

**The GreenCape Sector Development Agency
Progress Report on Strategic Project**

**Western Cape Industrial Symbiosis
Programme**

2013-2014



Report Prepared for:
Trade and Sector Development
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greencape

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EXECUTIVE SUMMARY

Background

Continued viability of businesses, the development of the economy and the potential for job creation are being challenged by the rising cost of energy and other inputs. Improving resource efficiency is a key to overcoming this challenge. Internationally and locally, it is recognised that the mitigation of climate change will require the industrial sector to be more resource efficient and reduce the carbon intensity of production processes. The Western Cape Industrial Symbiosis Programme (WISP) is one of a number of Green Economy initiatives of the Western Cape Government that aims to address these challenges by improving resource efficiency through industrial symbiosis (IS).

Programme Overview

WISP is a free facilitation service that connects companies so that they can identify and realise the business opportunities enabled by using unused or residual resources (materials, energy, water, assets, logistics, expertise). WISP uses various tools to engage with companies including, Business Opportunity Workshops, individual company meetings, company site visits, as well as awareness raising at industry events. These methods allow WISP to build a network of companies and identify under-utilised resources which could lead to business opportunities for the member companies. A very important role of the WISP team is follow-up including managing the resources and synergies identified, building the business cases for member companies, maintaining relationships, assisting companies with implementation of synergies, creation of completed synergy case studies for member companies and reporting on the effectiveness of the programme.

Programme Outputs for 2013-2014

The programme had four intended outcomes for the 2013-2014 year. These are summarised in the table overleaf indicating the progress in each of the outcome areas.

It is worth noting that the network developed in the first year of the programme now consists of 108 companies. A total of 589 resources and 1205 potential synergies between companies were identified. The WISP team has worked actively with the companies involved

so that, at the time of writing, nine synergies have been completed (i.e. exchanges of resources have occurred either as a one-off or will continue to do so on an on-going basis) and eight synergies are in final negotiation or implementation stages. The data gathered to date for those synergies that have been completed indicate that the following benefits have been realised:

Additional Sales	R 2.09 million
Costs Savings	R 1.45 million
Private Investment	R 100 000
Landfill diversion	23.3 tonnes
Energy Savings	1820 MWh/annum

WISP Outcomes, Outcome Indicators and Progress 2013-2014

Outcome	Outcome indicators	Progress
Adaptation of industrial symbiosis facilitation methodologies to the South African context	<ul style="list-style-type: none"> Adaptation of industrial symbiosis facilitation methodologies to the South African context 	<p>Completed.</p> <p>Key components include Programme design and methodology adaptation/development Adaptation of the SYNERGie™ database platform to the South African context Training of WISP team in IS programme delivery and on SYNERGie™ Training of 19 workshop facilitators</p>
Demonstration of IS in at least one industrial area/sectors in the Western Cape.	<ul style="list-style-type: none"> Demonstration of this approach in at least one pilot area to identify potential beneficiaries. Progressing of identified opportunities with at least 4 of beneficiaries identified through workshop(s) (i.e. two potential synergies) to enable the development of the initial business cases for job safeguarding or creation of new jobs or establishment of new enterprises to be developed as synergies are realised. 	<p>Completed.</p> <p>Greater Cape Metropole was selected as the pilot region. Two Business Opportunity Workshops were held (14 August and 9 October 2013).</p> <p>A total of 82 companies engaged through workshops and a further 26 were added to the network through one-to-one engagements (network of 108 companies in total).</p> <p>A total of 15 companies have already benefited (9 synergies implemented) and 16 companies are likely to benefit still in this pilot year (8 synergies in final stages of negotiation).</p>

