

**JET**

**bulletin**

December 2018



# **PLANT THE SEED**

**Growing our future through education  
in agriculture and nutrition**

**Improving school food gardens**

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**Supporting food security  
through inquiry-based learning**

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**Development through  
(em)power(ed) relationships**

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**JET Bulletin**—The purpose of the JET BULLETIN is to share some of the knowledge and insights that are gained through various multifaceted projects in which JET is involved. JET is very active in education development and evaluation, and we see a wide range of new learnings emerging which we believe would be of interest and value to other stakeholders in the sector and to education and training more broadly. We trust you will find the content of this edition of value.

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## The Jala Peo School Food and Nutrition Garden Initiative

The Jala Peo School Food and Nutrition Garden (SFNG) Initiative is a five-year project of the Department of Basic Education. Seed funding was provided by the WesBank Fund, managed by Tshikululu Social Investments. Implementation of the project is managed by JET Education Services. Jala Peo means 'Plant the Seed' in Sepedi.


This multi-stakeholder project seeks to improve nutrition and education by facilitating the establishment and maintenance of thriving school food gardens in identified schools. It also aims to promote, establish and strengthen multi-stakeholder partnerships to improve the status of agriculture, build human capital around agriculture in communities and share and replicate best practices.

The project's vision is that the food gardens will:

- Serve as an educational resource through which teachers can deliver quality educational outcomes for learners;

- Provide a pleasant teaching and learning environment for teachers and learners;
- Help to promote the greening of the community;
- Contribute nutritious, fresh produce to supplement school meals; and
- Endeavour to promote lifelong learning about growing food, a love of horticulture, good nutrition and the natural sciences and to increase the understanding of the relationship between humans and the environment.

In this bulletin, project partners share insights into the project's rationale, approach and implementation; the Department of Basic Education (DBE) outlines the importance of agricultural education, and the Wildlife and Environment Society of South Africa (WESSA) describes the Eco-Schools Programme, a practical, hands-on approach to improving national food security, poverty alleviation and quality education through providing teaching and learning opportunities relating to food production and knowledge of soil, water and air. [🔗](#)



Jala Peo initiative is one of its kind in the Vhembe District. There has not been a successful programme where various Government Departments and the NGOs walk together towards a common goal. I remember in the past formation of multi-stakeholders was tried and failed but it seems Jala Peo Modus Operandi is the best.

*Mr Munzhedzi,  
Thulamela Local Municipality*

## TO GROW A SEED



Kelly Shiohira, *JET Education Services*

‘What does it take to grow a seed?’

I asked my father this question when I was very small, intrigued by the tiny green shoots that pushed their way through the soil around our house to give us maize and beans and baby marrow.

‘Light, and water and good soil,’ he said.

So many years later, my house is surrounded by edible plants. We never want for fresh vegetables, and even the postman brings letters and takes home lettuce. I can’t imagine life without a food garden. Because together with the seeds my father planted in the ground, one more has firmly taken root – the knowledge that growing food is fun, healthy and rewarding.

Yet, in all its diversity, South Africa seems largely united in suspicion of food gardens. In the suburbs, people sit on manicured lawns and complain to each other about the price of produce, as if they were not sitting on arable land. Driving down the dirt roads in the rural parts of the country, my mind automatically notes the barren, fertile places by the river beds and the cut furrows of long-abandoned terrace fields, and I wonder what happened.

‘I’d like a garden, but I never learned to grow anything,’ a friend tells me with a shrug.

‘We’d like a garden, but there are too many goats and no water,’ says the principal of a school I visit.

‘I have a five hectare field where we grow cabbage and onions,’ a businessman in a rural town says. We become immediate friends.

The Jala Peo School Food and Nutrition Garden Initiative is about growing seeds. It is about preparing good soil – in this case, creating local multi-stakeholder partnerships that solve the challenges of goats and water and resources. It is about giving light to the need for and potential of agriculture in South Africa through advocacy and awareness. And it is about educating the thirsty minds of children in South African schools, their caregivers and the broader community. Jala Peo is about showing people that growing food is fun, that growing food is healthy and, of course, that growing food is rewarding.

In doing these things, Jala Peo is also about growing the nation. In 2015, 13.8 million South Africans lived below the food poverty line,<sup>1</sup> and in 2014, 10 million South Africans reported having inadequate food access, citing accessibility, affordability and quality of available food.<sup>2</sup>

Agriculture is a solution, both on a small scale for individuals and in terms of employment, entrepreneurship and empowerment. Agriculture is a growing sector of the economy, with both production and growth exceeding expectations in 2018,<sup>3</sup> and one which can stimulate the growth of other support sectors as well. Agriculture should be a part of our everyday lives, whether we live in the suburbs or the townships or the villages. And agriculture is a part of the solution to poverty in South Africa. We just have to embrace it.

We just have to plant the seeds ... and help them grow. 

1 <https://africacheck.org/factsheets/factsheet-south-africas-official-poverty-numbers/>

2 <https://www.statssa.gov.za/publications/P0318/P03182016.pdf>

3 <https://www.farmersweekly.co.za/agri-news/south-africa/agriculture-takes-lead-gdp-growth/>





# BACKGROUND

## Agriculture, gardening and learning in South Africa

Andrew Paterson, Kelly Shiohira, Maureen Mosselson, *JET Education Services*

### **Social access, curriculum knowledge, relevant skills, and unyielding attitudes**

The future of agriculture in South Africa should be bright. Agriculture has been identified as one of the two top growth sectors for South Africa over the medium term, and an emphasis on programmes for rural development by government departments and universities has helped to transform the historic practices of agriculture into more modern techniques.

And yet, in 2012 the sector constituted less than 3% of the South African economy, in an ongoing declining trend (DAS, 2012). A study by Greyling (2012) found that agriculture made

up a scant 8% of exports, and South Africa was a net importer of its most purchased food products from 2000 onward. Policy makers seem equally uninterested in the sector – the 2015 South Africa Public Expenditure Review found government expenditure on agriculture was less than the share of agriculture's contribution to the national GDP.

