Persistent Youth Unemployment: The Role of Public Employment Programme and Green Jobs - A Case of the Western Cape Province, South Africa

LUNGISANI GIFT DLADLA
University of KwaZulu-Natal
Lungisani.Dladla@gmail.com

Abstract

Since the dawn of democracy, the South African Government has placed a lot of emphasis on poverty alleviation and job creation as key priorities. Various policies and frameworks have been developed to address the challenges of unemployment. Despite all these efforts, the unemployment rate has remained stubbornly high at 27.32% in 2019, an increase of 0.36% from 2018 (StatsSA) (2019). The greatest burden is borne by the youth between 15-34 years as they account for 63.4% of the total number of unemployed persons. This article investigates the potential of government's led green jobs initiatives in addressing the youth unemployment in South Africa using the Public Employment Programmes (PEPs) approach. A qualitative research methodology was adopted in conducting this study following descriptive and diagnostic design. A case study survey was conducted from the Western Cape's Provincial Department of Environmental Affairs and Development Planning (DEADP) Working for Energy (W4E) Programme. The Study found that the programme has positively affected the youth as some have now enrolled in formal apprenticeship training, while others found employment or started small businesses. The study also found that the programme has great potential for expansion and replication if concerted effort is made by government across all the spheres.

Key Words: Public Employment Programmes (PEPs), Expanded Public Works Programme (EPWP), Green Jobs, Youth Employment

Introduction

Public Employment Programmes (PEPs) have a long history of providing the much needed relief to the poor from poverty and unemployment. Lal, Miller Lieuw-Kie-Song and Kostzer (2010) argue that PEPs provide the main social support to poor communities and serves as a safety-net to cushion them from the adverse shocks of unemployment in a short-to-medium term. The South African Government has identified employment creation and poverty relief as one of the apex priorities. As such, numerous strategies and programmes have been put in place. Amongst those initiatives is the Expanded Public Works Programme (EPWP). This article examines the impact of the Government-led green jobs initiative as part of the EPWP in addressing the youth unemployment. The article further looks at the potential to replicate this programme to other areas as part of the government's PEPs approach. The study thus focused on the Western Cape's Provincial Department of Environmental Affairs and Development Planning (DEADP) Working for Energy (W4E) Programme. This initiative is implemented in line with the objectives of the Western Cape Government's Provincial Strategic Plan (2014-2019), which seeks to achieve amongst other things job creation, a resilient and sustainable environment, Western Cape Government (WCG) (2014). The province has also prioritised training and skills development particularly in the green economy in pursuit of energy security through the use of small-scale embedded generation (rooftop solar PV) by business and households. As part of the EPWP, young people are employed and trained through this programme to install rooftop solar PVs and geysers in the province.

Background of the study

The first South African democratic government was established in 1994 and it faced a plethora of demands from the majority of the citizens who were not catered for by the previous apartheid government. To re-build the country, develop the economy and delivery services to the communities, Government introduced the Reconstruction and Development Programme (RDP). Key priorities in the RDP, included the increased job creation through economic growth; rebuilding the surroundings of the previously deprived South Africans through the provision of housing, schools, water, sanitation, electricity and other primary community assets. Another priority was to increase government capital spending, Dladla and Mutambara (2018). This programme was viewed by many as the government key socio-economic programme.

To implement the RDP, one of the strategies introduced by government was the National Public Works Programme (NPWP) as an important component to create jobs while delivering community assets and services. The NPWP had key thrusts, which Phillips (2004) argues are, Community-Based Public Works Programme (CBPWP) and the reorientation of mainstream public expenditure towards infrastructure creation, using labour-intensive

techniques. While appreciated experience attained through CBPWP, the programme did not achieve the needed scale to deal with the challenges of poverty and unemployment facing the country. As a result, the 2003 Growth and Development Summit (GDS) was convened by social partners, including government, labour, civil society and business to discuss amongst other things the challenge of poverty and unemployment in the country. The Summit came up with social compact for all the partners herein after referred to as the GDS Agreement. One of the main resolutions in the agreement was the extension of the public works programme (PWP), it further states that the EPWP can offer poverty and income break through short-term work for the unemployed to carry out socially useful activities. It indicated that these EPWP's would be designed to equip participants with a degree of training coupled with on the job experience, thereby increasing their potential to gain permanent employment in the future, Lal et al (2010) and Dladla and Mutambara (2018). Further, the agreement also indicates that these EPWP must be big enough to have a considerable effect on job creation, poverty alleviation and social cohesion, especially for young people, women and the rural poor. Some programmes in the EPWP must take the form of the National Youth Service Programme.

The first phase of the EPWP was introduced in 2004 with a target to create 1 million work opportunities over 5 years across four sectors. These sectors were the Infrastructure sector, Environment and Culture sector, Social sector and Economic sector. Each sector had its own programmes in line with sector objectives. The Expanded Public Works Programme is now in its fourth phase of implementation, which started in April 2019 to March 2024. The target for EPWP phase 4 is to create 5 million work opportunities over the 5 year period (EPWP, 2019). As the programme evolved over time, one of the noticeable changes that was made in the programme during its second phase, was the introduction of the Non-State sector to replace the Economic sector. This was made to attract non-state actors, such as Non-Profit Organisations (NPOs), Community Based Organisations (CBOs) among others to part take in the implementation of the government's PEPs.

