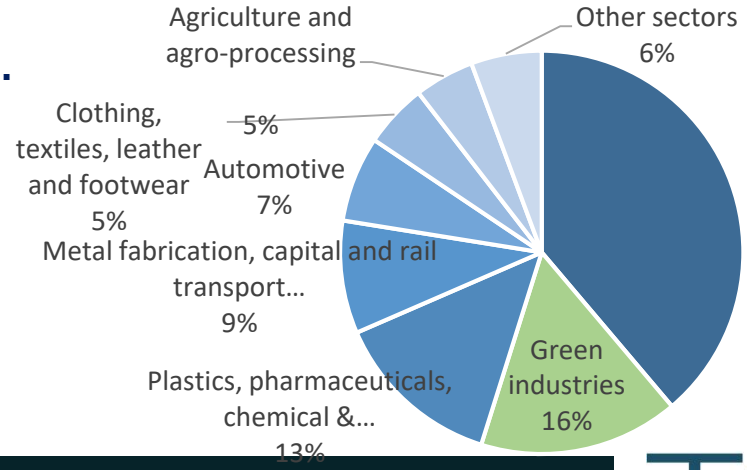
Policy implementation: Industrial finance

- Industrial finance directed at the transition to GID has steadily increased over the last decades.
  - Energy sector focus
- Non-specific industrial finance programmes have also made a contribution
- Private sector institutions have also demonstrated an increased interest in supporting initiatives.
- Capacity building activities (NCPC) have had an indirect mobilisation effect on investment.

Black Industrialist Support programme (November 2015 to March 2018)



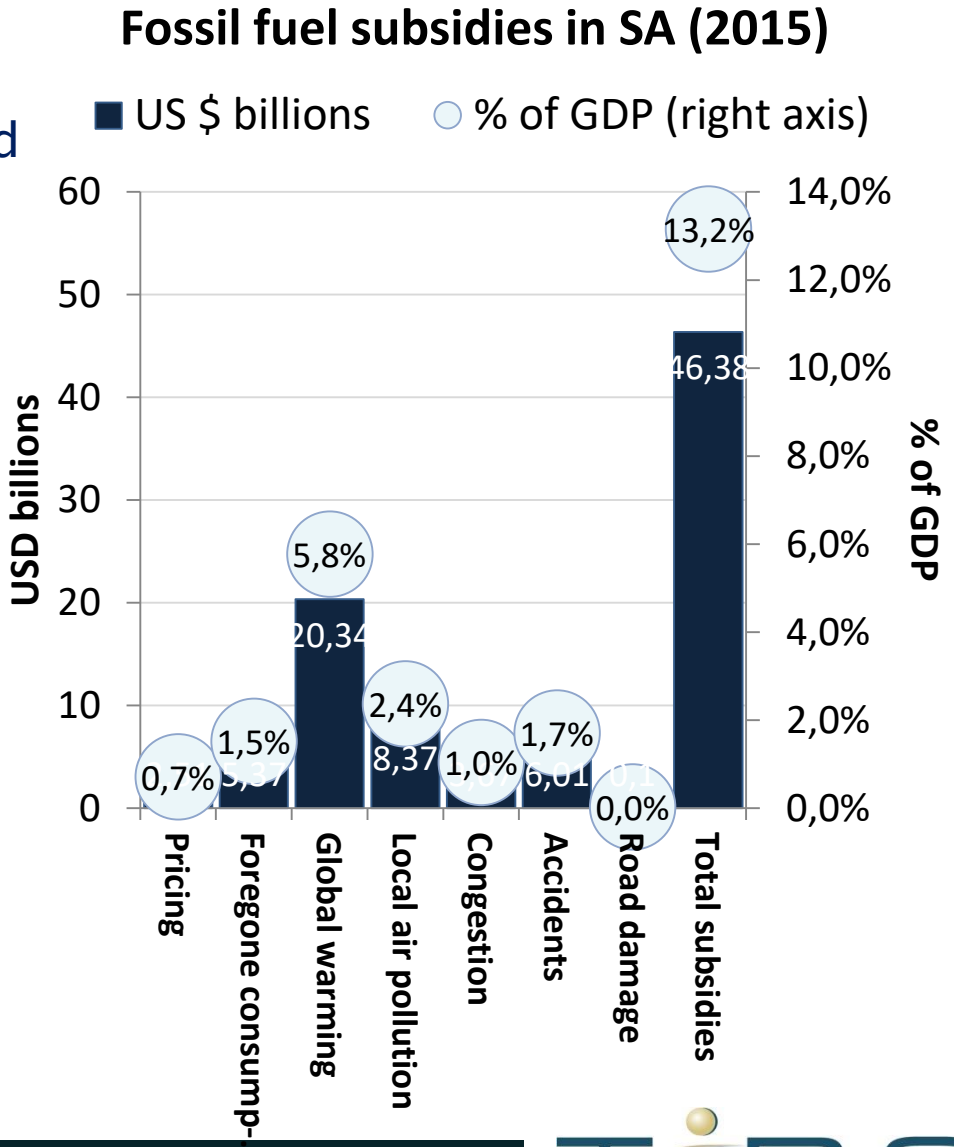
Value of IDC Funding Approved to IPAP Priority Industries 2008 to 2017 (in share of total)