Farming activities have evolved over hundreds of years through traditional agricultures, the use of European farming methods and crops, subsistence farming, peasant farming, small-holder farming and varieties of gardening projects. However, the place of agriculture in South African education is precarious: students' views on gardening suggest ingrained historical





Today, when young South Africans are asked about gardening, a predominantly negative perception emerges

attitudes to agricultural education and gardening – even though current curriculum intentions are totally different.

Today, when young South Africans are asked about gardening, a predominantly negative perception emerges. They are inclined to believe that being involved in gardening leads others to identify them with poverty and being unfashionable.

*They think that if you garden, you're poor or you're not cool.*  
(Nosiphokazi, 16-year-old young woman in Moller, 2005)

Yet further comments reveal that not only young people but their parents too share an indifference to gardening:

*There are parents who have no interest in gardening, so that is why some of us are either spoilt or not used to gardening ...*  
(Akhona, 15-year-old young man in Moller, 2005)

Other parents distance themselves more explicitly, as reflected in the following statement:

*The middle generation of parents regard gardening as a school subject taught only in township schools and not worthy of their children.*  
(Lotz-Sisitka, 2003)

To make sense of these comments, we need to know more about the context – how past and present agricultural practices and attitudes towards agricultural activities have evolved. Some critical questions need to be examined.

- How did education and curriculum policy in agriculture lead to the current perceptions about the value, usefulness, social status and approval of this profession?
- How does the way in which an occupation is presented to learners through the schools over a period of time impact on the willingness of school leavers to take up such an occupation?
- How does the colonial and apartheid ascription of diminished status to work tasks impact on how youth currently are likely to value those work tasks and the occupation with which they are commonly associated?

This article provides an account of how the school agricultural curriculum in South Africa evolved at different historical moments. It identifies how at key points, policy was framed to address the needs of colonial and apartheid society for economic growth and stabilising racial domination.

### Pre-colonial and colonial agriculture

For a long time, pre-colonial and colonial forms of agriculture co-existed inside and outside of colonial boundaries and mission stations. Indigenous people – or first farmers – cultivated sorghum and millet. Then European settlers introduced wheat and maize and also grew fruit and vegetables. Subsistence farming was also supplemented by hunting as well as meat, milk and eggs from domesticated fowl, sheep, goat and cattle.

Broadly, agricultural activities were slowly transforming from pastoralism toward cultivation activities.

### Colonial agriculture and growing labour needs

Gradually, demand for grains and produce encouraged colonial farmers to increase the land under cultivation. As production increased to feed the growing populations within the colonial territories, more labour was required, but was not easy to acquire.

Missionary stations inside and outside the colony were advocates of European ways of farming and diets. In the Eastern Cape and Northern Cape, missionaries noticed that traditionalist Africans were eager to learn and put into practice gravity-led furrow irrigation to improve crop yields.

In the 1880s, the Cape Colony government came up with the idea of providing industrial education to Christianised Africans who, as trained peasant farmers, would be expected to work on their own land or the land of white farmers. It was planned that these people would live in a frontier area that would act as a buffer zone to protect the colony from people living outside its boundaries. This early plan based on formally training Africans in agriculture did not succeed.

## Segregation and discrimination between 'industrial education' and 'agricultural instruction'

Demand for agricultural products rose steeply after 1870, during the Southern African diamond, gold and mining boom. Demand for education also increased in response.

At the turn of the century the Cape Colonial government was determined to segregate all types of schools by 1910. This meant that henceforth, different race groups could be taught different curricula in their schools. Education and training for Africans focused predominantly on 'teaching' Africans skills appropriate to predominantly rural contexts where it was presumed Africans would practise 'traditional' agriculture.

In poorly resourced rural mission outstation primary schools attended by the majority of African school-going children, what might have been termed 'industrial' education invariably took on a decidedly agricultural character. African children were exposed to 'traditional' handicrafts that were thought to be a way of embedding children in a rural lifestyle. Rudimentary forms of manual work and handwork were continued under Bantu Education.

By 1920, white children were accorded free education to Standard 6. At the same time, in curriculum terms, there was also a widening divide. Africans were phased into a 'manual' orientation, or training for 'labour', which left industrial and trade training open to white monopolisation. In this period, only a tiny minority of African students attended secondary school grades in the large mission institutions. As part of their programme, these students, clad in khaki fatigues, would do compulsory practical work in the fields of the mission station.

Pupils commonly aspired to working in the colonial bureaucracy or commercial sector as clerks, translators and perhaps also as teachers or police. White collar jobs offering predictable monthly income were preferred in comparison to agricultural occupations with unpredictable seasonal incomes.

### African peasant agriculture

In the same period, an outstanding exception to this narrative was the emergence of an entrepreneurial African peasant farmer class which successfully applied their knowledge and household resources – including family labour – to achieve higher volume and quality crop yields than could be managed by commercial white farmers. This class flourished, first in the Cape and then in the hinterland of the Free State and Transvaal Republics. When the Natives Land Act (1913) precluded them from land ownership, peasant farmers worked as sharecroppers on 'white' lands well into the 1950s. Gradually, however, through that period, the impact of the Land Act and subsequent legislation and regulation including labour taxes, led to the decline of this peasant farming class. Thereafter, Africans' practice of agriculture was increasingly limited to the homeland/bantustan system created during apartheid.

Meanwhile, support and services such as marketing, subsidies and lines of credit were extended almost exclusively to white farmers, who took advantage of the mechanisation of the sector, such as the introduction of tractors. These factors supported the expansion of white commercial farming, and whites-only agricultural high schools were established to cater to skills needs in that sector.



### Bantu Education and the bantustans

In the period before 1948 dominated by missionary schools, the majority of African school-going children never reached secondary school. Under apartheid, secondary education was reluctantly expanded due to political pressure in the 1980s, and then mainly in the bantustans where the apartheid government built more secondary schools than in white South Africa in an attempt to counter urbanisation. High school Agricultural Science as a subject was intended to service the extension and civil service requirements of the homelands.

