



SOUTH AFRICA
WINNER 2014



Waste to Food

Creating economic opportunities
by recycling food waste



SEED

promoting entrepreneurship
for sustainable development

Founding Partners



About SEED

SEED strengthens the capacity of small grassroots enterprises in developing countries to enhance their social, environmental, and economic benefits, builds bridges between entrepreneurs and policy makers and stimulates exchange and partnership building.

SEED was founded by the United Nations Environment Programme (UNEP), the United Nations Development Programme (UNDP) and IUCN (International Union for Conservation of Nature) at the 2002 World Summit on Sustainable Development in Johannesburg and is hosted by adelphi research gGmbH, based in Berlin, Germany.

adelphi research is a leading think-and-do tank for policy analysis and strategy consulting. The institution offers creative solutions and services regarding global environment and development challenges for policy, business, and civil society communities.



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Creating innovative solutions to local challenges

LOCAL CHALLENGES

Food waste & food security

Recycling practices have progressed across many industries in South Africa, except for the food sector, resulting in large amounts of post-consumption waste. Statistics suggest that 1.4 million tonnes of food are wasted by South African households each year, which in financial terms is equivalent to ZAR21.7 billion (USD1.4 billion) per year, or 0.8% of GDP¹. In addition, the amount of food waste incurred by retailers and hospitality intensifies the magnitude of the problem. Failing to recycle food waste also has environmental implications. For instance, organic waste is still largely sent to landfills, which is estimated to contribute to 4.3% of South Africa's greenhouse gas (GHG) emissions². Furthermore, the production of food that is not consumed wastes valuable resources, such as agricultural land, water and energy. At the same time, 25% of the South African population still suffers from hunger and malnutrition due to a lack of money to buy food, lack of access to land to cultivate food and lack of water. Therefore addressing food waste, not only at the production, post-harvest and distribution stages, but also at the post-consumption stage, is directly linked to food security.

Poverty in the Philippi Township

Philippi is an area of Cape Town with a population of nearly 200,000. While it has promising potential for growth due to the existence of the Philippi Industrial Area, the Philippi Horticultural Area and the recently developed Philippi Village, this low-income settlement still faces serious poverty. A 2011 census³ suggests that 38% of the labour force is unemployed, with at least 20% of the population living under the poverty line. While the farmland surrounding the township is estimated to produce around 80% of Cape Town's vegetables, food insecurity remains a problem in the township due to a lack of income to purchase food.

HOW THE BUSINESS WORKS

Waste to Food (W2F), located in Philippi, has developed a combination of technologies to overcome the widespread disposal of organic waste to landfills in South Africa, while at the same time contributing to employment and food security. Through partners, W2F collects food waste from large producers, such as retailers and hospitality groups, and from markets. With their innovative processing system, the waste is subsequently recycled into commercial high-quality vermicompost. The organic compost is then sold to commercial clients such as garden centres, seedling producers and farmers. The compost is also directly applied in community food gardens and in the W2F greenhouse to increase the production of organic vegetables, which are then consumed by the local community and sold back to retailers. By employing people from the Philippi Township and training them to become independent compost entrepreneurs and gardeners, W2F offers new livelihood opportunities to address poverty in the community.



Key Facts:

Location: Cape Town, South Africa
Founded: 2012
Annual turnover: USD 44,500
Annual profit: USD 1,700
Jobs created: 5
Average salary: USD 4,400 per year

Watch how we do it!



” Reduces CO₂ emissions and pollution from food waste while addressing food insecurity and unemployment in Philippi, Cape Town. “



¹ Nahman A, de Lange W, Oelofse S, Godfrey L, 2012. The costs of household food waste in South Africa. <http://adelph.it/WTFSourceNahman>
² Oelofse S and Nahman, A, 2012. Estimating the magnitude of food waste generated in South Africa. <http://adelph.it/WTFSourceCSIR>
³ City of Cape Town, 2011. Census Suburb Philippi. <http://adelph.it/WTFSourceCPT>

The power of partnerships



National businesses

Pick n Pay, one of South Africa's largest supermarket chains, is one of W2F's many partners. They source and deliver organic waste to W2F and offer marketing and packaging advice. They also provided start-up support and a grant of ZAR1.5 million (USD100,000) which funded operational costs for the first phase of the project, proof-of-concept establishment and the development of the plant. Through Pick n Pay's Ackerman Foundation, W2F also received a grant of ZAR2 million (USD130,000) to found the **Milisa Enterprise Development Trust (MEDT)**, which offers enterprise development opportunities to black youth. Pick n Pay is a shareholder of MEDT.

Don't Waste Services, a national business in waste management and also one of W2F's five shareholders, provides waste management skills training to W2F and also transports organic waste from producers to W2F. At the outset they offered a grant of ZAR1 million (USD67,000), which was used to purchase equipment and to fund some of the operational cost for the first phase of the project.



