Mpumalanga Green Economy

Draft Green Economy Sector Plan

26 August 2016, Middleburg
Presentation Outline

1. Contextualisation of the plan
2. Formulation process
3. Green sector implementation pillars
4. Implementation plan
Policy background and aims of the plan
Review of policy framework: Provincial

• Vision 2030 (2013)
  – Overarching strategic framework for Mpumalanga
  – Organising structure of vision focuses on outcomes and mechanisms to achieve outcomes
  – The framework is a valuable platform for structuring green economy implementation plan.

• Mpumalanga Economic Growth and Development Path (MEGDP) (2011)
  – The Green economy is identified as a new economy opportunity areas along with ICT
  – The Green Economy is identified as a sector that will assist in a job creation and reduce the emission of green house gases
## Provincial interpretation of the green economy

<table>
<thead>
<tr>
<th>Province</th>
<th>Description</th>
</tr>
</thead>
</table>
| **Western Cape (2013)** | Western Cape Green Economy Strategy Framework has the core objective of using the green economy concept as a means to become the leading green economic hub in Africa.  
- Green Economy is embedded into economic activities through Green is Smart Framework  
- Environmental Affairs and Development Planning prepare annual GE reports; Green Cape is an SPV created to unlock green economy potential in the province (donor funded) |
| **Limpopo (2013)** | Limpopo Green Economy Plan aims for the province to become a national pioneer in the green economy through leveraging its inherent natural resource advantages.  
- The Plan identifies short, medium and long term goals for the province, with a 2050 time horizon. Focus areas are structures according to national priorities.  
- Limpopo Department of Economic Development, Environment and Tourism established a Green Economy Unit to compile detailed implementation action plans |
| **Gauteng (2010)** | Gauteng Department of Economic Development aim is to implement a systematic approach to build a low carbon, resource productive economy in Gauteng that creates jobs and reduces environmental impacts.  
- Gauteng Department of Economic Development sees its role mainly as a facilitator for the development of the green economy. Document is due for revision |
Provincial interpretation of the green economy

KwaZulu Natal (2012)

- KwaZulu-Natal Green Economy Strategy aims for the province to be a place where opportunities are provided to all citizens to allow for prosperity and where natural resources are augmented and sustainably used to support basic needs and sustainable growth.

- There are 9 implementation projects identified in the strategy e.g. waste economy programs, green provincial buildings, green procurement policy, payment for eco-system services etc.

- KZN Department of Economic Development & Tourism established a Green Economy Unit which launched a Green Growth website in 2012 (currently not active). Green Economy Technical Assistance Fund was also established in partnership with Trade and Investment KZN.

Free State (2014)

- Free State Green Economy Strategy in which it states its objective to have a full transition to a green economy by 2045.

- Five key focus areas for the development of the green economy are: agriculture; climate change; energy; water; and capacity building.

- In 2013, the Free State Department of Tourism, Economic Development and Environmental Affairs launched Youth Green Economy programme.
Aims of the green sector plan

• The Plan aims to provide an integrated approach towards developing the green economy in Mpumalanga by 2030 in line with the Vision 2030. Specific objectives include:
  – Developing a sector plan based on the province’s strengths in natural resources endowments
  – Expanding on the economic, green and environmental initiatives that are already underway in the province in order to facilitate quick wins
  – Support the DEDT's drive in sustainable economic development
  – Develop an action plan for implementation
Formulation Process
Methodology and limitations

Project inception

- Assignment specification
- Identification of sources
- Identification of key stakeholders and reference group

Literature/Desktop Review

- Literature review report
- International, national review on green economy best practices
- Provincial policy priorities, socio-eco status quo & resource profile

Stakeholder consultations

- Research report
  - Semi-structures interviews conducted through meetings
  - Aim: uncover current SD/GE initiatives, opportunities, challenges & barriers

Development & Drafting of Green Economy Strategy

- Draft GE Sector Plan
  - Prioritisation of GE Opportunities
  - Outline of green economy initiatives
  - Detailed action plan with indicative timelines

Final consultations at MP Green Economy Summit

Finalisation of Green Economy Sector Plan

Stakeholder consultation and Participation

1. Initial consultations with key public sector stakeholders: provincial and national government, DFI’s, research institutions, district municipalities
2. Consultations extended to business associations, companies