To provide a clear understanding of the EPWP sectors and their objectives, the section below outlines all the EPWP sectors and their objectives. The lead and coordinating departments for each sector are also indicated.

EPWP sectors explained

The EPWP consists of four sectors as outlined in the (EPWP 2019):

- **Infrastructure sector**

The sector is led and coordinated by the national Department of Public Works and Infrastructure (DPWI) and the objective of the sector is to create work opportunities through increased labour intensity of public funded infrastructure construction and

maintenance projects. To achieve this, the sector uses of labour-intensive methods in the construction and maintenance of the infrastructure projects. This includes the establishment of dedicated labour intensive maintenance programmes, which have the potential to provide regular employment to large numbers of people.

- **Social sector**

The Social Sector is led and coordinated by the Department of Social Development (DSD). The main objectives of the sector is to draw a significant number of the unemployed people into productive work through the delivery of social services to enable them to earn an income.

- **Non-state sector**

The Non-State sector is led and coordinated by two departments: Department of Public Works and Infrastructure (DPWI) and Department of Cooperative Governance (DCOG). The objectives of the sector are to create work opportunities through collaboration with Non-State Organisations; strengthen community participation in the delivering of community assets and services that improve the quality of life and complementing wider service delivery. The sector consists of two sets of programmes: Non-Profit Organisations (NPOs) and the Community Work Programme (CWP), which are led and coordinated by DPWI and DCOG respectively.

- **Environment and Culture Sector**

The sector is led and coordinated by the Department of Environment, Fisheries and Forestry (DEFF) and its objectives are to build and protect South Africa's natural resources and cultural heritage. In carrying out those objectives the sector is aimed at dynamically using the preservation work to create both medium and long term work and social benefits to the participants and the community.

Problem Statement

Studies on energy efficiency, renewable energy and green jobs have been conducted global including South Africa. However, there is little if any evidence in the literature that specifically focusing on the green jobs is an intervention to address youth unemployment in South Africa. As noted by Borel-Saladin and Turok (2013), the literature does not break down on who are the major beneficiaries of the jobs created through green economy, especially when it comes to what is regarded in the South African context as vulnerable groups i.e. youth and women. This article thus aims to contribute towards closing that gap by narrowing down the search for how the green economy contributes to job creation in general and for the youth in particular focusing in the Western Cape Province of South Africa.

Study Objectives

The aim of this study is to examine the impact of the government-led green jobs initiative as part of the EPWP in addressing the youth unemployment. Using the Western Cape Department of Environmental Affairs and Development Planning W4E Programme as a case study for this research. Further, the study sought to investigate the potential to replicate this programme to other areas of the country and to contribute towards addressing the youth unemployment in South Africa.

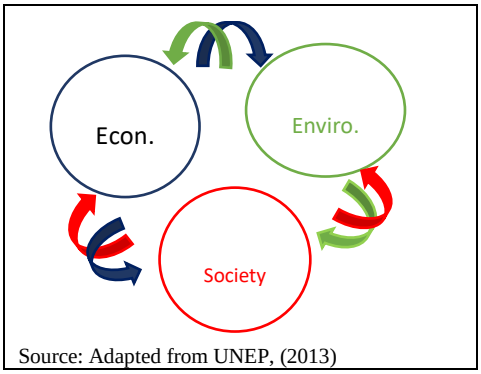
Conceptual Foundations

The International Labour Organisation (ILO 2018) report on the World Employment and Social Outlook found that the emission of greenhouse gases had risen by 33% between the period of 2000 and 2012 and that has a direct impact on climate change. The continued degradation of the environment as a result of climate change poses the greatest challenge to sustainable development, especially in developing nations, (ILO 2018). Over the past 30 years, the world has experienced devastating effects of climate change, which is evident in the increase of global warming, rising sea levels, droughts, intense and frequent storms and floods, change in the eco systems, changes in the areas where people live (Oxfam, 2015).

In the process of addressing the climatic change and related challenges, new industries and opportunities for job creation in the "green economy" have emerged (ILO 2018). The United Nations Environment Programme UNEP (2013) defines "green economy" as the economy that aims to create resilient, justifiable and pro-employment development following a pathway that decreases carbon reliance, encourages resource and energy efficiency while reducing the degradation of the environment. According to Ge and Zhi (2016), the concept of green economy was first introduced by the renowned economist Pearce, who advocated that the environment and economy unavoidably interact. Borel-Saladin and Turok (2013) argue that the development of new technologies, industries and processes in the green economy provides a whole new range of employment opportunities regarded as green jobs.

To develop a green economy the South African Government employed the Threshold 21 (T21) Model (c.f. Figure 1) as a single integrated framework for development planning as outlined in the UNEP (2013) Report.

Figure. 1: Threshold 21 (T21) Model



Source: Adapted from UNEP, (2013)

This model emphasises the integration in development and planning processing, with the key macro pillars or sectors that need to be taken into account, i.e. environment, society and the economy. A balance need to be struck in these core sectors to ensure that the improvement in one sector does not negatively affect the other sector(s). This is all the measures taken to avert the impact of climatic change and promote sustainable development.