In white South Africa, the Department of Bantu Education and its successor increased the emphasis on exposure to agriculture for learners as 'gardening' in the school syllabus (Nutt 1957: 75–88). The department was able to implement agriculturally oriented curricula more efficiently than in the mission schools. A detailed syllabus as well as tools and seeds were supplied to schools for activities under the oversight of the inspectorate.

### Agricultural subjects at schools in South Africa post-1994

The historical emphasis on agricultural education for African learners in South Africa is reflected in the number of schools offering the subject Agricultural Science at the level of school-leaving examinations. Of the 2 527 high schools in South Africa offering the subject, 2 082 or 82% of schools were located in the homelands. This meant that higher proportions of African students, the majority in most former homeland schools, would select the subject. Thus the homelands system sustained the place of Agriculture in the secondary school curriculum.

However, the critical problem in this scenario was, and remains, the poor quality of instruction in the subject. It is reported that the pedagogical approach of the majority of teachers of Agricultural Science is based on teacher-dominant 'chalk and talk' methods. Further, the subject is characterised by limited time allocations for practical experimentation and an overwhelmingly theoretical approach. The Department of Basic Education's review of the Agricultural Science results in 2017 reported:

*Learners show a serious lack of application skills which indicates a lack of depth in their subject knowledge. Learners need to be exposed to more real-life agricultural situations to enhance deep learning. (DBE, 2017a: 27)*





## Experience has shown that young people are sensitive to the labour market rewards that come with different occupations

young people visualise gardening work in relation to their aspirations? For them, gardening as an activity has a social meaning.

Qualitative academic research on the subject has found that students and parents show an ongoing disdain for agricultural and gardening occupations, and still associate them with poverty. This is unsurprising, given the long history briefly recounted above.

In spite of these attitudes and values which have shaped the willingness of South Africans to participate in farming and gardening, South Africa needs to tap into the potential of the agricultural sector – a vast network of careers and skills sets – to feed into and build the South African economy. How then can the current perceptions and social valuation of agriculture and agriculture-related careers be changed?

This is the background against which the Jala Peo School Food and Nutrition Garden Initiative is currently being undertaken in three provinces. The aim of the initiative is to establish and strengthen multi-stakeholder partnerships in the provinces to improve the status of agriculture, build human capital around agriculture in communities and to share and replicate best practices. The initiative engages government departments, municipalities, universities, NGOs, local businesses and schools to inspire agricultural-related activities such as expeditions, workshops, poster competitions and, of course, school food and nutrition gardens, with the ultimate aim of promoting nutritional knowledge and good agricultural practice in schools and their surrounding communities.

The rest of the bulletin gives more details on the project, with contributions from partner organisations. [🔗](#)

It is clear that this approach is failing to prepare school leavers for actual jobs in the sector. But at the same time, the subject is selected by a large percentage of school leaving candidates, as it is acknowledged to be a 'soft option' which students take merely to obtain a school leaving certificate, without intending to work on the land. In the school leaving examination of 2001, 93 905 or 19.9% of a total number of 471 821 candidates entered the Agricultural Science examination, while in 2017, 98 522 or 18.4% of a total number of 534 484 (DBE, 2017a: 3; DBE, 2017b: 24) did so, showing that large numbers of students continue to take the subject.

### Vocationalising agricultural skills – a solution?

Over time, policies intended to encourage school students to take up farming have met with qualified success. Research (e.g. Foster, 1965) has cautioned that introducing vocational subjects into a school curriculum does not necessarily lead youth to aspire towards manual types of work, and students would be likely to reject this curriculum. As Foster pointed out:

*In practice, the demand by Africans for western education was and is predominantly oriented towards the provision of more academic-type schools. This preference springs ... from a remarkably realistic appraisal of occupational opportunities ... (1965: 145)*

What Foster observed was that job entrants would on balance choose the job perceived to offer better opportunities (Foster, 1965: 155). In other words, perceptions of job or occupational success in the labour market acts as the largest determinant of youth aspirations towards work.

Vocationalisation is thus not a magic bullet, especially where young people perceive alternatives, as borne out by the preference of students in mission institutions for white collar work referred to earlier in this article.

### Enter the Jala Peo School Food and Nutrition Garden Initiative

Experience has shown that young people are sensitive to the labour market rewards that come with different occupations as identified in Foster's work. Young people also vest their aspirations in occupational choices that they make. Aspirations can refer to a desired lifestyle or social status. How then do

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**No one can whistle  
a symphony.**

**It takes a whole  
orchestra to play it.**

*(Luccock)*



## **A MULTI-STAKEHOLDER PARTNERSHIP APPROACH** to improving school food and nutrition gardens in South African schools

Ronald Mudimeli, Craig Gibbs and Kelly Shiohira, *JET Education Services*, and Mamokhele Maduna, *Department of Basic Education*

Sustainable development is achievable and enhanced through strategies informed by local context and generated with the involvement of local stakeholders. It is with this in mind that multi-stakeholder partnerships, called School Food Gardens and Nutrition (SFGN) Forums, were established through the Jala Peo Initiative in the Vhembe District (Limpopo) and West Coast District (Western Cape). The forums have been established to combine and augment resources and plan and coordinate efforts towards common goals. This article outlines the background, composition and lessons learnt in the formation of the Sibasa SFGN Forum.

### **A 'new' model of service delivery**

One of the primary goals in establishing a multi-stakeholder partnership is to enable the Jala Peo Initiative's sustainability by ensuring the involvement, ownership and ultimately the agency of the community and grounding activities and interventions in viable local solutions.

In addition, the project benefits from an outstanding advantage of a multi-stakeholder approach – the ability to promote innovation and problem-solving. According to Mladovsky et al (2015), bringing stakeholders with different perspectives together encourages all participants to see problems in new ways and enables the development of new and innovative

strategies for change. Therefore, a multi-stakeholder approach is a rational response to a complex problem.

