

Project-Based Descriptive Summary

1. Project Title and Author information

Buffelsdraai Landfill Site Community Reforestation Project

Author: Roxanne Munsamy, Wildlands Conservation Trust, roxannm@wildtrust.co.za

Abstract

African cities are particularly vulnerable to climate change and require mitigation and adaptation strategies that place considerable emphasis on the social dimensions of change. The Buffelsdraai Landfill Site Community Reforestation Project (BLSCR) centres around Climate Change adaptation and utilises a Community Ecosystem Based Adaptation (CEBA) approach. The BLSCR is deemed as one of the most successful flagship projects initiated by the City of Durban (eThekweni Municipality), as it has aspired to implement local level climate action from its project inception in 2008. Since project inception, approximately 725 325 plants have been planted within the buffer zone around the active landfill zone. In addition to the ecological benefits, community members from Osindisweni and Buffelsdraai area have seen various socio-economic benefits. Several local Small Medium and Micro-sized Enterprises (SMME's) have been developed and a host of job opportunities have become available to the adjacent communities thereby contributing towards poverty alleviation within the metropolitan area.

2. Introduction

Climate change is now known to be an unequivocal reality due to the vast amounts of greenhouse gases (GHG) emitted into the Earth's atmosphere as a result of increased anthropogenic activities. The resultant warming triggers a cascade of changes: erratic weather patterns poses threats to agriculture and affect food security, ocean levels continue to rise as glaciers melt and flooding becomes a reality in many coastal areas, changes in temperature affect biodiversity levels and water supplies are continuously compromised (Roberts 2010; Singh and Singh, 2013).

Without effective mitigation in place, GHG emissions continue to escalate and produce devastating consequences. Adaptation becomes necessary as to manage the unavoidable realities of the social dimensions of climate change especially within that

of third world countries (Singh and Singh, 2013). African cities are considered as highly vulnerable to climate change, predominantly due to high levels of unemployment and poverty, inadequate service provision, ageing infrastructure, rapid population growth, poor educational systems and governance.

Fortunately, within an African context, many such cities are still developing and can proactively mitigate and adapt to climate change. This has been particularly evident through eThekweni Municipalities Environmental Planning and Climate Protection Department (EPCPD), Buffelsdraai Landfill Site Community Reforestation Project (BLSCR) which was initiated as a Pilot in 2008 with Wildlands Conservation Trust (WCT) as an implementing partner. This project combines a climate adaptation strategy, ecological restoration and biodiversity to enhance and promote socio-economic benefits (community livelihoods) thereby leading to poverty alleviation to communities adjacent to the project site within eThekweni Municipality.

3. Projection Description detailing project history, partners, resources and timelines

The BLSCR is located at the Buffelsdraai Landfill, outside Verulam, north of Durban within a previously degraded and deforested area. The buffer zone around the Buffelsdraai Landfill Site is owned by the municipality and is around 800 m wide and has an extent of 787 hectares (ha) and ensures that the Buffelsdraai and Osindisweni communities are shielded from the negative impacts of the landfill. The BLSCR was implemented as a Pilot project in 2008 with the aim to alleviate the climate change impacts associated with the hosting of the Durban-based elements (307,208 tonnes CO₂) of the 2010 FIFA™ World Cup (Roberts, 2010) through the planting of indigenous trees within the buffer zone.. The total carbon offset will occur over a 20-year period on buffer zone around the Landfill (Robert et al., 2012; Diederichs and Roberts, 2015).

Initial project funding for the BLSCR was secured from the Danish International Development Agency (DANIDA) which allowed the project to be initiated by the City of Durban and implemented by the WCT (Diederichs and Roberts, 2015). Currently the project is funded by South African National Government and eThekweni Municipality (Diederichs and Roberts, 2015).

The BLSCRCP conceptualises a Community Ecosystem Based Adaptation (CEBA) approach (Roberts et al., 2012) which aims to holistically combine ecosystem management and restoration principles with that of community development, thereby also ensuring that ecosystem service provision is enhanced. According to Roberts (2010), in addition to the desirable carbon sequestration component associated with tree planting, the project was a means towards poverty alleviation and one which could provide the necessary ambassadorship for dire environmental issues such as climate change, land degradation and management of catchments to the adjacent communities.

The initial phases, 2009 to 2015 (phase one to six) focused on tree planting within the buffer zone, whilst the secondary reforestation phase 2016 to current (phase seven to 16) focuses primarily on installing secondary plants (shrubs, ground cover species and climbers). To date the project has planted approximately 582 380 trees as part of initial installations and 142 945 plants secondary installations. Once these species have properly established, ecosystem functionality begins to restore, and this in turn leads to a more resilient ecosystem in the face of long and short-term climate change adaptation. In addition to planting, WCT oversee that Invasive Alien Plant (IAP) Control and fire break maintenance activities occur within the buffer zone.