On the same breath, The African Union Agenda 2063 "The Africa we want" has set-up a targets that by 2023, at least 10% of all urban buildings should be certified as energy smart, African Union (2015:43). This poses a challenge to all African countries to rally behind this AU target. Environmentally sustainable and climate resilient economies and communities are among the key priorities of the AU Agenda 2063. To achieve this target, it proposes various strategies to be developed and implemented by member nations and these include:

- Developing and executing policies, strategies and rules to encourage sustainable growth of the energy sector;
- Encouraging the improvement and distribution of energy efficient technologies and using clean energy sources; and
- Guaranteeing the financing of training and skills development on the use of renewable energy technologies.

In South Africa, as part of the Expanded Public Works Programme of contributing to these objectives of the African Uniron Agenda 2063, "The Africa we Want", the Environment and Culture Sector implements the Working for Energy Programme (EPWP: 2019). This programme focuses on the provision of energy through renewable energy technologies and facilitating energy management through using labour intensive methodologies to

stimulate sustainable job creation, local economic development, technology, skills transfer and capacity development within the South African context.

Literature Review

The National Development Plan 2030 (NDP) assesses the impact of climate change in the country and in the world. It argues that the release of carbon dioxide and other greenhouse gases to the atmosphere and the environment is changing the earth's climate and conceivably imposing a hefty worldwide cost that will be borne disproportionately by the poor in the developing countries, (National Planning Commission: 2012). The increase in temperatures as noted by the ILO (2018), the more unpredictable rainfall and extreme weather events are expected to take a substantial toll on the African Continent and many developing countries. This will be accounted for by a rise in the spread of tropical diseases and growing losses (human and financial) from droughts and flooding. Drastic and creative measures have to be taken into consideration in order to avert the impact of climate change. The green economy, according to Turok (2013) provides an opportunity in this regard.

Ge and Zhi (2016) assert that green economy is becoming the key industry that will lead the future economic growth and employment for most nations. The study by Ge and Zhi analyses the relationship between green economy and employment. These authors found that the green economy has a positive impact on job creation, because of the new infrastructure that never existed before and which must still be built in the green economic sector. Infrastructural development is accompanied by job creation and development of new skills. In their findings Ge and Zhi dismiss the perception that switching to green economy and green jobs results in a general increase in unemployment, especially in economies that still depend on coal as the source of energy. This was further supported by Chan and Lam (2012) whose study focused on working conditions in the green jobs industries. Chan and Lam also found that green economy brings along a direct increase in employment in various industries of the green economy such as solar energy technology industries as the primary source of energy. But beyond the increase in job creation, the social-environmental benefits derived from the green economic sector are even bigger. In Cambodia, the Global Green Growth Institute (GGGI) (2018) found that by investing in green industry, it creates more positive financial benefits for businesses as well as society and in return these benefits result in economic-wide gains, reduce the negative environmental impact on society particularly those associated with air and water contamination, and it also reduces carbon footprint.

Talbot, Langa and Ortiz (2019:25) however note that there is a skills gap between workers in the traditional coal-based energy sector and those in the renewable energy sector such as wind power plants and solar plants. The education level of workers in wind power plants

is generally higher when compared with those in the thermal power units. This then brings an important dimension in crossing-over from high carbon based energy to cleaner and sustainable energy (Daniel and Kammen: 2009).
To make sure that the workforce possesses the requisite skills by the economy, it is important that during decommissioning of coal mines, South African coal mines companies together with the government put in place skills development programme to re-train and capacitate former mine workers to be able to use their skills in the energy sector or improve their livelihoods after the mines have closed down. Bridle and Geddes (2019) in a report published by International Institute for Sustainable Development (IISD) noted that reviewing international lessons on how governments respond to low-carbon transitions in terms of reducing negative impacts on energy consumers and workers has challenges. Their study recommended that for government, industry, workers and other stakeholders to ensure a just transition in preparation for possible sunset of the coal sector, they need to have policies and commitment that encompasses social dialog amongst all the stakeholders and careful plan for this transition to achieve a win-win solution amongst role-players, particularly the workers, those policies and commitment must include giving workers and the affected communities an opportunity to obtain the skills that they will use post the coal mining period and their role beyond this period. This is to ensure that the disruption caused by the switch-over from coal-based energy sector to renewable energy sector is reduced to both the workers and communities.

Lettmayr and Riihimäki (2011) opines that vocational training and experience are critical for countries to move towards knowledge-intensive economies. As a consequence, the crossover from the conventional coal-based energy sector to the renewable energy sector requires improvement in the skills of the workforce to cope with the demand of this new and emerging sector.

There is a general consensus from many scholars that the green economy has a positive contribution to job creation and enhancement of social equity. However, Ramsarup and Ward (2017) argue that during the transition towards a cleaner and sustainable energy economy, some jobs are lost. Their argument was further supported by Ge and Zhi (2016) citing (Liu, 2011) who contend that the nascent of the green economy has a direct link to net job losses in the sector. This notion, was nonetheless challenged in a study by Chan and Lam (2012) UNEP (2011) and Ditlev, Daniel and Kammen (2009) who found that despite the job losses in a high carbon based economy, there is an overall net employment opportunity, where the total job losses in the high carbon based economy is less than the jobs created in the green economy.