Studies conducted in South Africa on the sustainability of school food gardens reveal many challenges facing schools in their quest to establish and improve their gardens, including access to water, funding and resourcing, poor safety and security and inadequate human capacity in terms of horticultural knowledge and skills. While school food gardens and nutrition initiatives are promoted by the Department of Basic Education through the National School Nutrition Programme and various relevant school subjects, addressing these challenges clearly requires a coordinated network of stakeholders which can be drawn on for resources, infrastructure and expertise.

In addition, a mandate for forming multi-stakeholder partnerships within government was established with the launch of Operation Phakisa in July 2014, a government programme intended to fast-track development through the collaboration and coordination of various government departments, businesses and civil society organisations.

Building on the growing consensus that partnerships promote sustainable development initiatives, the Jala Peo Initiative has adopted as a primary objective the establishment of multi-stakeholder forums as a new model of service delivery which



can increase the efficiency and effectiveness of discrete government departments and other actors within the food and nutrition space, such as businesses and agricultural colleges.

### The Sibasa Forum

Setting up the Sibasa SFGN Forum entailed consultative meetings convened by the University of Venda, Department of Education and Tshikululu Social Investments to, amongst others, discuss the results and recommendations of the surveys that had been conducted in schools and the conceptual framework of a planned, multisectoral initiative to support the schools. The forum was strengthened by the participation of JET Education Services (JET) as project manager and the appointment of a fulltime project coordinator.

The project coordinator engaged in a series of meetings with individual representatives of provincial and local government departments and other strategic local stakeholders. An induction meeting which outlined the purpose and potential benefits of the initiative to each stakeholder was convened. The forum has since been meeting on a regular basis. Government departments participating in the forum are the Limpopo Departments of Education; of Agriculture and Rural Development; of Economic Development, Environment and Tourism (LEDET); and of Health. Institutions of higher learning are represented by the Institute for Rural Development at the University of Venda (UNIVEN), Madzivhandila Agricultural College and Vhembe Technical and Vocational Education and Training (TVET) College. Vhembe District and Thulamela Local Municipalities are strategic members of the forum. The Wildlife and Environment Society of South Africa (WESSA) was also invited to participate due to the relevance of its Eco-schools Programme in integrating school food gardens into curriculum delivery. JET, Tshikululu and the Department of Basic Education are also members of the forum, and the forum's chairperson and deputy are Senior Officials of the Vhembe Education District. The project coordinator acts as the forum's secretary.

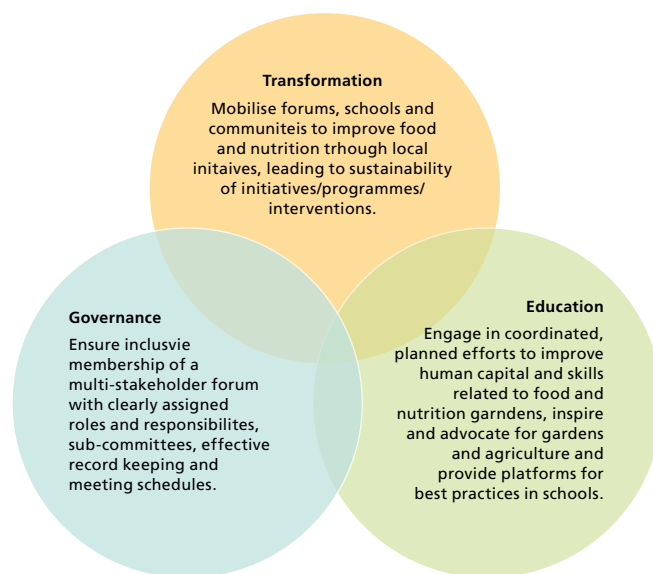
The project coordinator is responsible for administration and coordination on behalf of the forum to ensure that forum activities are carried out as planned and also for monitoring and offering support to schools. The coordinator visited schools to conduct an initial baseline assessment which was shared with the forum. Based on the findings and a reflective analysis of its own capabilities, the forum undertook a strategic planning session to plan and coordinate activities in support of school food gardens and nutrition in the area for the year. In the relatively short period of six months, the forum has already contributed positively.

To maximise the forums' functioning, three sub-committees were established, reflecting each member's expertise and field of service (see Table 1).

UNIVEN is an ideal convener for the advocacy and knowledge management sub-committee because of its strength in research, publications and communication, while the Local Economic Development section of the municipality is familiar with potential local sponsors who may be willing to fund and resource the initiative.

### Functions

The forum is intended to facilitate **transformation** through community engagement and ownership of the programme, to demonstrate a new type of effective, collaborative **governance** (the multi-stakeholder partnership) and to **educate** others through engagement in activities in support of school food gardens and nutrition programmes in the district.



The forum's key areas of responsibility are listed in Table 2.

### Lessons learnt

The first ingredient of an effective multi-stakeholder forum is recruitment of appropriate participants, since a forum's effectiveness is subject to the capacities, knowledge, experiences and commitment of its members. While senior government officials are crucial as they have the departmental knowledge and authority to sign off on activities and commitments, it was found that their recruitment needs to be balanced against their other work and time commitments. Participation in the forum is also an excellent opportunity for less senior staff to begin to explore their leadership and transformational potential. An ideal combination is senior and promising junior staff members. The inclusion of representatives from participating schools is also advisable where possible.