Policy implementation: Industrial finance

- Material gaps still remain
  - Misalignment of the industrial and GE policy frameworks
  - Lack of funding pool for some segments
  - Misunderstanding of GE by financiers
  - Focus on RE and EE

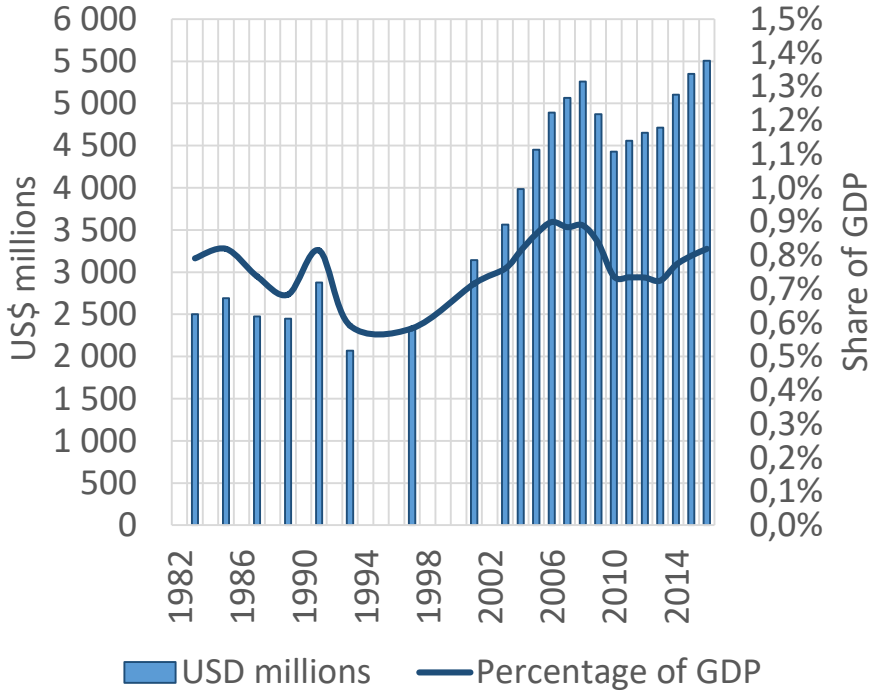
- In addition, the amount of support directed at unsustainable activities remains particularly high.
  - Direct fossil fuels subsidies amounted to
    - 2.2% of GDP in 2015
    - 13.2% when the cost of externalities is included.



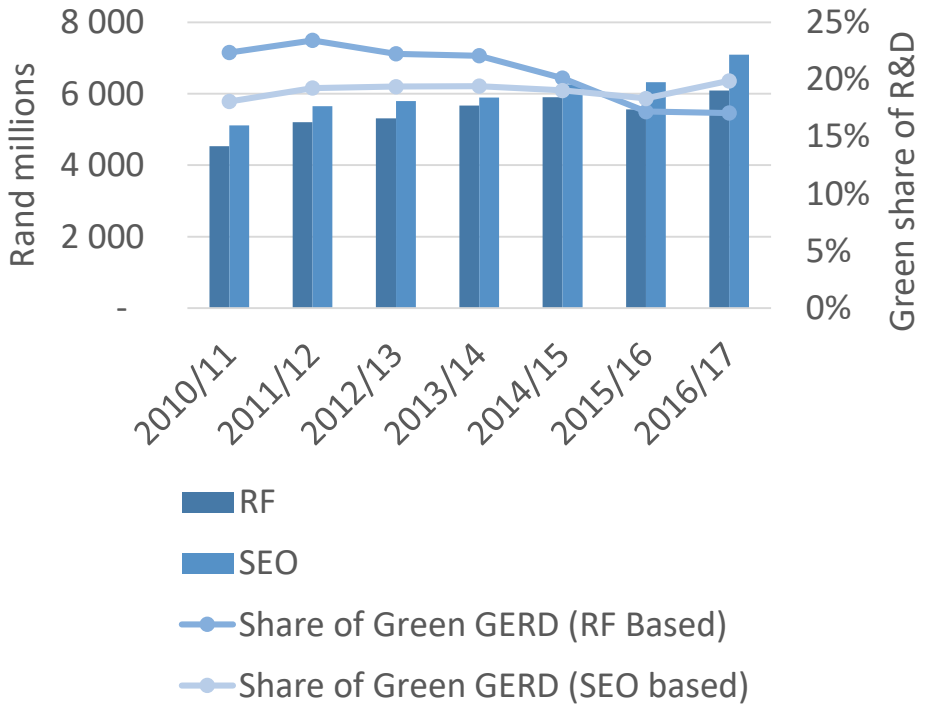
Policy implementation: R&D and innovation

- SA has set the target of increasing R&D expenditure to 1.5% of GDP by 2019.
- SA has also committed to maintaining investment in R&D and innovation to support the transition to a green economy.