The afore mentioned sentiments were further echoed by the UNEP (2011) and UNEP (2013) who indicated that a green economy generates net employment opportunities and boosts social equity, and that besides employment creation, the green economy also

provides socio-environmental benefits. Similar views were also noted by GGGI (2018), Lal et al. (2010), Pollin, Heintz and Garrett-Peltier (2009) in their contention the International Labour Organization ILO (2018) also considers that the green economy can contribute to the creation of millions of employment opportunities. This clearly demonstrates that the green economy provides dual benefits to any country. On one hand, it contributes to job creation, while on the other, it provides cleaner and sustainable energy and recused carbon footprint. This has been considered even by developed nations. For example, to address the challenge of climate change and increase job creation, Pollin et al. (2009) and Barack Obama set the target for the United States that by 2025, a total of 25% of energy to be produced from renewable sources. Whilst the National People's Congress and the Chinese People's Political Consultative Conference in 2010 placed the green economy as the key priority to drive job creation and energy security, Ge and Zhi (2016). UNEP (2011) argue that greening the economy has boundless prospective to fuel growth globally.

The green economy provides a new path for employment creation and as such draws the attention of many scholars (Ramsarup & Ward, 2017). But what has been noticeable in the literature is the absence of a specific focus on employment studies when it comes to the green economy. The literature on the green economy and renewable energy thus focuses its analysis mainly on job creation in general terms. As has been noted above, the literature concentration revolves around the following areas:

- How green economy contributes to employment in general;
- The positive effect of the green economy;
- Direct employment from renewable energy sector etc.

The literature does not break down on who the major beneficiaries of the jobs created through green economy are particularly when it comes to what is regarded in the South African context as vulnerable groups i.e. youth and women. This creates a gap in the literature considering the high unemployment rate amongst these groups in South Africa. This paper thus aims to contribute in closing that gap by narrowing down the search of how the green economy contributes into job creation in general and to the youth in particular.

The Western Cape Provincial Department of Environmental Affairs and Development Planning: Working for Energy Programme

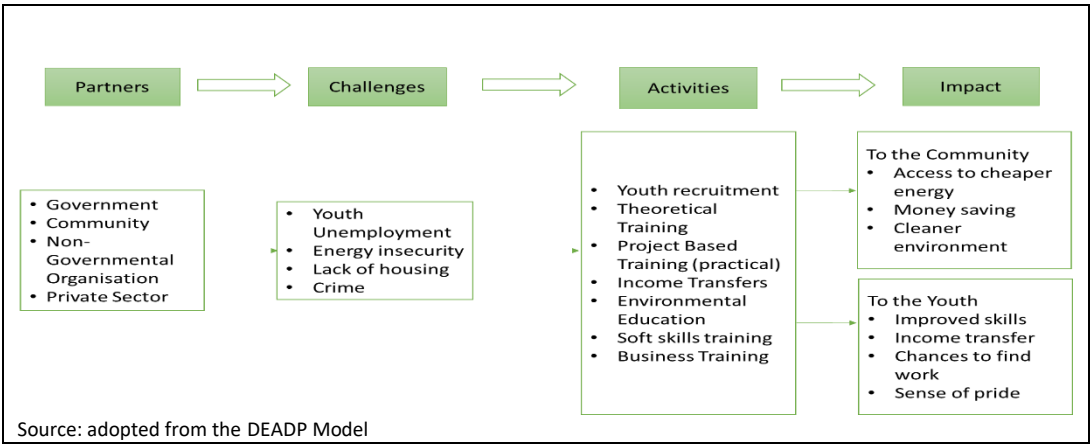
In contributing to addressing the youth unemployment challenges and energy insecurity while protecting the environment, the Western Cape (WC) DEADP implemented the W4E programme in 2016 (DEADP, 2017). According to South African National Energy Development Institute (SANEDI) (2019), the objectives of the W4E programme is to provide sustainable clean energy solutions to rural and low income urban communities with special emphasis on employment creation, skills development and community enterprise

development. The programme targets youth, women and people with disabilities in rural areas and low-income urban communities. A total of 40 young people were recruited into the programme in four cohorts for a period of 18 months per cohort. The programme structure had two components namely a theoretical training and practical training component. The practical training included the actual fitting of solar geysers, panels and physical plumbing at low cost houses that were built by government (as depicted below). Their training also included soft skills and small business training.

Source: DEADP

According to DEADP (2017) the training of the participants was done through a People Public Private Partnership (4P's) model. This is a community development model, which involves local communities, government, non-governmental organisations (NGOs) and the private sector. Figure 2 below highlights the 4Ps model.

Figure: 2 People Public Private Partnership (4P's) Model.