Limitation and challenges

1. Lack of coordination across relevant stakeholders
2. Connecting with the right people
3. Access to strategic documents (documents in draft form)
Green Sector Prioritisation: provincial priorities

<table>
<thead>
<tr>
<th>Economic priorities according to MEDGP</th>
<th>Environmental priorities (based on researched activity)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce unemployment</td>
<td>Biodiversity management</td>
</tr>
<tr>
<td>Reduce poverty</td>
<td>Waste management</td>
</tr>
<tr>
<td>Reduce inequality</td>
<td>Water resources</td>
</tr>
<tr>
<td></td>
<td>Land rehabilitation</td>
</tr>
</tbody>
</table>

Source: MEDGP and DNA Economics research
# Green Sector Prioritisation: prioritisation criteria

<table>
<thead>
<tr>
<th>Factors addressing socio-economic priorities</th>
<th>Factors addressing the environment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Potential for job creation</strong>: contribute towards the creation or preservation of jobs?</td>
<td><strong>Resource quality improvements</strong>: assessment of ecological footprint e.g. CO₂ reductions</td>
</tr>
<tr>
<td><strong>Industry localisation potential</strong>: opportunity for industrial development or additional industrial activities</td>
<td><strong>Resource volume improvements</strong>: contribute more resources without detraction from the environment?</td>
</tr>
<tr>
<td><strong>Rural development</strong>: intervention geared towards improving livelihoods in rural areas?</td>
<td></td>
</tr>
<tr>
<td><strong>Addressing income inequality</strong>: invention just and equitable for all?</td>
<td></td>
</tr>
<tr>
<td><strong>Access to services</strong>: a direct impact on the access to services for the poor?</td>
<td></td>
</tr>
</tbody>
</table>

Source: Adapted from Development Bank of Southern Africa’s prioritisation of the Green Economy programmes nationally (2011)

- Each criterion is assigned a score of 1, 2 or 3 with 3 indicating a high potential
- Scoring exercise is relatively subjective and qualitative
- Opportunities with aggregate score of 7 or higher were selected for prioritisation in the province
# Green Sector Prioritisation: criteria application

<table>
<thead>
<tr>
<th>High level opportunities</th>
<th>Jobs</th>
<th>Industry localisation potential</th>
<th>Rural development</th>
<th>Income inequality</th>
<th>Access to services</th>
<th>Resource quality improvements</th>
<th>Resource volume improvements</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generating electricity from bio-mass</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>15</td>
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<tr>
<td>Mini or Micro Hydroelectricity development</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>Energy efficiency &amp; Solar PV installations</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Support for sustainable small-scale and community farming</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>16</td>
</tr>
<tr>
<td>Training in Sustainable agricultural practices</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>Waste management: evaluate competing models for recycling</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>Generating electricity from landfill waste biogas</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>Feasibility study on developing a bio-products industry</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>2</td>
<td>8</td>
</tr>
</tbody>
</table>
# Green Sector Prioritisation: emerging priorities

<table>
<thead>
<tr>
<th>Implementation pillars</th>
<th>Prioritised opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biomass sector</td>
<td>• Generating electricity from bio-mass (15)</td>
</tr>
<tr>
<td></td>
<td>• Feasibility study on developing a bio-products industry (8)</td>
</tr>
<tr>
<td>Farming for food security</td>
<td>• Support for sustainable small-scale and community farming (16)</td>
</tr>
<tr>
<td></td>
<td>• Training in sustainable agricultural practices (11)</td>
</tr>
<tr>
<td></td>
<td>• Development of agriculture industry outside of established farming based on Agri-hubs (14)</td>
</tr>
<tr>
<td>Towns and urban centres</td>
<td>• Waste management (12)</td>
</tr>
<tr>
<td></td>
<td>• Generating electricity from landfill waste (12)</td>
</tr>
<tr>
<td></td>
<td>• Rollout of solar PV and energy efficiency (9)</td>
</tr>
<tr>
<td></td>
<td>• Clean cooking stoves (12)</td>
</tr>
<tr>
<td>Sustainable Tourism</td>
<td>• Expansion of eco-tourism and develop PPPs with large, private landowners for tourism initiatives (8)</td>
</tr>
<tr>
<td></td>
<td>• Development of small, sustainable enterprise development on protected land (12)</td>
</tr>
</tbody>
</table>
Green Economy
Implementation Pillars
Bio-mass sector