R&D expenditure in South Africa



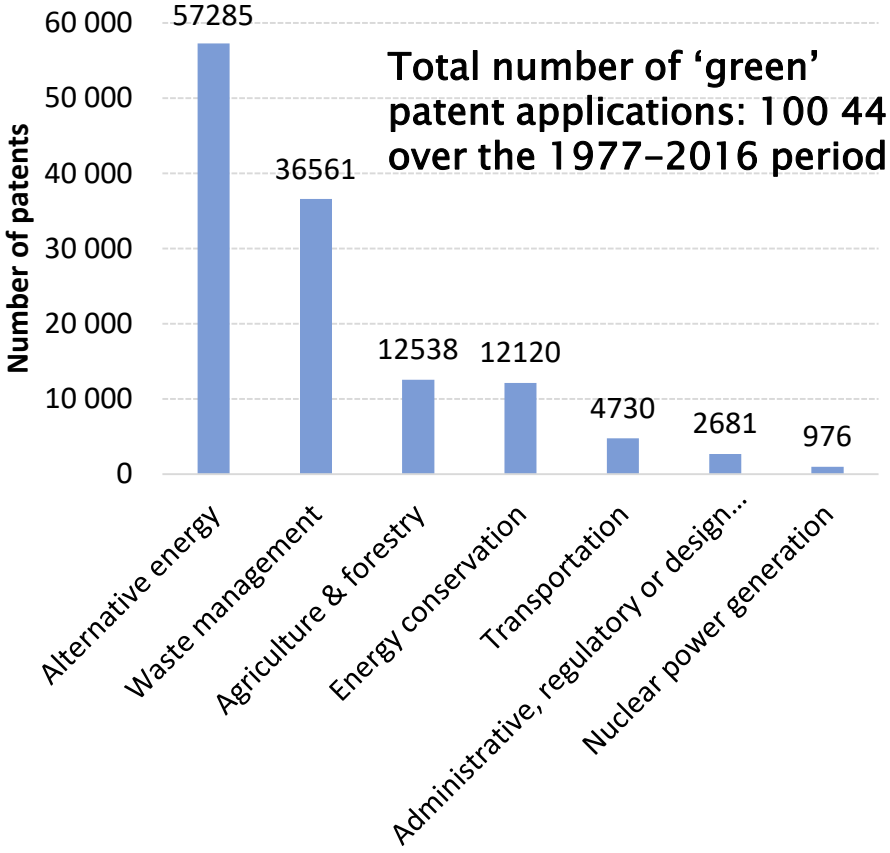
Green R&D expenditure in South Africa

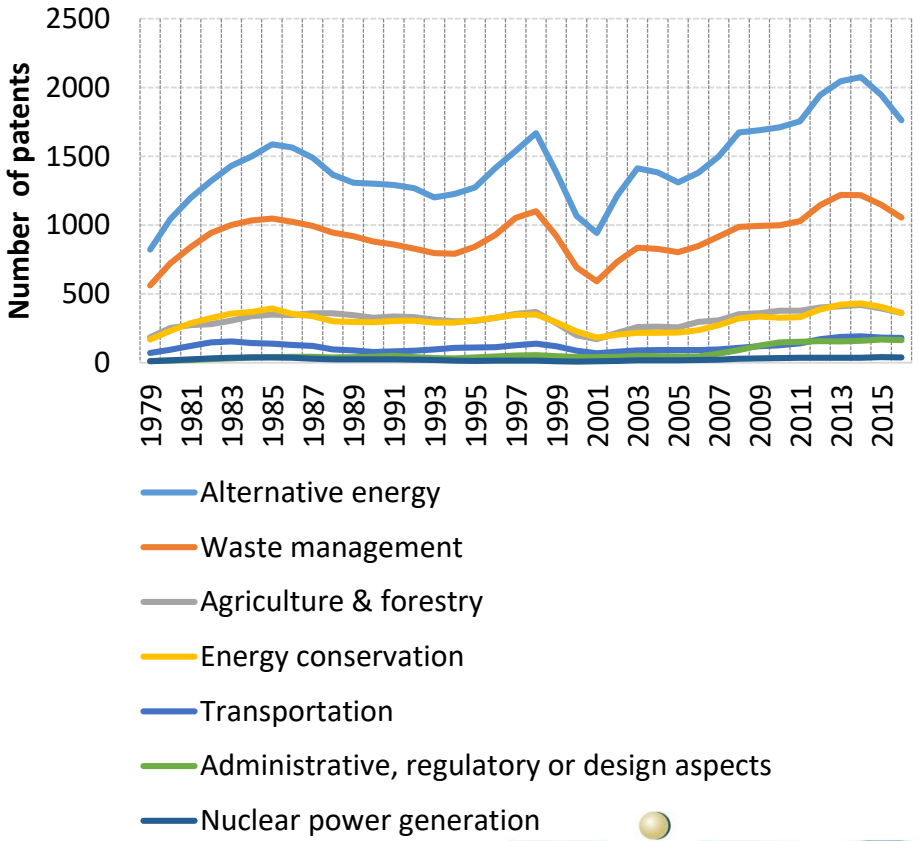


Policy implementation: R&D and innovation

- SA's patenting activity shows a dynamic green R&D and innovation field.

Numbers of patents (granted and pending) for green technologies across sectors in SA from 1977 to 2016





Policy implementation: Skills development

- The transition also rests on the ability to identify and supply ‘green skills’.