Source: adopted from the DEADP Model

In this model, the government uses a multi-pronged strategy towards addressing the challenges of youth unemployment, energy insecurity and environmental degradation. The key partners in this model and their roles are:

- Government, who is the overall driver and funder of the development on behalf of the people.
- Community, which offers the sustainable development principles to the intended recipients or beneficiaries of the development who must be part of all the processes in the development. Therefore the community is a key partner in this model.
- Non-Governmental Organisations that offer support and complement the work of government at community level. NGOs play a critical role in local community development. In this model, the local NGO was involved an as an active participant in the project and was responsible for the training and mentoring of the participants.
- Private sector with the government appointing private companies to implement some projects on behalf of the state. As such, the partnership creates a platform for the private sector to fully understand the government objectives for each project implemented. Furthermore, it enables government to communicate the developmental goals of the project and social impact of the project to the community.

This model enables the parties to fully embrace the government's social, economic and environmental objectives from this project and this allows all role-players to work as a unit to achieve the objectives.

Research Methodology

In line with Jupp (2006), a qualitative research methodology was used in this study and the data was gathered from the research participants by categorising them into two groups, to ensure that balanced inputs were received from all the parties who were involved in the conceptualisation, implementation and management of the project from 2016. The first group was EPWP beneficiaries (workers) and the second group was comprised of management officials and partners involved in the project (excluding EPWP beneficiaries). Partners in this case were departmental officials, NGO management and the company management that was involved in the project implementation. One-on-one interviews were conducted with the research participants. This method of data collection was selected on account of the easy accessibility it offers to the participants. In summary, the information was sourced from:

- Six departmental officials, NGO management and the company management that was involved in the project implementation. The officials selected were those who were directly involved in the implementation of the programme and who had intimate knowledge of the programme; and
- Thirteen out of 34 EPWP beneficiaries were purposeful selected based on their current status after the programme has ended and graduated from the programme since 2016.

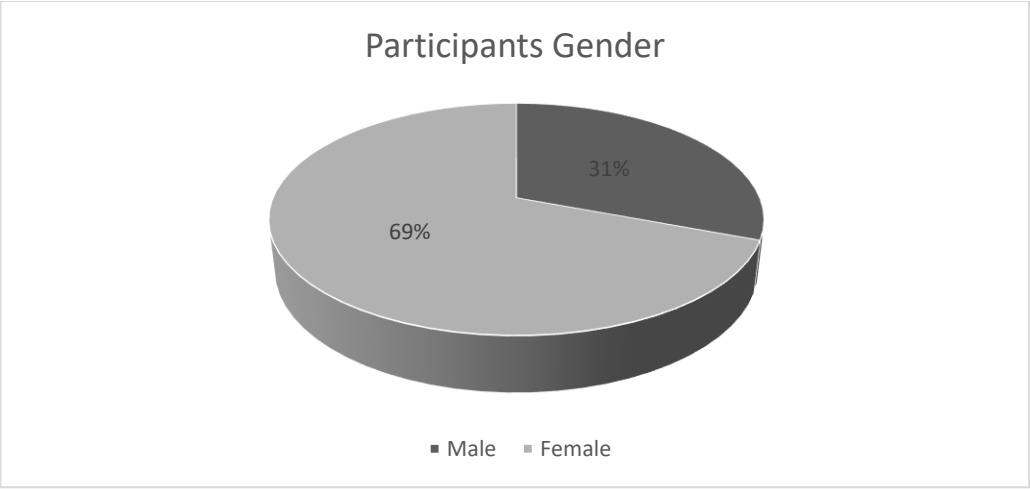
To protect the rights, dignity of privacy of the interviewees, the researcher made sure that the ethical considerations were adhered to as follows: Firstly the researcher was properly introduced to all the participants and objectives of the study. Secondly the respondents were requested to voluntarily give consent to participate in the study. Thirdly, they were assured that their identity and personal information were to be protected. Lastly, the respondents were guaranteed that the data generated from their participation were to remain anonymous and confidential and that they were not forced to take part and were free to withdraw from the study at any time without suffering any penalties.

Findings and Discussion

To measure a success and the impact of a programme, it was important to look at its key objectives as a scope and the framework for assessment. The study results firstly showed that 100% of participants were young people and secondly of those participants, more than two third (69.6%) were females, as shown in Figure 3 below. As such, this is a direct

response to the unemployment challenge indicated by Stats SA (2019) above, particularly amongst the young people in the country. What is also more positive about the programme is that the majority of participants were females.

Figure 3: Participants Gender



The section below then presents details of the study findings to the rest of the questions that were posed to the research participants and discusses them. These findings are structured according to the various themes emanating from the data generated and to get a better picture of the impact of the programme from the sources.

Experience in solar geyser installation and plumbing

Vocational training and experience as noted by Lettmayr and Riihimäki (2011) in the literature review, plays a critical role as countries move towards knowledge-intensive societies. This is an important element for economic growth, employment creation and poverty alleviation. The programme beneficiaries were asked whether or not the programme assisted them in any way or form. Of the respondents who participated in the study, 100% responded positively to this question, some even went further to say that the programme opened other opportunities for them, some have obtained full time employment after they exited the programme. One EPWP beneficiary applauded the programme and said that:

> "*I am currently working as a programme facilitator in this site and assist the new youth intake, through the skills and experienced I received from this programme*"

Some further indicated that they have received formal apprenticeship opportunities to advance their studies in the plumbing trade, something that would not have happened if they were not introduced to this field through the programme. Another beneficiary commended the programme and said that:

> "*Currently I am in my 3rd year of apprenticeship training for plumbing and the future looks good*"

Others indicted that they are currently working, even though some are not working directly in the same field. But being part of the programme improved their confidence, the soft skills training they received helped them to handle interviews and job assessments.