Strategic focus areas

- **Forestry**
  - Grow the number of biomass plants to match resource availability

- **Sugar cane**
  - Expand electricity sales from bagasse

- **Resource management**

- **Sustainable Consumption**

Goals for 2022

- **Forestry**
  - Two projects established through Bioenergy Cluster support

- **Sugar cane**
  - One project established through Bio-energy Cluster support

- **Resource management**

- **Sustainable Consumption**

Suggested Activities

- **Forestry**
  - Leveraging Bio-Energy Cluster for partnerships
  - Identify and develop strategies to overcome regulatory barriers

- **Sugar cane**
  - Leveraging Bio-Energy Cluster for partnerships with sugar producers/farmers
  - Identify and develop strategies to overcome regulatory barriers

Proposed vision for 2030

To extract more value from biomass assets by increasing implemented bio-energy projects.
Proposed vision for 2030
To extract more value from biomass assets by increasing implemented bio-energy projects.

Strategic focus areas

- **Forestry**
- **Sugar cane**

**Resource management**
- Revitalise management of forestry and related water resources

**Sustainable Consumption**
- Explore production of bio-based products (e.g. plastics from plants)

Goals for 2022

- **Investigate matching Working for Water with development of bio-energy project, i.e. invasive species as a biomass feedstock**
- **Revitalise management of forestry and related water resources**
- **Formalise alien invasive species as biomass feedstock**
- **One mini-hydro project**
- **Explore production of bio-based products (e.g. plastics from plants)**
- **Feasibility assessment of bioplastics production in Mpumalanga**
- **Assess local and export markets for bio-plastics**

Suggested Activities

- Investigate matching Working for Water with development of bio-energy project, i.e. invasive species as a biomass feedstock
- Feasibility assessment of bioplastics production in Mpumalanga
- Assess local and export markets for bio-plastics

**Infrastructure:** Projects require optimal location in terms of feedstock, water and electricity infrastructure.

**People:** Incremental skills development through institutions such as the Fibre Processing & Manufacturing SETA

**Investment:** Facilitate affordable long-term finance through MEGA; assess FDI potential for projects

**Capacity & Knowledge:** Raise awareness on Bio-Energy Cluster within the sector, develop a key information portal to facilitate project development

**Regulatory considerations:** A thorough assessment of provincial/municipal regulatory burdens
Sustainable Agriculture

Outcome for 2030
A resource conscious, sustainable dual agricultural economy

**Strategic focus areas**

**Small holder farmers**
- Embed green initiatives in the rollout of aggregators (Agri-parks, & Agri-hubs)

**Commercial farmers**
- Include alternative forms of energy in Agri-hubs

**Resource management**

**Goals for 2022**
- Include alternative forms of energy in Agri-hubs

**Suggested Activities**
- Support farmers to access information and advice on green farming best practices via extension services
- Pilot the inclusion of green initiatives in a farming co-operative e.g. solar lighting etc.
- Addition of alternative forms energy, energy efficiency and recycling in Agri-hubs

**Suggested Cross-Cutting Activities**
Sustainable Agriculture

Outcome for 2030
A resource conscious, sustainable dual agricultural economy

Strategic focus areas

Small holder farmers
- Conduct a diagnostic assessment on where green initiative can be applied within MP commercial farms

Commercial farmers
- Facilitate improvements in resource efficiency

Resource management
- Strategically locate underutilised land for development
- Water as a key input

Goals for 2022

Small holder farmers
- Increase in the utilisation of idle farming land (e.g. up to 20,000 hectares)

Commercial farmers
- Conduct a diagnostic assessment on where green initiative can be applied within MP commercial farms
- Support farmers to access information and advice on green farming best practices through information portal
- Promote effective resource utilisation through energy and water efficiency technologies
- Support farmer development of mini-hydropower plants

Resource management
- Assessment of water resources to identify sustainable usage opportunities
- Consider water pricing models that support sustainable usage
- Coordinating among stakeholders to allocate underutilised land to productive and sustainable applications

Suggested Cross-Cutting Activities

Strategy: Work with DARDLEA to set implementation targets for 2022

Infrastructure: Integrate green farming skills with extension network

Investment: Facilitate affordable long-term finance through MEGA; assess FDI potential for projects

Capacity & Knowledge: Raise awareness of benefits of green farming methods

Regulatory considerations: Assessment of water allocation and pricing rules and regulations
Green Town and Urban Centres