Outcome	Outcome indicators	Progress
Evidence of the potential business development and job creation potential of IS in South Africa	<ul style="list-style-type: none"> An estimation of the energy savings or waste minimisation potential available to the beneficiaries as well as estimations of the business impact (e.g. cost savings, new business opportunities) and job creation potential enabled by realising these IS opportunities. 	<p>Completed for majority of Key Performance Indicators (KPIs) for realised synergies.</p> <p>KPIs</p> <ol style="list-style-type: none"> 1. Business development, including additional sales, cost savings and private investment 2. Landfill diversion 3. Reduction in CO₂ emissions 4. Job creation <p>In addition, enterprise development has been identified as a longer term goal.</p> <p>A carbon calculator has been developed specifically to assess the CO₂ emission reductions achieved by synergies. This has been tailored to IS and to the SA context. The calculator has been developed to also allow WISP to provide information to companies about carbon emission reductions in a format that is consistent with carbon footprint reporting using internationally accepted protocols.</p> <p>Note that with the agreement of the Steering Committee, no job creation figures will be reported until a defensible methodology has been developed. This is an activity area for the next year of the programme.</p>
An indication of the barriers to be overcome to enable this potential to be realised.	<ul style="list-style-type: none"> A strategy for the further development of a regional industrial symbiosis based on the findings of this pilot. If necessary, this could be replaced by a report on the barriers to be overcome to enable the roll-out and realisation of the benefits of an industrial symbiosis programme. 	<p>Completed.</p> <p>The WISP pilot has demonstrated that there is considerable enthusiasm within industry in the Western Cape for an IS programme, and willingness to develop the business opportunities identified. Free facilitation is still key to enabling synergies to be realised as many companies do not have the human resources to allocate the time required to develop synergies.</p> <p>Of note is that there are regulatory barriers that may prevent some synergies to be realised, but that WISP has established a working relationship with the regulators to be able to obtain early warning of potential barriers to be overcome. Other barriers</p>

Outcome	Outcome indicators	Progress
		<p>include the lack of an appetite for capital investments to realise opportunities and the lack of value chains for secondary materials. This is an area where there is a link to the Waste Economy project also being done at GreenCape. Work on overcoming these barriers will be taken up by the Waste Economy project with support from the WISP team where appropriate.</p> <p>The interest from industry and government extends beyond the Western Cape. The WISP team have assisted with a scoping workshop held in KZN in February to assist in developing a roadmap for a similar programme in KZN to be managed by Trade & Investment KZN. The WISP team continues its efforts with other stakeholders for the development of a national programme.</p>

Programme Development in 2014-2015

The structure of the programme will remain largely unchanged from the pilot year. The primary goals will be business network development, potential synergy identification and synergy realisation. To build the network, three Business Opportunity Workshops have been planned for 2014 in June, August and October, with a yearly dissemination event scheduled for March 2015. Greater Cape Town still holds significant untapped potential and will therefore continue to be a focus area for the WISP team, but WISP also plans to grow and diversify the network to include the West Coast and Cape Winelands regions.

WISP will aim to assist at least 90 business over 2014-2015 with proactive interventions to become more resource efficient (up from the achieved target of 60 in 2013-2014). The programme's performance will also be reported against the KPIs (business development, landfill diversion, reduction in CO₂ emissions and job creation) developed in the pilot year.

Other key activities and initiatives for 2014-2015 include:

- Development of a formal communications strategy
- Development of synergy case studies (which become public documents that capture synergy details and benefits) and synergy "Blueprints" (these document information on

the opportunities, the strategies used to realise them, any barriers encountered and lessons learned, and thereby become a resource for other facilitators and programmes).

- Setting up a Programme Advisory Group (PAG) consisting of members of industry that can provide strategic advice to and promote the programme
- Expansion of the carbon calculator and capacity building in Life Cycle Assessment/Carbon Footprinting
- Development of a systems based methodology for the estimation of net job creation
- Relationship building to enable WISP to make progress in terms of enterprise development

Concluding Remarks

The one-year WISP pilot can be regarded as a success both in its execution (achieving its intended outcome) and on the positive impact it is having on Western Cape business in terms of financial benefits, landfill diversion, CO₂ emission reductions and potential for SMME development and job creation. In addition, through strategic support to other provincial and national entities, development of practical methodologies and tools, and building a South African evidence based for the potential of IS, WISP has contributed significantly to building a foundation for a successful South African national industrial symbiosis programme.