Civil Society Organisations (CSO)

The **Philippi Economic Development Initiative** is a local NGO that aims to create economic opportunities in the Philippi area. They are also a shareholder of W2F and assist with administration such as due diligence, regulations, accounts and certification process(es). Originally they provided a grant of ZAR1 million (USD67,000) which funded equipment and operational costs for the first phase of the project. They are also instrumental in networking, bringing in new partners and most importantly, they have a trusted relationship with the people in the community that W2F works with.

In turn, they benefit from the partnership by gaining new opportunities to fulfil their mandate of creating economic development in the area.



National Government

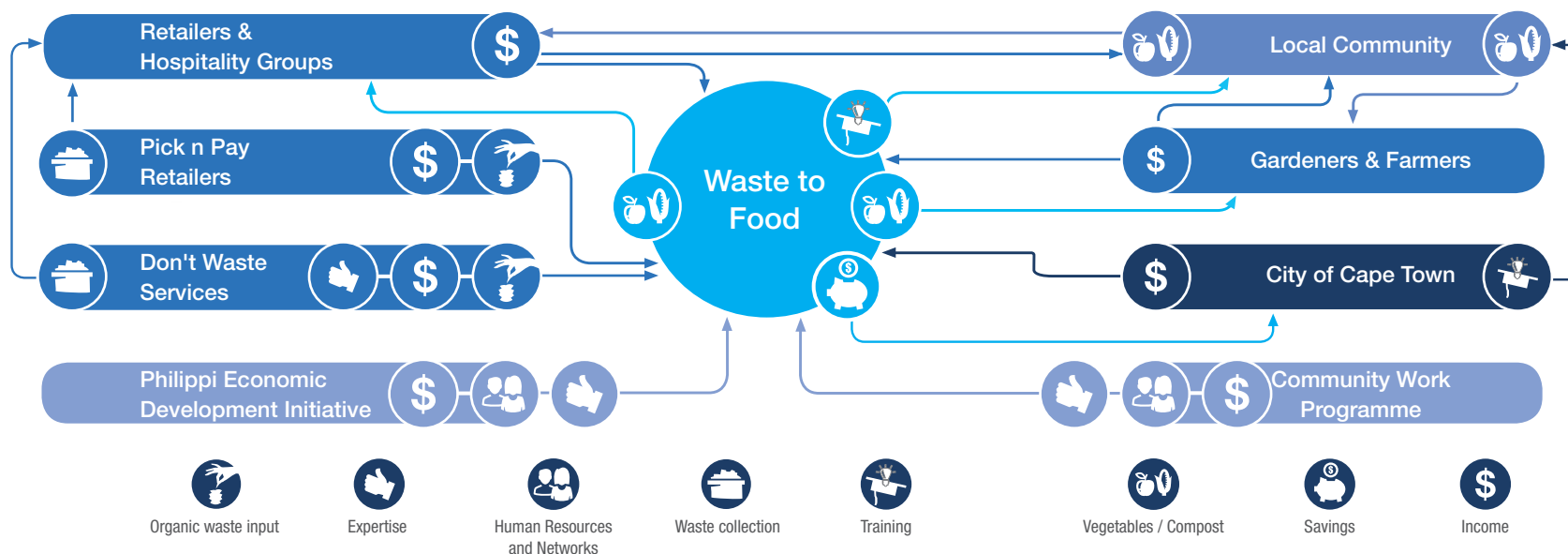
The **City of Cape Town** was a founding partner that provided ZAR600,000 (USD40,000) of seed funding to pilot the project and purchase technical equipment. They are also the landlord of the land where the W2F recycling plant and greenhouse are located. Their role is to help with the business skills training that W2F offers to the future micro-franchises. Finally, they are a key partner in reaching other government departments. Partnering with W2F is part of their strategy to increase employment and income in Cape Town and in turn, reduce poverty. At the same time, recycling food waste saves the city on waste management costs and reduces its carbon footprint.

The **Community Work Programme (CWP)** aims to provide a job safety net for unemployed people, especially youth, through various projects such as food production. They provide manpower and technical assistance with the setting up and running of the greenhouse, irrigation systems and vegetable production. In turn, W2F provides them with a platform to create jobs in farming.

Learn more about the partnership!



PARTNERSHIP STRUCTURE



“Working with a wide range of partners can be challenging in terms of coordination and aligning incentives. Involving partners as shareholders and creating a shared value amongst all has been a real success factor for us.”

Creating impact



SOCIAL IMPACT

W2F has three main social impacts: employment creation, skills development and increased food security. Firstly, the enterprise employs people from Philippi and trains them in composting. Some remain directly employed, while others are trained to set up their own vermicompost micro-franchise. In turn, these micro-franchises create indirect employment. The same concept applies for vegetable production. Through the MEDT, W2F trains people from the area in organic farming. Some will continue to work at W2F's greenhouse while others are trained to become micro-entrepreneurs in organic farming. More indirect employment was created through a cooperation agreement with the Samarpan Foundation, which trained unemployed people in the area to recycle PET bottles into bricks used to build the W2F staff canteen. Food security is achieved through the onsite staff food garden, the greenhouse and the farming micro-franchises. The staff food garden generates vegetable for the staff, and the greenhouse and micro-franchises increase access to high quality and affordable vegetables for the community.