Outcome for 2030
Eco-conscious towns with improved resource utilisation

Strategic focus areas

Waste management
• Expansion of recycling activities and waste beneficiation

Energy efficient buildings

Greener homes

Goals for 2022

• Expand waste recycling activities in 2 larger municipalities
• Establish one waste-to-energy project

Suggested Activities

• Investigate the viability and sustainability of recycling activities within large municipalities
• Investigate the feasibility of waste-to-energy project within provincial urban centres

Suggested Cross-Cutting Activities
Green Town and Urban Centres

Outcome for 2030
Eco-conscious towns with improved resource utilisation

Strategic focus areas

Waste management
- Expansion of recycling activities and waste beneficiation

Energy efficient buildings
- Promote the use of solar PV and energy efficiency in businesses/buildings

Greener homes

Goals for 2022

Waste management
- Expand waste recycling activities in 2 larger municipalities
- Establish one waste-to-energy project

Energy efficient buildings
- Improve current levels of solar PV rollout in the province
- Promote practical energy efficiency measures

Greener homes

Suggested Activities

Waste management
- Investigate the viability and sustainability of recycling activities within large municipalities
- Investigate the feasibility of waste-to-energy project within provincial urban centres

Energy efficient buildings
- Deployment of solar PV technology on government buildings
- Partner with business associations in driving energy efficiency

Greener homes
Green Town and Urban Centres

Outcome for 2030
Eco-conscious towns with improved resource utilisation

Strategic focus areas

- **Waste management**
- **Energy efficient buildings**
- **Greener homes**
  - Promote cleaner cooking and home heating methods
  - Extend the roll-out of solar water heating (SWH)

Goals for 2022

- Establish a cooking stove & heater programme that focuses on local content

Suggested Activities

- Align resources and efforts with the DOE solar water heating programme
- Conduct a needs analysis for cooking stoves within rural development nodes

Suggested Cross-Cutting Activities

- **Infrastructure**: Consider distribution network requirements for greater renewables penetration
- **Investment**: Facilitate affordable long-term finance through MEGA; identify available funding sources
- **Capacity & Knowledge**: Raise awareness of benefits of renewable energy and energy efficiency
- **Regulatory considerations**: Consider experience from municipalities that have implemented renewable energy and energy efficiency projects (including net metering) on how to overcome regulatory blockages
Sustainable Tourism

- **Key outcome** is to leverage Mpumalanga’s natural environment to deliver economic vitality that has low impact on the environment and enables healthy communities

- **Suggested activities for 2022:**
  - Updating the Mpumalanga Tourism Growth Strategy (2007) to incorporate sustainability into the provincial strategy
  - Promote the incorporation of responsible tourism in the grading and marketing of tourism destinations
  - Expansion of cultural parks and related activities in proximity to major tourist destinations
Way forward

- Information and feedback generated at Green Economy Conference will be incorporated into the Plan
  - But we’re particularly interested in comments and suggestions relating to the Green Economy Sector Development Plan
- Update Plan based on comments
- Updated plan submitted to DEDT
- DEDT will drive implementation
High-level cross cutting activities
Institutional and Capacity Development

1. Suggested capacity building activities
   a) Sensitization to the green economy concept
   b) Communicating the benefits of the green economy
   c) Partnering with national initiatives for capacity development (PAGE, CSIR, South African Low Emissions Development Program (SA-LED))

2. Collaboration for skills development
   a) Private sector collaboration to map skills shortage in the green economy
   b) Partner with the relevant training SETAs
   c) Strengthen technical and vocation skills development through learner-ships
Implementation Plan
## Biomass sector

<table>
<thead>
<tr>
<th>Action Item</th>
<th>Suggested Actions and/or Resolution</th>
<th>Actors</th>
<th>Resources</th>
<th>Timeframe</th>
</tr>
</thead>
</table>
| **Leveraging Bio-energy Cluster Partnership for Bio-energy projects** | - Insert senior departmental representatives into cluster  
- Consolidate bio-mass project pipeline via information portal - establish priority projects | DEDT, Bio-energy cluster | None | FY 2016/17 |
| | - Raise awareness of the Cluster (marketing) & extend its reach to include key project developers | DEDT | R 15 000 | FY 2016/17 |
| | - Develop a key information portal to facilitate information sharing | DEDT, Bio-energy cluster | R 35 000 (web design)  
R2000 (hosting p.a) | FY 2017/18 |
| **Address sector regulatory barriers** | - Diagnostic evaluation to identify regulatory and other barriers to biomass projects in Mpumalanga | DEDT, Cluster, Service provider | R800 000 | FY 2017/18 |
| | - Establish a technical and inter-departmental task team to fast track 3 priority projects | DEDT, IDC, MEGA, DWA, Municipalities, DARDLEA | None | FY 2017/18 |
## Biomass sector (2)