TABLE 1: Member expertise and service

Sub-committee	Lead	Members
Advocacy and Knowledge Management	UNIVEN	Limpopo Department of Education, LEDET, WESSA-Eco Schools
Training and Curriculum	Limpopo Department of Education	Madzivhandila Agricultural College, Vhembe TVET College and the Department of Health
Fundraising and Resource Mobilisation	Vhembe District Municipality	Limpopo Department of Education, Thulamela Municipality and the Department of Agriculture

**TABLE 2: Forum key responsibilities**

Develop a shared vision and common goals for the project in the district.	Plan, schedule and co-ordinate activities among stakeholders.	Manage combined budgets and assets for optimal deployment;  Leverage external and local expertise and resources from businesses, higher education institutions, NGOs and other opportunities.	Mobilise stakeholders to spread information and solicit support for participation in and ownership of the programme;  Elicit the involvement of the community in caring for, preserving and protecting schools' resources and assets.	Ensure sustainable change through:  Inspiring interest in and activities related to school food and nutrition gardens;  Expanding human capital, knowledge and opportunities around food production, nutrition and related topics;  Providing opportunities for institutions to share and replicate best practice.	Report on progress and the status of the school food and nutrition gardens to stakeholders.
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Taking ownership of the activities is also important to realise an effective, multi-stakeholder partnership. Adekunle and Fatumbi (2012) contend that every stakeholder should be able to contribute something. Yet to avoid straining relationships, it is also important that all participants benefit. During the first forum meeting, members were requested to complete a stakeholder matrix in order to indicate their anticipated contributions and benefits. Members were encouraged to participate in the forum through the reflective exercise, and this initial engagement formed the basis for other forum activities which further built a sense of ownership in planning and executing the Jala Peo Initiative.

**Collaborative participation achieved in 2018:**

- The forum engaged in collaborative planning and budgeting.
- The Department of Agriculture and JET organised an excursion for teachers in Jala Peo schools to an agricultural production site.
- The University of Venda assisted with the development of a baseline survey instrument to measure the status of school food gardens.
- Madzivhandila Agricultural College facilitated a school gardeners' workshop attended by over 50 people.
- The LEDET adjudicated a school poster competition for learners which raised awareness about the benefits of gardening.
- The Department of Health has assisted Jala Peo schools to address health and safety concerns such as gardens planted too close to latrines.
- The Department of Agriculture has assisted Jala Peo schools with technical advice including on pest control and irrigation techniques.

The project coordinator is an important member of the forum team. The ideal candidate has a working knowledge of local government structures, experience in the education system, good project management skills, excellent stakeholder relationship skills and experience and/or an educational background in agriculture. The project coordinator is key to establishing the forum and initially guiding its activities while achieving buy-in to not only the initiative but also to the idea of multi-stakeholder partnerships.

A multi-stakeholder partnership embedded in a programme needs to be responsive and agile. Quarterly meetings were not sufficient and scheduled far apart, and this hindered taking decisions which could facilitate significant progress in the implementation of activities. The solution was to establish a working group – a small team which was mandated to take decisions between the quarterly meetings. This group meets monthly to discuss activities and plans and is able to draw on the expertise and capacity of any forum member when necessary. **In addition to the correct structures and individuals, it is only a coordinated team with a shared vision that makes a formidable forum.** JET conducted a team coordination workshop with the purpose of fostering social cohesion and bridging gaps among the forum members so that they could arrive at a unified vision. The results of the workshop were increased involvement of forum members and a concrete action plan which the forum has begun undertaking.

Through continuous encouragement, involvement, planning exercises and celebrations of successes, forum members are actively engaging. In addition to all members engaging in successful joint planning, forum members have participated in and led a number of activities for Jala Peo schools. The Department of Agriculture assisted JET to plan and execute a teacher's excursion to an agricultural site. The Department of Health has ensured Jala Peo schools are operating their gardens safely. A school gardener's workshop was facilitated by Madzivhandila Agricultural College. The workshop was attended by over fifty school and community members, thanks to collective advocacy by the Department of Education and the project coordinator. Even initiatives which may originate outside of the forum are quickly taken up if they support the vision – a poster competition was conceptualised by the National Steering Committee, which advertised the competition in schools. The LEDET took over the judging, the forum is organising the awards ceremony, and the University of Venda has offered to host learners for an excursion as a reward to the winning class.

Creating a winning team which can achieve its mandates and fulfil its purpose takes time, effort and planning. It is not enough to simply have the right people in the room, although that is a necessary start! Public and private social partners with shared mandates may have competing priorities and overlapping responsibilities; it is thus important to create a safe space where these can be explored so that more complex problems



such as the status of agriculture in schools and communities can be broached.

Having a solid team, with shared goals and plans, gives every indication that local solutions to difficult problems can be found. ☺

As a collective we successfully established forums and are implementing the agreed programme work plans in Limpopo (Vhembe District) and the Western Cape (West Coast District). The Free State (Fezile Dabi District) will be prioritised in 2019.

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Supporting food security through inquiry-based learning in the

# WESSA ECO-SCHOOLS PROGRAMME

Cathy Dzerefos,  
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IMAGE: An agroforestry system, with drip irrigation, use of mulch and shade cloth optimises food security at Makgari Primary School. PHOTO: Judy van Schalk Wyk

## THE ECO-SCHOOLS PROGRAMME

Active in 67 countries around the world, the Eco-Schools Programme has been implemented in South Africa since 2003 by WESSA, a national leader in environmental education, investing in youth and facilitating transformation in schools through innovative programmes that offer project-based learning.

WESSA works with schools and teachers throughout South Africa to support and improve school curricula with regard to environmental learning, equipping children for sustainable living. The Eco-Schools Programme aims to create awareness and action around environmental sustainability in schools and their surrounding communities as well as support Education for Sustainable Development in the national curriculum. With over 50% of the content in some national curriculum (CAPS) subjects being environmental in nature, Eco-Schools makes a positive contribution towards improving education in South Africa.

Since 2003, more than 4 500 schools across all nine provinces have participated in the programme, reaching 640 000 learners and 4 264 teachers in 2017. The programme accredits schools that make a commitment to continuously improve their school's environmental performance.

Eco-Schools are a collaboration with the Jala Peo Initiative in Vhembe and are part of the forum there. From January WESSA will run this programme in the 29 Jala Peo Initiative schools in Vhembe.