- No central repository of learning opportunities exists in the country, hindering the rollout of skills and competencies.
- SA also does not have a comprehensive, cross-cutting approach to green skills development,
  - despite existing initiatives in some universities, SETAs and TVET colleges.

- For ‘champions’ driving the transition,
  - A wide spectrum of learning opportunities relevant to a green economy already exists in SA, such as in the case of resource efficiency.

Policy implementation: Regulation and economic instruments

- Regulations, through their various forms, can have a fundamental impact on the transition to GID and
- They have been utilised with various degrees of success in SA.

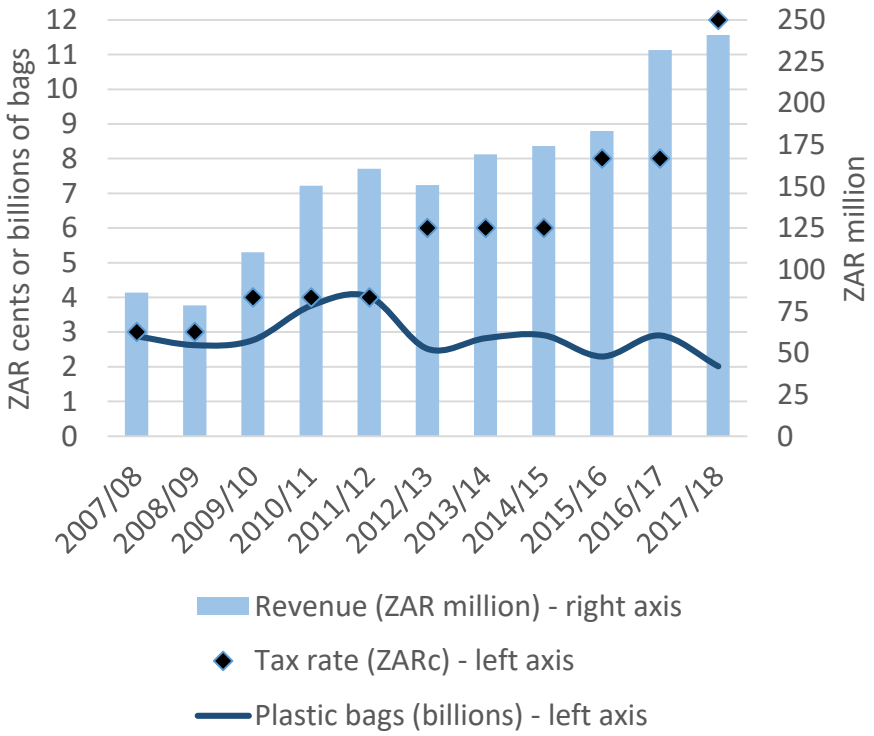
- Command-and-control regulation (licensing and requirements for EIAs, PPPs and IWMP) is widely used in SA.
- However, its implementation remains highly imperfect,
  - lack of enforcement
  - difficulty in obtaining some licenses
  - a hindering effect by obstructing CE initiatives or preventing the rollout of new techs.

- From a CC perspective, quantity-based regulations around GHG emissions have been implemented at the national (PPD trajectory), sectoral (SETs) and firm (carbon budgets) levels

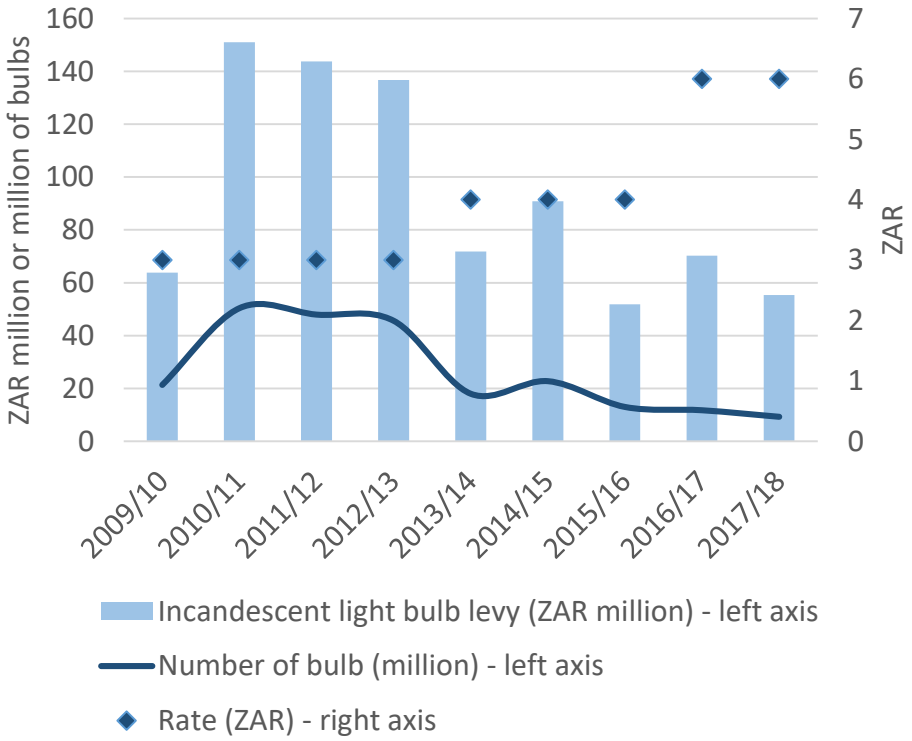
Policy implementation: Regulation and economic instruments