<table>
<thead>
<tr>
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<th>Resources</th>
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</thead>
<tbody>
<tr>
<td>Bio-mass resource scoping</td>
<td>Conduct a high-level bio-mass feedstock resource map through the corridor to inform sector potential and optimise location</td>
<td>DEDT, Forestry South Africa, University of Mpumalanga, Cluster</td>
<td>R 2 000 000</td>
<td>FY 2018/19</td>
</tr>
<tr>
<td>Leveraging on the EPWP</td>
<td>Identify forestry areas with high density of invasive species within the forestry corridors</td>
<td>(DARDLEA), Municipalities</td>
<td>None</td>
<td>FY 2017/18</td>
</tr>
<tr>
<td></td>
<td>- Assessment of weeds as a biomass feedstock within the biomass corridor</td>
<td>University of Mpumalanga, SAFCOL, Forestry South Africa</td>
<td>R 600 000</td>
<td>FY 2018/19</td>
</tr>
<tr>
<td>Prove feasibility of bioplastics production in Mpumalanga</td>
<td>Feasibility assessment of bioplastics production in Mpumalanga</td>
<td>DEDT, Paper milling industry, SAFCOL</td>
<td>R1 000 000</td>
<td>FY 2019/20</td>
</tr>
<tr>
<td></td>
<td>- Assess local and export markets for bioplastics</td>
<td>SAFCOL</td>
<td>R500 000</td>
<td>FY 2019/20</td>
</tr>
<tr>
<td>Explore feasibility of micro-hydro-plants in public forestry lands</td>
<td>Assessment of hydro-plant potential in strategic locations e.g. proximity to local communities through engagements</td>
<td>SAFCOL, MTPA, DEDT, Service provider</td>
<td>R800 000</td>
<td>FY 2018/19</td>
</tr>
</tbody>
</table>
## Sustainable farming

<table>
<thead>
<tr>
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<th>Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pilot the embedding of green initiatives in a farming co-operative</td>
<td>Identify a successful small holder farming co-operative and conduct a needs analysis on alternative energy sources and resource efficiency</td>
<td>DEDT, DARDLEA, service provider</td>
<td>R 350 000</td>
<td>FY 2017/18</td>
</tr>
<tr>
<td></td>
<td>Access government, donor or DFI grant funding to create best-practice case study. Rollout appropriate solution and evaluate the impact of these interventions on the productivity and level of co-op</td>
<td>DEDT, DARDLEA, MEGA, IDC, service provider</td>
<td>R 30 000 (support to access funding)</td>
<td>FY 2018/19</td>
</tr>
<tr>
<td>Alternative energy and E.E for Agri-parks &amp; Agri-hubs</td>
<td>Feasibility assessment of including solar PV, biogas digesters, energy efficiency equipment, etc. in processing centres</td>
<td>DEDT, DARDLEA, MEGA, Service provider</td>
<td>R 500 000</td>
<td>Depended of Agri-hub rollout schedule</td>
</tr>
<tr>
<td>Support farmers to access information and advice on best practices</td>
<td>Scoping of national initiatives on sustainable agricultural practices</td>
<td>UMP, Western Cape Department of Agriculture, DAFF, DARDLEA</td>
<td>R 300 000</td>
<td>FY 2017/18-FY 2018/19</td>
</tr>
<tr>
<td></td>
<td>Develop an information tools and platforms on sustainable agriculture best practices</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Promote effective resource utilisation</td>
<td>Raise awareness on energy efficiency, water efficiency technologies &amp; precision agricultural techniques- sensor technologies that maximises the efficiency of inputs</td>
<td>UMP, Farmer Associations e.g. Agri-SA</td>
<td>R 100 000 (per annum)</td>
<td>FY 2017/18-FY 2019/20</td>
</tr>
<tr>
<td>Action Item</td>
<td>Suggested Actions and/or Resolution</td>
<td>Actors</td>
<td>Resources</td>
<td>Timeframe</td>
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<td>------------</td>
</tr>
<tr>
<td>Skills development</td>
<td>- Create programme to train extension officers in small holder farmer water management techniques &amp; include green initiatives in current training programmes</td>
<td>UMP, DARDLEA, service provider</td>
<td>R 1 500 000</td>
<td>FY 2018/19</td>
</tr>
<tr>
<td>Increase utilisation of idle farming land</td>
<td>- Identify and quantify idle farming capacity.</td>
<td>DARDLEA, Municipalities</td>
<td>None</td>
<td>FY 2017/18</td>
</tr>
<tr>
<td></td>
<td>- Investigate funding available to repurpose suitable idle land for sustainable agriculture e.g. organic farming (private, public, donor and DFI), and structures required to access the finance</td>
<td>DARDLEA, Department of Rural Development and Land Reform, Municipalities, MEGA, Service provider</td>
<td>R 300 000</td>
<td>FY 2017/18</td>
</tr>
</tbody>
</table>
## Green Towns- Waste management