Key impacts

- Created 4 direct jobs at W2F
- Created 12 indirect jobs through the Samarpan Foundation
- Created 25 jobs in organic food production through CWP
- Trained 10 micro-entrepreneurs in vermicomposting and business management



ECONOMIC IMPACT

The Philippi community first derives economic benefits from the enterprise through the alternative income opportunities created from recycling food waste into vermicompost, generating an income above the country's average. The households involved in W2F's organic farming activities save income on food purchases, increasing their purchase power for other goods and services. By using the vermicompost, the yields are also improved and any surplus becomes an additional source of income. Upstream, W2F offers retailers and hospitality groups a sustainable and cost-effective alternative to dispose of food waste, in turn contributing to their Corporate Social Responsibility (CSR) objectives. In the broader context, W2F creates additional income for the municipality by increasing the number of tax payers, by saving millions of Rands on municipal waste management costs, by increasing productivity in Philippi and by advancing Cape Town's position in the organic food market.

Key impacts

- Processes 3-4 tonnes of food waste per day, which reduces annual municipal waste management costs by ZAR1.8 million (USD122,000)
- Sells 2,5 tonnes of vermicompost per day
- Generated additional income for over 170 people in Philippi



ENVIRONMENTAL IMPACT

Every tonne of organic waste disposed of in landfills produces approximately 1.4 tonnes of CO₂ equivalent, mostly in the form of methane. It also produces liquid leachate, which impacts water resources. By reducing the amount of food waste in landfills, W2F contributes to climate change mitigation and the improvement of water resources. The impact of the latter is not to be underestimated when taking under consideration that South Africa is strongly affected by water scarcity and droughts. Furthermore, W2F reduces the use of chemical fertilisers and pest controls, which are known to trickle down to rivers and in turn cause eutrophication and dead zones in oceans. The vermicompost and organic practices also enhance the soil structure by improving water infiltration and reducing erosion.

Key impacts

- Reduces food waste disposal in landfills by 1,400 tonnes per year
- Reduces CO₂ emissions by 3,000 tonnes per year
- Replaces over 900 tonnes of non-organic fertiliser per year
- Sold 500 units of 100% biodegradable packaging

CHALLENGES

- Separation of waste at the source: the presence of contaminants in the organic waste, such as plastic and glass, complicates the composting process
- Competition from chemical fertilisers and pest controls
- Existing predominant conception amongst retailers that the aesthetics of non-organic vegetables is more important than the nutritional value and positive environmental impact of organic vegetables

SUCCESS FACTORS

- Strong partnerships generated upfront investment, in-kind support and trust during the establishment phase
- Business development trainings improved staff and micro-entrepreneurs' skills
- Strong environmental focus and supporting legislation in Western Cape
- Increased visibility from the SEED Awards enhanced credibility and trust amongst partners

FUTURE PLANS

- Scale up to phase 2: double the plant's capacity
- Establish 8-12 micro-entrepreneurs in vermicomposting per year
- Create 80 indirect jobs with above-average income through the micro-enterprises by mid-2017
- Set up an agricultural academy by mid-2017 to train 8-12 micro-entrepreneurs in food production per year
- Acquire new equipment to increase the amount of organic waste processed to 20 tonnes per day
- Increase the production and sale of organic vegetables

“ Before, I was unemployed. Now, I not only have a sustainable income that enables me to pay for my kids' education, food and rent, but I'm an entrepreneur! I've learned how to run a business, how to make business decisions and I've learned about the environment. ”
– Beneficiary –

See how we create impact!





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SEED Case Studies Series

Demonstrating Sustainable Development on the Ground through Locally-Driven Eco-Entrepreneurship

Social and environmental entrepreneurship, also known as green and inclusive entrepreneurship or eco-entrepreneurship, has a critical role to play in achieving a global Green Economy. By embracing the added values of social improvement and resource management eco-enterprises that have won a SEED Award are living proof that entrepreneurial partnerships between various stakeholders can create innovative and novel solutions for delivering sustainable development at the grassroots level and be economically sustainable.

Over the last ten years, SEED has awarded over 200 SEED Awards to eco-enterprises in 37 countries. While the value of eco-entrepreneurship in delivering sustainable development is increasingly recognised and harnessed in the development sphere, there is still very little data available on the triple bottom line impact of these enterprises and their contribution to sustainable development.

The SEED Case Studies are designed to help fill that gap by generating insights for policy and decision-makers on the role of green and inclusive enterprises in achieving sustainable development, and on enabling factors that can help them overcome barriers and reach scale and replicate.





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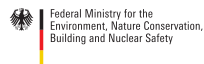


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