The programme accredits schools that make a commitment to continuously improve their school's environmental performance

ABOVE: Produce at Makgari Primary School in the Blouberg area of Limpopo Province is used in the school feeding scheme and surplus is given to orphans. PHOTO: Judy van Schalk Wyk

Education for sustainable development (ESD) is increasingly important worldwide to address environmental issues of the 21st century. Implemented in 33% of countries, Eco-Schools, managed by the Foundation for Environmental Education (FEE), remains the largest ESD initiative for schools in the world (Buckler & Creach, 2014). Since 2003, the Eco-Schools Programme has been implemented by the Wildlife and Environment Society of South Africa (WESSA) in all nine provinces of South Africa. Through a multidisciplinary, systematic and collaborative approach, the Eco-Schools Programme seeks to influence a school community to make sustainable choices that link local context with global phenomena (Boeve-De Pauw & Van Petegem, 2013), for instance, food security at the level of the school and climate change at a national and global level. The basic elements of soil, water and air are natural assets whose integrity is important for climate change adaptation and resilience (Agri-SA, 2017). It is in the interests of national food security, poverty alleviation and quality education that food production and knowledge of soil, water and air are optimised as teaching and learning opportunities at schools.



### Soil

The Food and Agricultural Organization warns that 33% of global soil is moderately to highly degraded through erosion, salinisation, compaction, acidification, chemical pollution and nutrient depletion. These human actions are reducing soil biodiversity, decreasing the bacteria, fungi and earthworms present in soil and essential for the decomposition and nutrient recycling that leads to healthy soil and vigorous food production. Inquiry-based learning activities that schools can implement to enhance soil health include reducing storm-water velocity in areas of erosion, revegetating areas, producing compost and using mulch.

The Eco-Schools Programme aims to teach learners the difference between clay, sand and loam and what these different types of soils can be used for. An interest in soil science is encouraged by using a soil testing kit 'Toil in the Soil' that was developed by the North-West University. Learners are exposed to investigating soil under different land use conditions



using quadrat sampling and measuring temperature, pH, soil moisture and humus content. Earthworm farms of different designs are started to demonstrate cost-effective ways to boost soil fertility using kitchen scraps from the school feeding scheme and even some used paper. The simplest earthworm farm is made from old tyres and a makeshift lid, while the most complex involves a central column surrounded by a barrel structure where plants can be grown vertically. The choice of earthworm farm depends on the conditions at a specific school. For example, Leruthware Primary in Mosenthal had access to old tyres discarded by the community and became motivated to design and build a structure to access the liquid fertiliser that the earthworms produced. In contrast, Pitso Tolo Primary in Lehurutshe is situated in a community with recurring water shortages, so a vertical garden inspired the school to experiment with a system that used less water than planting directly in the ground.



### Water

The miniSASS test (developed by the Water Research Commission) and water quality tests (developed by the World Water Monitoring challenge) are methods used by WESSA to test the quality of river water and raise awareness of water conservation at schools. These tests have been used by Eco-Schools to alert local and national government to areas where sewage or industrial pollution was occurring. Children have been involved in creating ponds at their schools, filming problem areas and clearing invasive alien plants from waterways, showing that positive action can be taken locally. Food gardens have also benefitted as water conservation methods are introduced, for example, watering during cool times of the day, using drip irrigation, mulching to reduce evaporation from the soil or using tunnels and shade cloth.



### Air

Some Eco-Schools have their own weather stations which allow learners to measure atmospheric air temperature, cloud formation and precipitation. Monitoring and predicting the weather are important skills in the agricultural sector and can mean planting at the wrong or right time. The planting of trees in an agroforestry system allows for the microclimate to be ameliorated and the production of nutritious, edible fruits, dry-season feed for livestock, fuelwood, construction materials and medicine. The moringa tree is a favoured all-purpose tree whose planting is encouraged next to or within food gardens. At many schools, indigenous knowledge pertaining to trees has resulted in fruiting trees like the marula and the baobab being maintained in the school grounds.

The Eco-Schools Programme is an ESD initiative that targets whole-school involvement and dovetails with many of the Sustainable Development Goals (SDG) determined by UNESCO, with the overarching emphasis being on SDG 4 pertaining to quality education. The frequency and intensity of drought, floods and high winds is expected to increase in the next century in South Africa (Chami & Moujabber, 2016), and Eco-Schools are well positioned to adapt to these increasing environmental stresses as they are armed with knowledge and practical skills which can be used to enrich soil, conserve water and ameliorate temperature. ◉

BELOW: Learners at Pitso Tolo Primary School, North West Province feed the earthworms in the vertical garden. Credit: Cathy Dzerefos



Further information on the WESSA Eco-Schools Programme can be found on:

- <http://wessa.org.za/what-we-do/schools-program/wessa-eco-schools/>
- <https://www.facebook.com/WESSASchoolsProgramme/>

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# Growing our future through education in **AGRICULTURE AND NUTRITION**

*Mamokhele Maduna, Chief Education Specialist: Sustainable Food Production in Schools, National School Nutrition Programme, Department of Basic Education*

The agricultural sector is seen as core to growth and development in South Africa and the African continent in general, and is expected to be one of two areas of expansion in the South African economy over the medium term. Yet when weighing career choices, many young people shy away from agriculture, assuming that it is an unprofitable occupation involving intense labour with limited opportunities. There are reports that students who study agriculture in schools, colleges and universities are often regarded as being of little importance, while their peers studying for careers in management sciences, law, computer science and medicine are appreciated and held in high esteem. Anthony Goble, Agri SA's young farmer of the year in 2015 believes that the agriculture sector is not marketing itself sufficiently; for instance, when he went to high school, degrees in agriculture were not advertised, and the business world was portrayed as offering a more appealing future.