<table>
<thead>
<tr>
<th>Action Item</th>
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</tr>
</thead>
</table>
| Viability of expanding waste recycling activities within larger municipalities | - Map waste resources in larger local municipalities such as Mbombela- accurate data informs waste economy potential  
- Consider potential to separate waste at source  
- Assessment of the market for recycled material (e.g. packaging, plastics) and financial viability of recovering materials  
- Assess feasibility of treatment of waste using alternative technologies | DARDLEA, District & Local Municipalities, service provider  
Municipalities and refuse removal service providers  
DARDLEA, District & Local Municipalities, REDISA, Mondi, Service Provider  
DEDT, Service Provider | R1 200 000  
R800 000  
R800 000  
R500 000 | FY 2017/18  
FY 2018/19  
FY 2018/19  
FY 2017/18-FY 2018/19 |
| Feasibility assessment of waste-to-energy project                           | - Draw lessons from Umjindi Local Municipality's participation in SALGA and GIZ pilot study on bio-gas development  
- Conduct feasibility study for a waste to energy project in larger municipalities- both landfill and waste water treatment plants | GIZ Biogas Platform, SALGA, Umjindi Municipality, DARDLEA  
Municipality, service provider | None  
R800 000 | FY 2017/18  
FY 2018/19 |
## Green Towns- Energy Efficient Buildings

<table>
<thead>
<tr>
<th>Action Item</th>
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<th>Resources</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Deployment of Solar PV in municipalities</td>
<td>- Assessment on potential impacts on revenue of the installation of solar PV on Mbombela local municipality</td>
<td>SALGA, COGTA, DEDT, Interested municipalities, service provider</td>
<td>R1 200 000</td>
<td>FY 2017/18</td>
</tr>
<tr>
<td></td>
<td>- Evaluation of small embedded generation regulations and tariff structures for grid connections – and experience on municipalities that have effectively supported embedded generation (City of Cape Town, Drakenstein Municipality, Ethekweni)</td>
<td>SALGA, COGTA, DEDT, Interested municipalities, NERSA, Eskom, Service provider</td>
<td>R500 000</td>
<td>FY 2017/18</td>
</tr>
<tr>
<td>Deployment of Solar PV on government buildings</td>
<td>- Incorporate deployment of solar PV as part of current energy efficiency drive in government buildings</td>
<td>DEDT, Department of Public Works, Roads and Transport, Municipalities, Service provider</td>
<td>R10 000 000</td>
<td>FY 2017/18</td>
</tr>
</tbody>
</table>
## Green Towns- Energy Efficient Buildings (2)