- Price-based instruments have been used to change behaviours, with various degrees of success.
- Positive impact of levies on electric filament lamps and plastic bag vs. carbon tax on new vehicles

Impact of the plastic bag levy

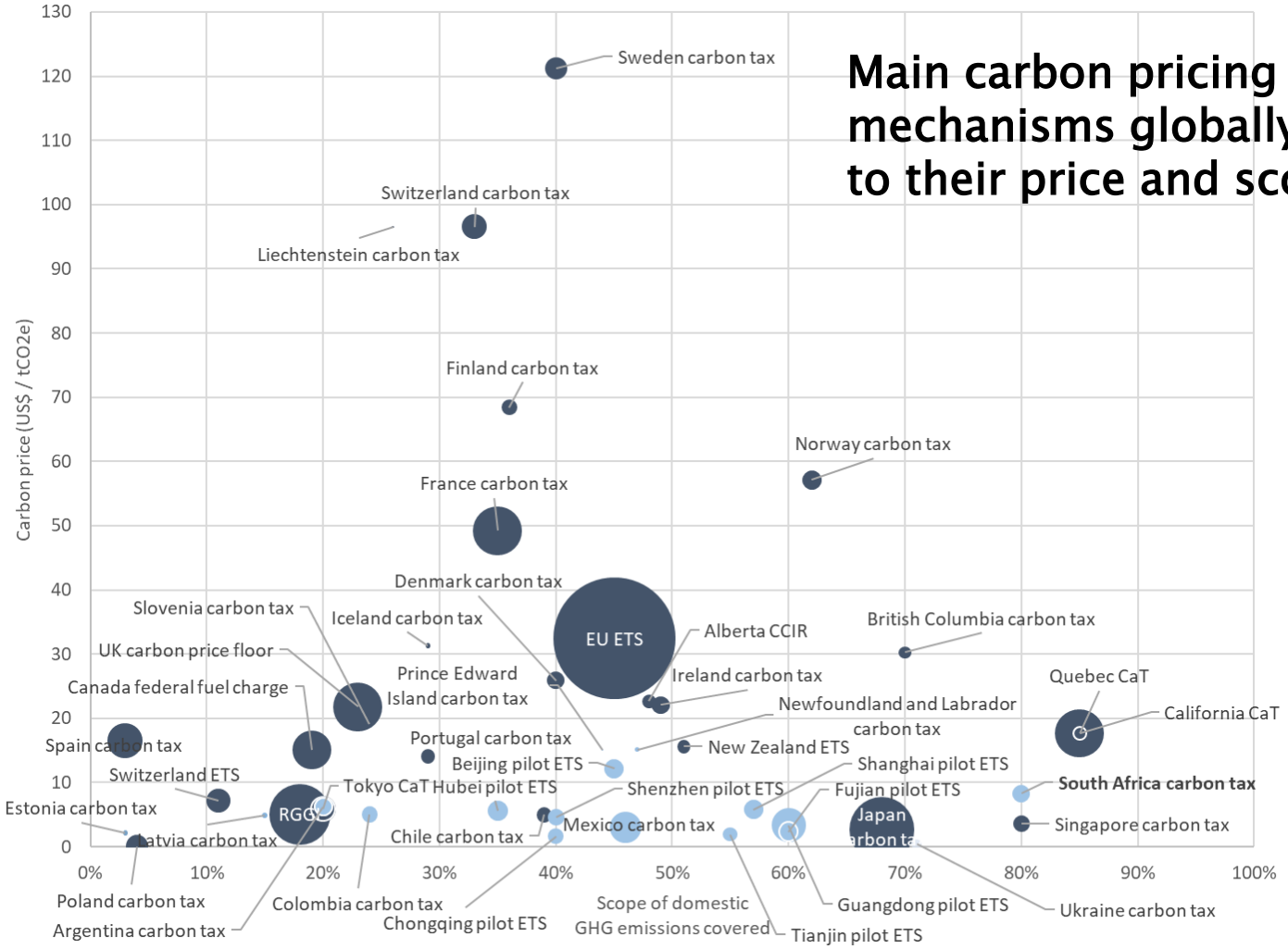


Impact of the levy on incandescent light bulbs



Policy implementation: Regulation and economic instruments

- A carbon tax on GHG emissions has been implemented since June 2019.