However, less than 15% of the interviewed participants indicated that they are currently doing nothing after they exited the programme, but indicated that next year, they will be going back to school to further their studies in the same field as they have already applied to technical colleges and are also interested in opening their businesses once they have finished their studies.

Drawing from these assertions, the green jobs initiative by the Western Cape Provincial Department of Environmental Affairs and Development Planning has played a positive role in youth skills development and employment creation. More opportunities have been opened by this programme for participants to further their studies. Soft skills training improved the participants' confidence to seek and compete in the job market. Despite some not being currently employed after exiting the programme, the positive attitude demonstrated towards going back to school and further their studies in this field is credited to this programme.

Small business establishment and increased income

Dladla and Mutambara (2018) noted that South Africa depends on small businesses to create sufficient jobs to absorb the surplus unemployed masses. Of the respondents who participated in the study, 30% applauded the programme for the opportunity with the training they received and indicated that they are engaging in small business activities in their areas to install or repair solar geysers or general plumbing. One beneficiary expressed delight about the programme and said that:

> "*Through the skills acquired from the programme I have started my own plumbing business to fix leaking taps, blocked toilets, etc. in my community and earn income, I do have technical skills but lack some business management skills*".

These findings concur with a study conducted by Dladla and Mutambara (2018: 13), which showed that small business support intervention within the EPWP contributes positively

to the programme and encourage participants to engage in small business activities to generate income and improve their livelihood. As it was noted by these authors that, there is still a need for the "after-service" support that must still be provided to these programme beneficiaries who started their business to ensure that their businesses are sustained and grow. Furthermore, a dedicated and more structured small business support programme must be provided to the youth in this programme. To replicate and expand this programme, a concerted effort by government and its agencies is required across all spheres. As it was envisaged by the GDS (2003) that, 'such EPWP's must be large enough to have a substantial impact on employment and social cohesion, especially for young people, women and the rural poor'.

Programme duration and further support

Sufficient exposure to any form of employment is an important yard stick to measure whether a person is able to compete in the job market or not. According to Berniell and de la Mata (2017), the longer a person stays in a position, the more experience he or she accumulates and the better he or she can compete in the job market. When research participants were asked about how to improve the programme as well as their concerns, the majority (90%) of those who participated in the study indicated that the programme duration needs to be increased and to be intensive with some small business training being added to the programme. Some indicated that the programme needed to be expanded and more young people be recruited to also benefit and be able to get jobs or start their own businesses or further their education in this field.

One participant asserted that:

> "*I will encourage the government to extend this programme to other young people as there are many of them who will also benefit like we have in this programme*".

Drawing from these assertions, these findings reaffirm what ILO (2020) and Ditlev, Daniel and Kammen (2009) studies have found that for a programme to be impactful, it is important that the participants are kept longer to gain that necessary experience and exposure as well as to compare and bring them in-and-out for a shorter duration. Therefore, more time needs to be allocated for the participants to undergo both their theoretical and practical training so as to ensure the success of the programme.

Job creation, skills development and improved environment

Addressing the youth unemployment challenge and skills development is a key priority of the South African government like any other economies in the world. Departmental officials and partners were asked whether in their assessment the programme had a positive impact to the participants, community and the environment. A resounding 100% of the interviewed officials and partners agreed that indeed there has been a huge impact. One official commended as follows; "*The programme totally uplifted participants as they*

joined the programme with zero skills in this field and were introduced into scarce energy skills of solar geyser, solar panel installation and plumbing"

Some of the participants claimed that the programme also introduced the participants to likeminded members of the community and that increased their group network. Similarly, when it comes to community and the environment, officials and partners felt that community benefited from the programme through access to solar energy and save on electricity costs and also introduced the community to environmental awareness. One official asserted that:

> "*Many of the young people who participated in the programme found new purpose in their lives, including environmental cautiousness, upliftment of their community and perseverance with female participants recorded 0% drop-out rate from the programme considering that this has been regarded as male's jobs*".

These findings support the study conducted by ILO (2020) on the role of public employment programmes in terms of job creation to the youth in the green economy. The ILO study revealed that the green economic sector in 2016 employed more than 10 million people around the world. The ILO study predicts that by year 2030 the green economy can create up to 60 million additional jobs world-wide.

Programme challenges and areas of improvement

Sustaining and upscalling a job creation programme is a critical element in improving the impact of the initiative (Dladla & Mutambara, 2018). Departmental officials and partners were asked to identify challenges on the implementation of the programme required improvement and their responses revealed the following challenges on the implementation of the programme:

- Limited places for practical phases of the programme in the industry and other government projects;
- The programme was too short, yet offered great potential to youth skills development, youth employment and developing small businesses for the youth in the green economy; and
- The programme was implemented on a small scale and could not reach many young people who are unemployed and could have also benefited from the programme.