<table>
<thead>
<tr>
<th>Action Item</th>
<th>Suggested Actions and/or Resolution</th>
<th>Actors</th>
<th>Resources</th>
<th>Timeframe</th>
</tr>
</thead>
</table>
| Promotion of energy efficiency in municipalities | - Partner with business associations in marketing & driving energy efficiency for small businesses  
- Compile a database of approved provincial suppliers for energy efficiency (energy audits, equipment etc.)  
- Consolidate information on available national incentives for energy efficiency and solar PV | Provincial business associations, DEDT | None | FY 2017/18 |
| | | DEDT, Service provider | R200 000 | FY 2017/18 |
| | - Expand participation in the Division of Revenue Act (DoRA) Energy Efficiency Demand Side Management (EEDSM) Programme | National Treasury, Municipalities | None | FY 2017/18 |
| | - At least 15 municipal buildings retrofitted for enhanced energy efficiency by 2022. Engage with DoE/DEA Vertical Nama project for additional funding. | Municipalities, DoE, service provider | R 4 500 000 | FY2017/18- FY2021/2022 |
| | - Promotion of other demand side management tools such as smart meters e.g. Mkhondo Municipality | SALGA, Municipalities, COGTA | None | FY 2017/18 |
| | - Linking with Cities Network and lessons learnt on energy efficiency and renewable energy | Urban Centres such as Mbombela, Emalahleni | None | FY 2017/18 |
## Green Towns- Greener homes

<table>
<thead>
<tr>
<th>Action Item</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Align efforts with the DOE SWH</td>
<td>Re-establish participation in the redesigned fully subsidised SWH Programme (Social programme)</td>
<td>Human Settlements, Municipalities, DoE</td>
<td>None</td>
<td>FY 2017/18</td>
</tr>
<tr>
<td>Establish a cooking stove programme</td>
<td>Conduct a needs analysis for cooking stoves within rural priority nodes, and high pollution areas such as the Highveld</td>
<td>DARDLEA, DEDT, Municipalities</td>
<td>R 1 500 000</td>
<td>FY 2017/18-FY 2018/19</td>
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<tr>
<td></td>
<td>Develop guidelines and procedures in the deployment of cooking stoves. Draw on available research.</td>
<td>DARDLEA, DEDT, Municipalities, DTI (local content). Service provider</td>
<td>R 350 000</td>
<td>FY 2017/18-FY 2018/19</td>
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<tr>
<td></td>
<td>Develop a database of approved provincial suppliers for cooking stoves. Verification with SANS and SABS</td>
<td>DEDT</td>
<td>None</td>
<td>FY 2019/20</td>
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</tbody>
</table>
## Sustainable Tourism

<table>
<thead>
<tr>
<th>Action Item</th>
<th>Suggested Actions and/or Resolution</th>
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</thead>
<tbody>
<tr>
<td>Updating the Mpumalanga Tourism Growth Strategy (2007)</td>
<td>- Incorporate sustainability into growth strategy</td>
<td>MTPA, DEDT, Service provider</td>
<td>R900 000</td>
<td>FY 2017/18</td>
</tr>
<tr>
<td>Promote the incorporation of responsible tourism in the grading and marketing of tourism destinations.</td>
<td>- Encourage tourism businesses to promote their sustainability credentials. through marketing support</td>
<td>MTPA, Business Associations</td>
<td>R50 000</td>
<td>FY 2018/19</td>
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</table>
## Backup slides

<table>
<thead>
<tr>
<th>High level opportunities</th>
<th>Jobs</th>
<th>Industry localisation potential</th>
<th>Rural development</th>
<th>Income inequality</th>
<th>Access to services</th>
<th>Resource quality improvement</th>
<th>Resource volume improvement</th>
<th>Total</th>
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<tbody>
<tr>
<td>Generating electricity from biomass</td>
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<td>Mini or Micro Hydroelectricity development</td>
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<tr>
<td>Energy efficiency &amp; Solar PV installations</td>
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<td>Development of agriculture industry outside of established farming based on Agri-hubs</td>
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<tr>
<td>Support for sustainable small-scale and community farming</td>
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<td>Training in Sustainable agricultural practices</td>
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<td>Waste management: evaluate competing models for recycling</td>
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<tr>
<td>Generating electricity from landfill waste biogas</td>
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<tr>
<td>Feasibility study on developing a bio-products industry</td>
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<td>Water management: Minimise water losses</td>
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<td>Water management: Re-use and recovery and infrastructure maintenance</td>
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<td>Increase the scope of rainwater harvesting</td>
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<td>Expansion of eco-tourism and develop PPPs with large, private landowners for tourism initiatives</td>
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<td>Small, sustainable enterprise development on protected land</td>
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<td>Clean cooking stoves: develop guidelines, procedures, and investigate feasibility of local manufacturing</td>
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<td>Improve home insulation</td>
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<td>Air pollution management-implementation of regulations</td>
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<td>Expand greening of government buildings and public spaces</td>
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