4. Relevance and Impact to eThekweni Municipality

Poverty alleviation through job opportunities, benefactors and SMME development

Reforestation Employment Opportunities

According to the eThekweni Municipality (2013), Durban has one of the largest number of people residing in the metropolitan area who are currently listed as unemployed and who are currently living on less than 2 dollars (R28.75) a day. Thus far, the community reforestation project has been creating job opportunities for both of the adjacent communities, through direct employment working within the buffer zone as restoration staff whose core function pertain to planting, clearing IAP's on site and caring for the plants and seedlings that are brought and stored in the nursery until they are ready to be planted. Opportunities also exist for field rangers whose core responsibility are to traverse the buffer zone and ensure that illegal activities (hunting, grazing, plant

harvesting, trespassing etc. does not occur). Other opportunities available include working as tractor drivers, nursery management community facilitators and social facilitators. These employment opportunities are split between the Buffelsdraai and Osindisweni Communities respectively.

Indigenous Tree's for Life Programme

In addition to the direct employment opportunities that are offered, a different pathway into the green economy is through WCTs' "Indigenous Tree's for Life" Project. The Tree's for Life Project is one of the Wildlands Conservation Trusts' most precious of livelihood initiatives. This project is aimed at uplifting previously disadvantaged communities and especially groups of women and the elderly by participating and entering the green economy through the propagation, growth and bartering of indigenous plants. Through this livelihood programme, community members are invited to register as Trepreneurs, "Community Plant Growers" and are encouraged to propagate and grow indigenous seedlings in their home nurseries until they reach a suitable height/ age and are ready to be bartered. On collection of the plants, Trepreneurs are issued out credit notes which are exchanged for groceries, school fees, building materials and to name a few. Currently, BLSCRIP has 203 registered Trepreneurs from the last registration process conducted in 2018. During May and June 2018, a total of 61 749 plants to the value of R 308 745,00 were collected from 147 of the registered Trepreneurs. A further 40 000 plants will be collected in May and June 2019 to the value of R375 000.

SMME development

SMME's are referred to the engine of growth, they are critical for alleviating poverty and play an important role in developing countries (Ayandibu and Houghton, 2017). In South Africa, considerable attention is placed on developing SMME's for Local Economic Development (LED). The community reforestation project is mandated to ensure that SMME development occurs and the project must attain a minimum of 30% contractor participation rate for each year active (Figure 1). WCT has continued to support the surrounding Buffelsdraai and Osindisweni communities through the sub-contraction of several SMMEs, whom each employ a workforce from within these communities.

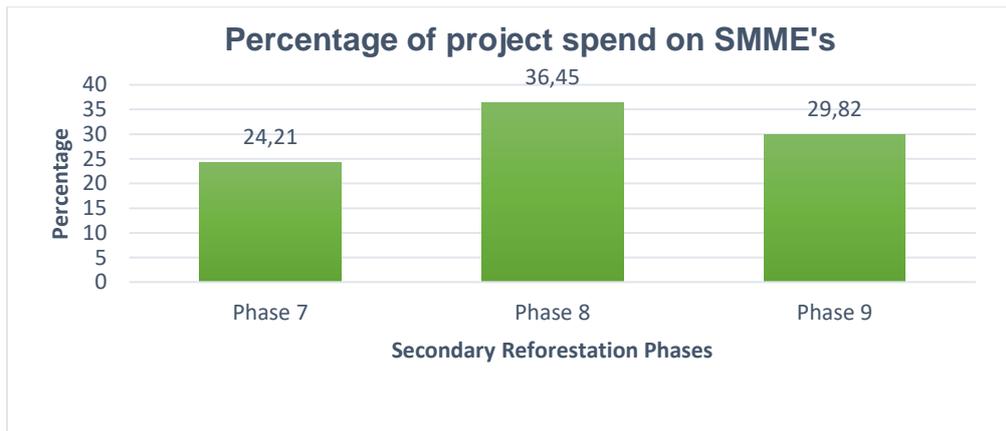


Figure 1: SMME Expenditure from January 2016 to June 2018

5. Concluding remarks

Community reforestation projects requires a lot of energy, passion and hard work from all those involved actively involved. Between January 2016 and June 2018, over 140 000 trees were collected from the community plant growers in exchange for livelihood support. WCT has also ensured that it has continued to play an active advocacy role in the community, which enables a project presence and understanding to be maintained amongst the surrounding communities. Ultimately, the end goal is to work together to ensure that the goal of conservation and socio-economic development is met. Projects such as this, highlight that each tree, plant and seed that goes into the earth contributes towards representing a greater biodiversity, improved habitat, improved soils and water quality. The BLSCRIP equip communities to own their future.

References

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