To address these challenges, they recommended that partnerships be forged with businesses for placement of participants in their sites for the practical phase of the training. One official reiterated:

"Programme participants need to be kept into a programme for a longer duration. For example for two-three years, to ensure that they go through all phases of development. This will further increase their experience as well as confidence to be able to tackle this job anywhere with greater confidence. In order to make a meaningful contribution in addressing unemployment challenges, the programme needs to be scaled up and cover wider areas and communities".

Further, departmental officials and partners recommended that a strong buy-in from government and its agencies to train and place young people on energy efficient programmes including retrofitting is required in order to replicate the programme to other areas. They also noted that vocational training colleges need to provide dedicated training on renewable energies while big businesses need to commit themselves to work with small businesses on the installation and maintenance of their renewable energy plants and equipment; including the big installers of the renewable energy equipment who must also place these trainees on their business sites as well as to sub-contract them to local businesses in their projects.

These findings concur with the study conducted Thwala (2007) on the challenges facing labour-intensive PWP in South Africa, which revealed that most PWPs programme suffer a constant problem of being short-term in nature. As such, they fail to deliver an impactful contribution on the reduction of unemployment. Further to this, Thwala argued that very few PWP programme reaches the required scale to cause a dent on unemployment challenges. India's Mahatma Gandhi National Rural Employment Guarantee Programme (MGNREGP) is a pioneer in this case in terms of scale and it has created more than 57 million employment opportunities in 2015 (Talbot et. al., 2019:20).

Conclusion and Recommendations

This article focused on the impact of the government-led green jobs initiative as part of the EPWP in addressing the youth unemployment. Drawing from the findings, the investigator noted the numerous positive impact that the programme has made into the lives of the participants and the environment in general. The positive impact noted by programme participants include: job creation, skills development, new opportunities such as starting their own businesses. The review of the literature has also shown that little evaluation of the green jobs initiative is done to assess its impact to the youth, but noted that training and skills development is an important element in the green economy. Scholars have opined that workers in renewable energy sector such as wind power plants and solar energy industries are generally more skilled and educated as compared to their counterparts in the convectional energy sector that depends on fossil fuel. As such, this study recommends a:

- **Dedicated and structured training to support green jobs** so that training remains an important component of the programme as highlighted in the GDS Agreement on EPWP and AU Agenda 2063. To expand the programme so that dedicated training must be provided across the country, specifically for this programme. The training must be aligned to government programmes and priorities. Therefore integrated planning between government departments, agencies and state owned entities is critical, to ensure that once participants are trained, there is a placement already available for them.
- **Projects of a longer duration need to be adopted** so as to gain maximum impact of the programme, it's important that a list of projects for practical training is developed to ensure that participants are placed in projects with longer duration or projects are combined to give the longer time span for each participant in the project.
- **Dedicate training of small businesses on green economy** given that developing small business in the green economy is critical to ensure that the equipment installed in communities is serviced and repaired by those local businesses. Small businesses training and support must thus be provided in the entire value chain of the green economy by government's small business agencies, provincial and national, including providing funding for start-ups and expansion capital.
- **Promotion of local manufacturing of products in a bid** to develop local economies. This is important so that people start from the beginning, which refers to the manufacturing of the parts and components. The development of local manufacturers, do not only create local jobs, but also the potential to export the excess products. To revive the local factories, this programme also provides opportunities to manufacture the products locally.
- **PEPs to embrace technological change and innovation** especially because they (PEPs) are not backward looking programmes and that times are changing and countries are not the same in terms of poverty levels and unemployment. This therefore implies the programmes should evolve and embrace what technology brings as well as different dynamics in various countries. A one-size-fits all approach is not always the solution on EPWP. What works for South Africa, may not work for Kenya, Angola, Zimbabwe etc. because the environment and conditions in these countries are not the same. This then means South Africa needs to evaluate its founding principles and legislations on the EPWP to see if they are still relevant in the country's economic conditions and the changes brought by technology. If one does not go back to evaluate the relevancy of any interventions to current conditions, new developments and interventions might be stifled because they will not always conform to conventional founding principles, which have become outdated by time and technology.

Acknowledgements:
The author appreciates the support of the National Research Foundation through Prof Betty C Mubangizi's Research Chair in Sustainable Local Rural Livelihoods at the University of KwaZulu-Natal.

References

African Union (AU). (2015). Agenda 2063. The Africa we want. A Shared Strategic Framework for Inclusive Growth and Sustainable Development: First ten-year implementation plan 2014 – 2023.

Berniell, L. and de la Mata, D. (2017). Starting on the right track? The effects of RST job experience on short and long term labor market outcomes. CAF – Working paper; N° 2017/26, Buenos Aires.

Borel-Saladin JM and Turok IN. (2013). The impact of the green economy on jobs in South Africa. South African Journal of Science, 109, 9-10.

Bridle, R. and Geddes, A. (2019). South Africa: Is a transition away from coal just around the corner? https://www.iisd.org/gsi/subsidy-watch-blog/south-africa-transition-away-coal-just-around-corner (accessed 06 July 2020).