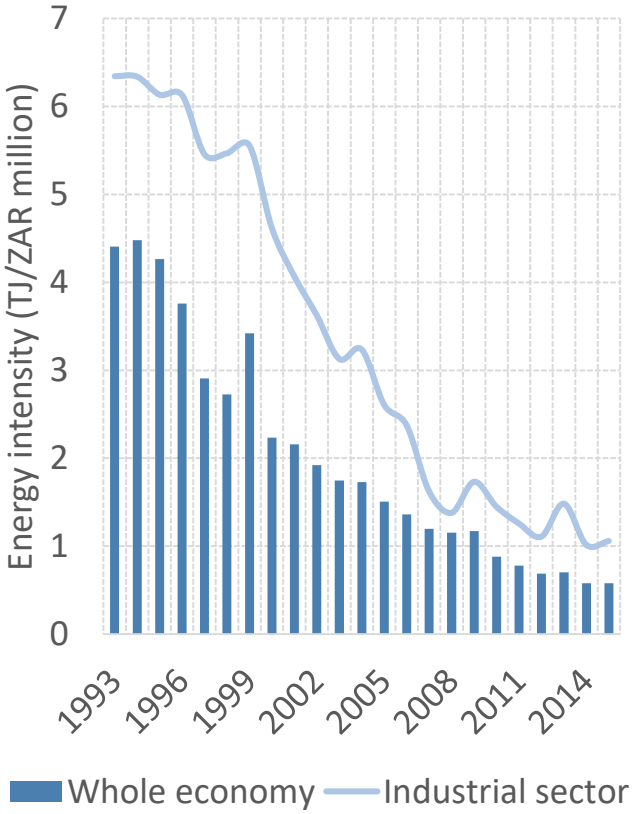


Main carbon pricing mechanisms globally according to their price and scope

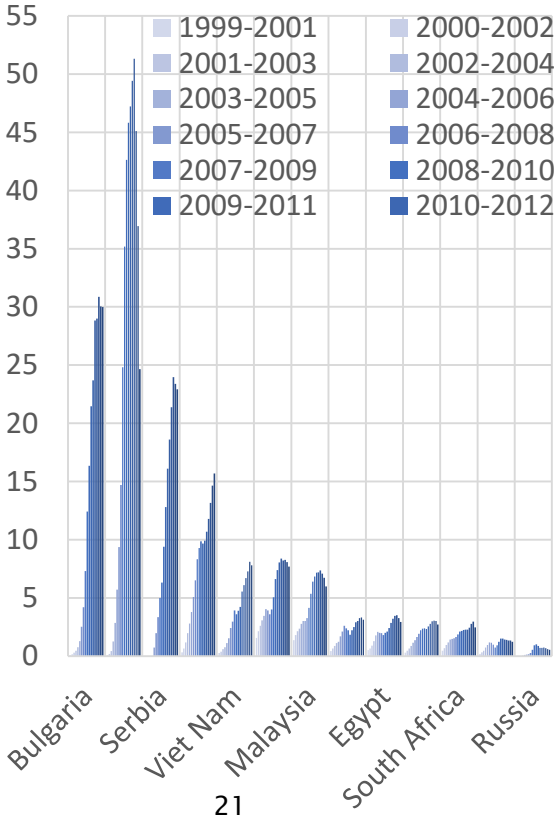
Policy implementation: Regulation and economic instruments

- Rules and frameworks as well as procurement and fiscal rules have been used with some success in SA
- The use of standards and targets has shown mixed results.
  - EE vs. ISO 14 001 vs ISO 50 001

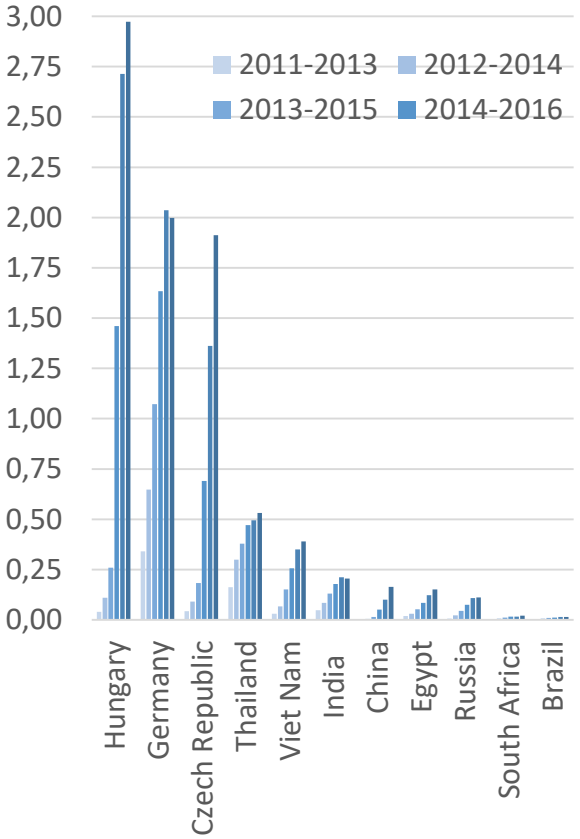
Energy intensity of the SA economy (in TJ/ZAR million)



ISO 14 001 certificate per US$ 1 bn GDP



ISO 50 001 certificate per US$ 1 bn GDP



Policy implementation: Localisation

- 'Green procurement' has yet to be rolled out in SA
- The REIPPPP has been the main avenue used to support the localisation of green goods.
- Products can be 'designated' for local procurement by public entities.
- Of the 23 designated, 5 are directly linked with the transition to an IGE
  - Essentially in RE and EE.
  - The impact remains uncertain
  - but the experience of the rollout of SWHs demonstrate some of the difficulties

Designated products supporting green industrial development

Designation	Specification
Solar PV	• mono/ poly crystalline PV module – 25% ; Copper Indium Gallium Selenide solar cell (CIGS cell, sometimes CI(G)S or Thin film – 75%; Mounting Structure – 90%; Inverter – 40%
SWHs	• 70% (target 1 million) use of Eskom Rebate Programme
Residential electric meters	• Prepayment and Post-paid Meters 70%; Smart Meters 40%
Residential water meters	• 50 – 70%
Buses	• 70% and 80% locally-made content of the bus body for city and commuter buses, respectively.