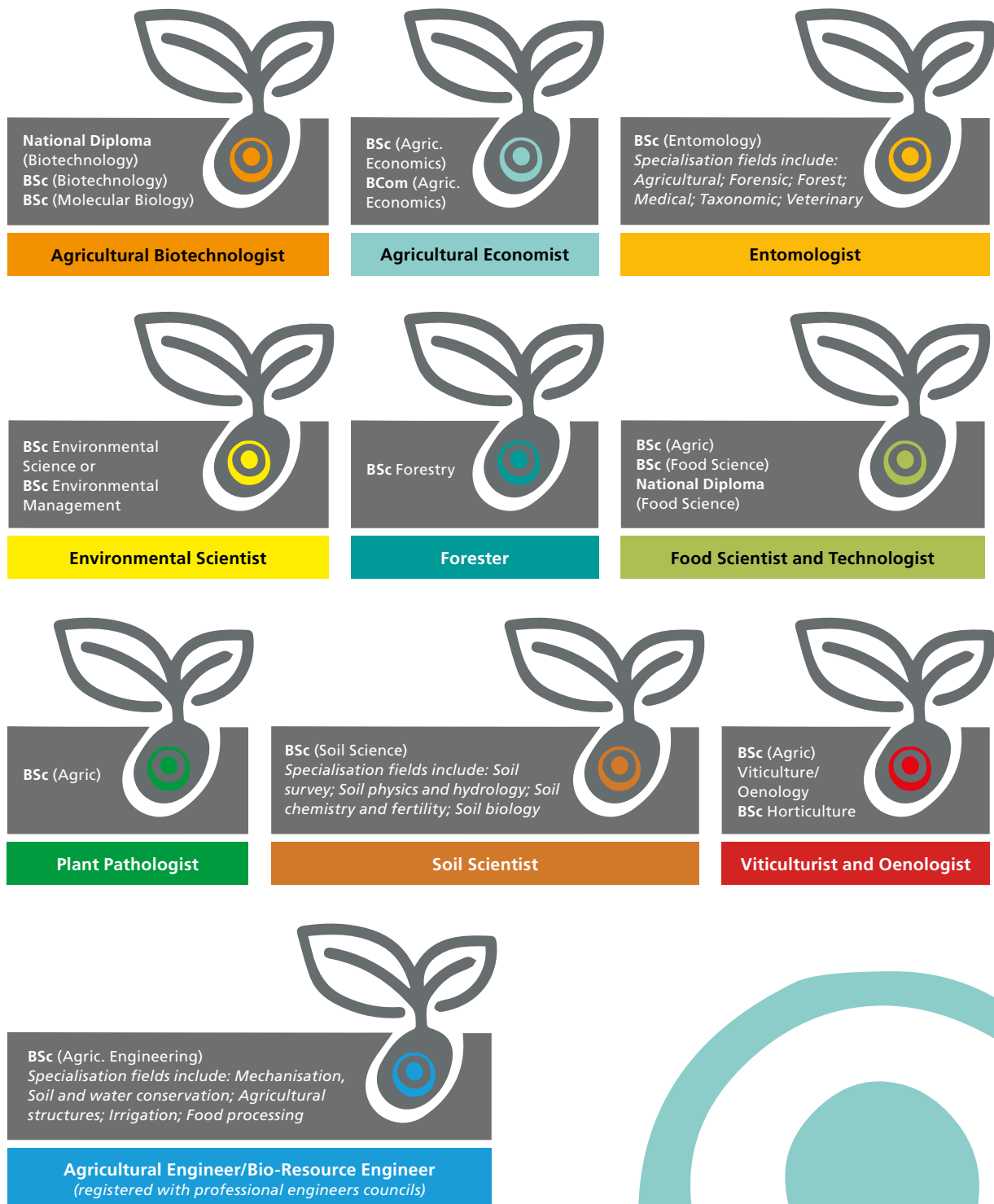
Despite the persistence of this mindset across academic institutions and among youth, agriculture can provide youth with opportunities to grow a sustainable future and harvest


success. Career opportunities in agriculture are many and varied and include forestry, dairy farming, plant breeding, fruit cultivation, poultry farming, bee-keeping, engineering, animal health, processing, marketing, economics, finance, education and training, research, and more. For young people to view the sector more positively and be attracted to agricultural careers, agriculture must be made more dynamic and appealing. This can be achieved through emphasising the increasing role of technology in agriculture, providing well-rounded career guidance which promotes agriculture during the early school years and connecting children to the many individuals doing well in agricultural professions.

Since careers in agriculture encompass a wide range of skills and expertise, from chemistry and biology to tourism and conservation, agriculture offers career opportunities to youth from disparate backgrounds. Careers in agriculture also encompass a range of occupations which are classified as scarce skills.



**FIGURE 1**  
Some scarce skills in agriculture





It is the collaboration  
between a range of  
different stakeholders that  
holds the promise of truly  
sustainable impact

# A SOCIAL INVESTOR'S PERSPECTIVE

## Development through (em)power(ed) relationships

Graeme Wilkinson,  
*Social Investment Specialist and Analyst Team Lead, Tshikululu Social Investments NPC*

### Power over

An unshakable reality in the work of any social investor is the power dynamic inherent in any benefactor-beneficiary relationship. Traditionally, the view is that the one with the money has the power – the power to infer, influence, direct, impose even. This dynamic is often further fuelled by compliance requirements of the donor – ‘payment is conditional upon x, y and z’. In this way, the donor assumes power over the beneficiary.

No social investor is immune to this dynamic. Some social investment practitioners are energised by the chase for compliance, ticking off all the regulatory boxes to ensure that a social investment opportunity is ‘legit’, and that the promised

returns warrant consideration. There is a thrill in getting the job done, completing the checklist, being part of something that is going to make a difference. Other practitioners are fundamentally uncomfortable with this dynamic. They are reluctant to become the agent that imposes, as this contradicts a value that may have drawn them into the sector in the first place: the desire to empower others. Indeed, they are keenly aware of pervasive inequality and they want to be a part of bringing about greater equity in society – not reinforcing a skewed system.

An experienced social investment team is aware of these dynamics but is also aware that (in a Foucauldian sense) power is all pervasive; it is within you, within the people you engage with, and within the system that provides the context





to your work. Power is something an experienced social investor works with purposefully to build relationships. And through relationships, true development happens.