Chan CKC, Lam MC. (2012). The reality and challenges of green jobs in China: An exploration. International Journal of Labour Research. 9(10):253-270.

Department of Environmental Affairs and Development Planning (DEADP), (2017). Western Cape Government (WCG) Green Economy Report. https://www.westerncape.gov.za/eadp/files/atoms/files/Green%20Economy%20Report%202017.pdf (accessed on 08 July 2019).

Ditlev E, Daniel M. and Kammen B. (2009). Green jobs and the clean energy economy. Copenhagen Climate Council.

Dladla L and Mutambara E. (2018). The Impact of Training and Support Interventions on Small Businesses in the Expanded Public Works Programme-Pretoria Region. Social. Sciences, 7(12), 248.

Expanded Public Works Programme (EPWP). (2019). Expanded Public Works Programme Phase Four, Business Plan: EPWP Phase IV (2019/20-2023/24).

Global Green Growth Institute (GGGI), (2018). The Economic, Social and Environmental Impacts of Greening the Industrial Sector, GGGI Cambodia (2018). https://www.greengrowthknowledge.org/sites/default/files/downloads/resource/GGGI_Greening-the-Industrial-Sector-in-Cambodia_FULL-REPORT_0.pdf (accessed 06 July 2020).

GE Y, ZHI Q. (2016). Literature Review: The Green Economy, Clean Energy Policy and Employment. Energy Procedia: Science Direct, 88: 257-64.

International Labour Organisation (ILO). (2018). World Employment Social Outlook, 2018: Greening with Jobs, Geneva. https://www.ilo.org/weso-greening/documents/WESO_Greening_EN_web2.pdf (accessed 20 July 2019).

International Labour Organisation (ILO) (2020). Green Jobs for youth. https://www.decentjobsforyouth.org/wordpress/wp-content/uploads/2017/08/Thematic-Plan-4-Green-Jobs.pdf (accessed 13 February 2020).

Jupp, V. (2006). *The Sage Dictionary of Social Research Methods*. SAGE Publication Ltd. London.

Lal R, Miller S, Lieuw-Kie-Song M, and Kostzer D. (2010). Public works and employment programmes: Towards a long-term development approach, Working Paper. International Policy Centre for Inclusive Growth, No. 66, International Policy Centre for Inclusive Growth (IPC-IG), Brasilia.

Lettmayr, C.F. and Riihimäki, T., (2011). The Benefit of Vocational Education and Training. European Centre for the Development of Vocational Training. Luxembourg: Publication Office of the Europian Union.

National Planning Commission (NPC). (2012). National Development Plan 2030: Our future–make it work. Pretoria: NPC. Available at http://www.gov.za/documents/national-developmentplan-2030-our-future-make-it-work. (Accessed 07 July 2020).

Oxfam. (2015). Extreme Carbon Inequality: Why the Paris climate deal must put the poorest, lowest emitting and most vulnerable people first. https://www-cdn.oxfam.org/s3fs-public/file_attachments/mb-extreme-carbon-inequality-021215-en.pdf. (Accessed 27 July 2019).

Phillips S. (2004). The Expanded Public Works Program (EPWP). Overcoming Under-development in South Africa's Second Economy. Pretoria, South Africa. (UNDP, HSRC & DBSA Conference on; 28 & 29 October 2004).

Pollin R, Heintz J, and Garrett-Peltier H. (2009). The economic benefits of investing in clean energy. Center for American Progress and Political Economy Research Institute.

Ramsarup, P. and Ward, M. (2017). Enabling Green Skills: Pathways to Sustainable Development. Rhodes University Press.

South African National Energy Development Institute (Sanedi). (2019). Annual Report 2017/18. [Internet:http://www.sanedi.org.za/img/Shared%20documents/2nd%20draft%20SANEDI%20Annual%20Report%20(003).pdf accessed on 18 July 2019.]

Statistics South Africa (StatsSA). (2019). Quarterly Labour Force Survey - QLFS Q1:2019. http://www.statssa.gov.za/publications/P0211/Presentation_QLFS_Q1_2019.pdf. (Accessed on 27 July 2019).

Talbot, V., Langa, M. and Ortiz, J.T. (2019). Why Public Employment Programmes are needed. Global Comparative Analysis of Public Employment Programmes: Strengths and limitations, p.4.

Thwala, W.D., (2007). Challenges facing labour-intensive public works programmes and projects in South Africa. International Journal of Construction Management, 7(2), pp.1-9.

United Nations Environment Programme (UNEP). (2013). Green Economy Scoping Study: South African Green Economy Modelling Report (SAGEM) - Focus on Natural Resource Management, Agriculture, Transport and Energy Sectors.

United Nations Environment Programme (UNEP). (2011). Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication, www.unep.org/greeneconomy.

Western Cape Government (WCG). (2014). Provincial Strategic Plan 2014- 2019. https://wcedonline.westerncape.gov.za/documents/PlanningStrat/ProvAndNationalPlans/ProvincialPlans/ProvincialStrategicPlan-2014-2019.pdf (accesses on 08 July 2019).