Policy implementation: Economic zones

- SEZs can be leveraged to support a green transition.
- Of the 12 SEZs supported by government, 4 directly aim to foster a transition towards a green economy:
  - the Atlantis SEZ (greentech manufacturing hub);
  - the Upington Solar Corridor SEZ (solar technology manufacturing);
  - the Bojanala Platinum Valley SEZ (hydrogen economy); and
  - the Musina SEZ (Limpopo Eco-Industrial).

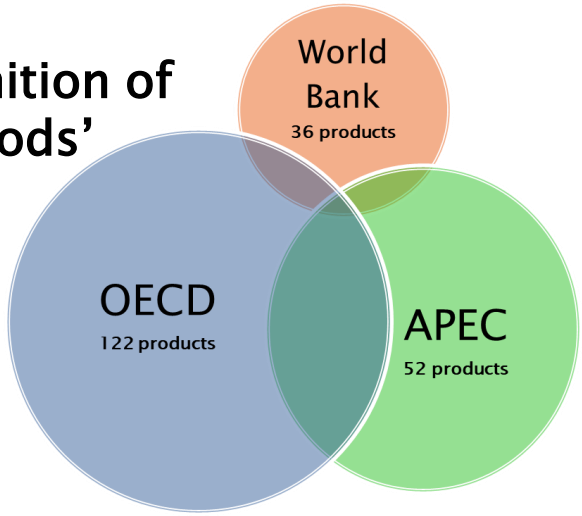
Existing SEZs	Proposed but not designated
1) Coega SEZ – Eastern Cape	1) **Bojanala SEZ – North West**
2) East London SEZ – Eastern Cape	2) Tubatse SEZ – Limpopo
3) OR Tambo SEZ – Gauteng	3) **Upington SEZ – Northern Cape**
4) Musina-Makhado SEZ – Limpopo	
5) Richards Bay SEZ – KwaZulu-Natal	
6) Saldanha Bay SEZ – Western Cape	
7) Atlantis SEZ – Western Cape	**South Africa's SEZ**
8) Nkomazi SEZ – Mpumalanga	
9) Maluti-A-Phofung SEZ – Free State	

- The potential to turn all SEZs into eco-industrial parks remains however to be seized.

Policy implementation: Trade policy

- Trade policy can be used to promote the development of green goods and services globally as well as domestically.
- SA's trade balance for green goods could be materially improved, notably by promoting import substitution.
- Import are roughly double the size of exports.

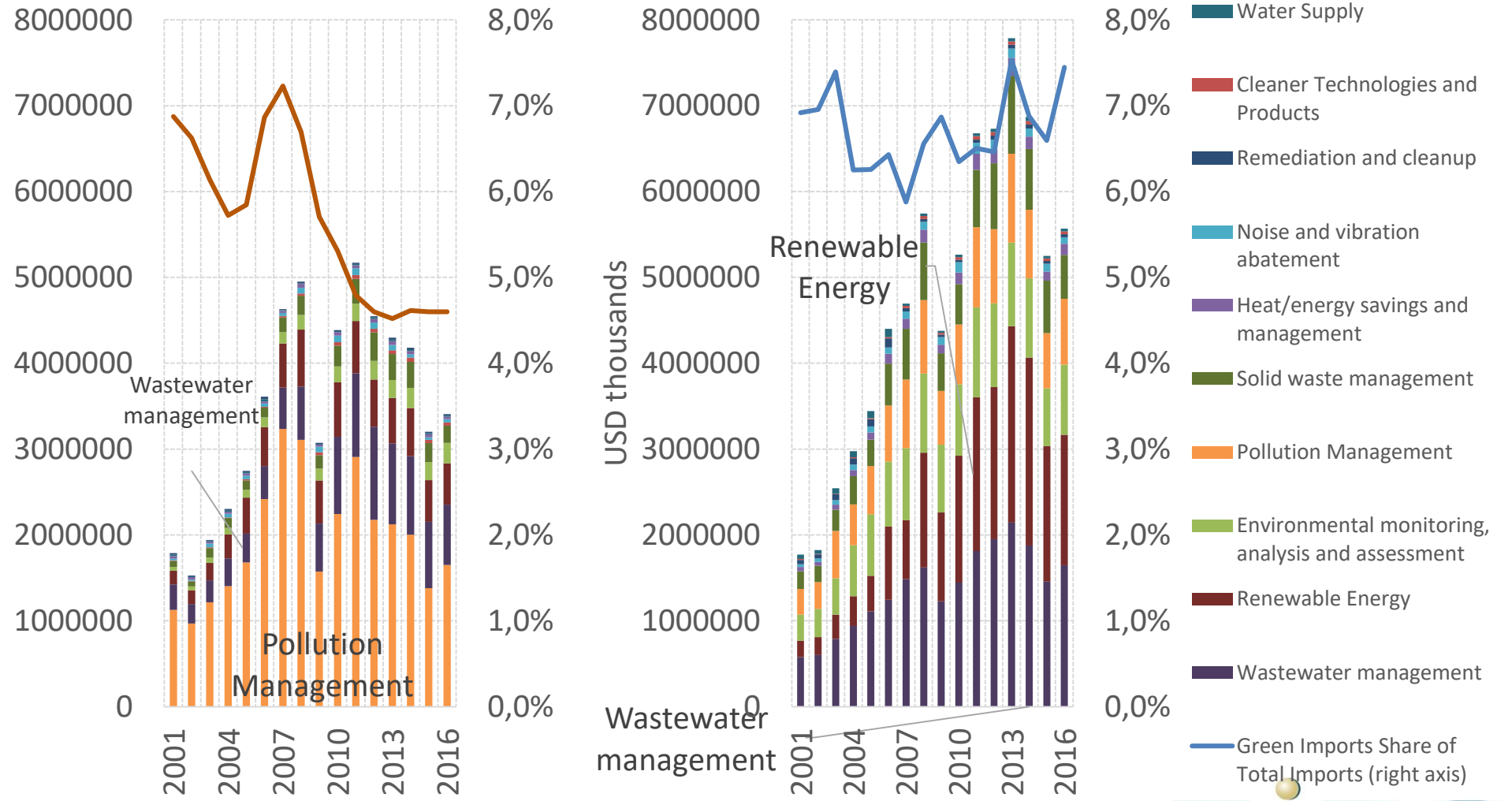
Varying definition of 'green goods'