### Power with

A considered and professional approach to social investment is able to transcend through and beyond the 'power over' dynamic. In my experience, the differentiator is the way the investment is done. Experience has shown that improved project outcomes follow when all stakeholders are able to negotiate competing interests through robust debate. And in so doing, find their common positions around which to build an agreed way forward.

**Power with** transparency and debate leads to better informed, more inclusive and robust decision-making. In this way, one works with power to direct considered social investment strategies that are better able to deliver sustained social returns.

### Power to

More recently, social investors have shown an increased interest in investing in initiatives that drive more purposefully towards definable impact, and even achieve systems change. This approach broadens the scope of what social investment can entail in South Africa. Recent such initiatives include social impact bonds, and initiatives set up specifically to drive policy change through partnerships with other donors, implementers and government. There is a growing recognition that it is the collaboration between a range of different stakeholders that holds the promise of truly sustainable impact.

These are **collective impact** initiatives – initiatives where key stakeholders gather together behind a common objective, to collaborate in achieving the objective, whilst all the while working to meaningfully include even more stakeholders (see: Hanleybrown, F., Kania, J., & Kramer, M. (2012). Channelling change: Making collective impact work. *Stanford Social Innovation Review*. Available at: [https://ssir.org/articles/entry/channelling\\_change\\_making\\_collective\\_impact\\_work](https://ssir.org/articles/entry/channelling_change_making_collective_impact_work) [accessed 5 December 2018]).

Jala Peo, co-created with the Department of Basic Education, is one such initiative. It is all about unlocking the resources (inputs, equipment, skills, knowledge and expertise) that are already in communities and directing these in a coordinated way to enable a district office of a provincial department of education to adequately support schools in its precinct to establish and maintain school food and nutrition gardens that are then used as outdoor learning laboratories.

A school food garden might not seem like an important and urgent lever for change. However, consider these facts:

- Nationally, there is a great deal of focus on the quality of our education system's outcomes, especially in the areas of literacy and numeracy levels, and learners' ability to apply knowledge; and
- Non-communicable diseases as a direct result of poor lifestyles are on the increase and accounted for 57.4% of natural deaths in South Africa in 2016.

Food and nutrition are fundamental considerations in any strategy to mitigate either of these challenges. The Jala Peo Initiative holds that:

- Every school is entitled to enjoy the quality learning benefits of using an outdoor learning lab;
- The resources for this are already in the local community;
- A food garden is not about farming for produce (the National School Nutrition Programme has sufficient budget to buy nutritious food for non-fee-paying schools) but about teaching learners about nutrition, natural science and the practical application of knowledge (e.g. Mathematics, History, Language); and that
- Every stakeholder can contribute something to the initiative and must also benefit something:
  - » A local agricultural college can offer soil analysis, but also gains placement sites for its students to do practical field work,
  - » The municipality is aided in meeting its mandate of ensuring all schools have access to water,
  - » A district health department official is aided in directing the limited school nutrition support budget more optimally (in one district, the education department

didn't even know that the health department had such a budget allocation).

The WesBank Fund, a local social investor, plays the role of influential champion in the Jala Peo Initiative, using its networks and relationships to:

- Secure memorandums of agreement with three provincial education departments;
- Enlist the necessary implementation capacity and expertise;
- Convene meetings of stakeholders representing the public, private and civil sectors in three pilot districts;
- Enable the establishment of one Jala Peo Forum per district – a circuit-level forum of stakeholders who meet regularly and give direction to the initiative in support of schools in that area; and
- Enable the deployment of a project coordinator to support the forum in giving effect to its plans and programmes.

The Jala Peo Initiative is already active in the Sibasa Circuit of the Vhembe District in Limpopo, in the West Coast District of the Western Cape, and is about to take root in the Fezile Dabi District in the Free State.

We are already learning, even at this relatively early stage, that we need to connect with another sense of **power** to change and improve. Social investors can leverage their collective power to bring about change in systems, but to achieve collective impact, we need to find ways of leveraging the collective power of a much broader range of stakeholders who do not all have the same sense of agency.

### Power within

Even after successfully convening a forum committed to achieving collective impact, even with a robustly debated and jointly agreed end goal, we are not seeing the anticipated movement towards achieving that goal. The energy does not flow as one might expect. The right people are in the room, representing the right stakeholders with already approved budgets and mandates that align to the common goal. Yet, what can account for the inertia that seems to exist between meetings?

What is often missing is the **power within**. The individuals in the room struggle to appreciate the **power within** the room, and how this can be translated into a power to change things. We wondered whether participants weren't also struggling to translate the **power within** the room into a power within themselves, such that they could take this power within with them to draw on as they give effect to the forum's plans between meetings?

We use the term 'agency' to refer to this form of power. Coming from within, together with the other forms of power, agency awakens the individual's ability to act and to change the world.

Together with our social partners, social investors are now giving greater attention to nurturing the **power within**. And we've been finding that story-telling, simple as that may sound, is proving to be a keen strategy to achieve this. Understanding **power within** to encapsulate the capacity to imagine and to hope for the future, we chanced upon the idea of holding a poster competition for school learners, inviting them to imagine what a school food garden could mean for **them**. It was not only the response of the learners that surprised us, but also the reaction

of the forum members when they began to see the **power within** to affirm the identity of the local community, their stories, their hopes, their dignity. The learners were showing through their posters that as a community they could dream and act and change the world for the better.

Social investment that seeks to affect sustainable systemic change through collective action must include consideration for the affirmation and building of the power within. This will lead to stronger agency amongst stakeholders that are crucial for collective action. The stronger the actors, the stronger the relationships with and between them can become. And through stronger relationships, the more likely a lasting impact will result. ☺



### Acknowledgement

I am indebted to the [www.PowerCube.net](http://www.PowerCube.net) for the framing of the four concepts of power used in this article. See: <https://www.powercube.net/other-forms-of-power/expressions-of-power/?submit=Go> [accessed 8 August 2018].





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