- At the global level, SA has elected not to participate in the negotiation of the EGA, which appears politically flawed in favour of developed countries.
- At the regional level, tariffs are not a significant barrier
- SADC focuses on developing a regional industrial policy, incl. a SADC Green Economy Strategy and Action Plan.
- Discussions are however yet to deliver concrete interventions

Policy implementation: Trade policy

South African exports and imports of green goods, from 2001 to 2016



Source: TIPS, based on data from TradeMap

Policy implications

- The development of a GIP in SA is conditioned on building the capability of the state in designing and implementing it.
  - Green industrial policy is, by definition, cross-cutting, complex and challenging of the status quo.
  - Efforts should be directed towards building internal capacity on sustainability transitions within the departments of the ESEID Cluster.
  - The use of the SEIAS should be further leveraged to improve the understanding of cross-cutting issues

- Institutional capabilities to be built by enhancing inter-governmental coordination at the strategic as well as design and implementation levels.

- Sustainability issues should be embedded in personal, team and institutional performance management systems.

Policy implications

- Double mainstreaming of sustainability in industrial policy and industrial development in environmental policy.
- Sustainability objectives to become an integral pillar of SA's industrial policy, including the upcoming Master Plans.
  - Greening the support programmes
  - Strategic, time-bound and conditional support to 'green' performance improvements.
  - Measures incompatible with the transition to be progressively phased out.
  - Policy and regulatory bottlenecks identified and unlocked.
- Realities of industrial development should be taken into account in all sustainability-related policies and strategies.
  - LT clarity to the economy on environmental regulation, including carbon pricing.

- Collaboration to enable the commercialisation of innovation and R&D, in order to bridge the 'valley of death'

- Development the 'green' skill base, through awareness raising, the establishment of professional bodies and the mainstreaming of green skills in education programmes.

Policy implications

- Both capacity building and policy mainstreaming interventions, in order to be successful and long-standing, need to rely on up-to-date, accurate information and data.
- Establishment of a central, robust and extensive information base
- Economic data and information to be further disseminated and understood, notably by non-economic departments and stakeholders.
- One-stop-shop platform dealing with the interplay of sustainability and industrial development.
- Systems for the co-development of policy (in its broad sense) by government, the private sector, labour and communities should be established.

Policy implications

- Further attention to be paid to managing the transition process within a just transition framework.
- A LT vision aligned with the country's sustainability objectives should be developed.
- Leveraging the Master Plan process, sectoral roadmaps should accompany the vision in order to flesh out the implications for each economic activity.
- Resilience plans to be systematically crafted to ensure a just transition in favour of workers, small businesses and low-income communities.

- Institutionally, due to the cross-cutting and far-reaching nature of this work:
  - social dialogue and co-development by a set of multi-disciplinary and varied stakeholders, under the guidance of the PCCCC, should be driving this process.

Conclusions

- South Africa's transition to an inclusive green economy is underway.
- The road is, however, still long and complicated. This is notably the case in terms of green industrial development.
- Many 'green shoots' in support of the transition to GID are nevertheless present and growing in South Africa.
- The transformation of both economic and societal systems in favour of more sustainable models of development have definitely started at the policy as well as ground levels.
- Going forward, tremendous opportunities exist for further aligning industrial development and green economy policies in South Africa, and embark on a just transition to green industrial development.

Trade & Industrial Policy Strategies

Supporting policy development
through research and dialogue

www.tips.org.za

Gaylor Montmasson-Clair
Senior Economist: Sustainable Growth
gaylor@tips.org.za
+27 12 433 93 40