

**Assignment – Sustainable Development**

**Course Module: Introduction to Sustainable Development**

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**How sustainable are we really?  
Examining the Sustainability of the St Francis Bay Thatch Farm Project  
A Working for Water Pilot Project**

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## *Plakkerskamp*

*Die reen sak neer, saggies  
kalmerend teen die woeste wind*

*Die plastiek blomme wuif tussen die  
nou gepakte 'huise'  
Die geratel van planke en plate baklei  
om heel te bly  
'n Modderpoel word die avontuur  
van 'n kleintjie, wat glo, dat die normaliteit is  
Die geskree van 'n ander gaan ongehoord  
Die vele gesigte van gebroke mense-  
weggegooi tussen vullis en oop vlaktes  
Die lewe is dag tot dag, sekonde tot sekonde,  
want alles verander oornag*

*Die reen sak neer, saggies  
kalmerend teen die woeste wind.*

*J.S. Gouza*

## **Introduction**

The advent of the new millennium saw the conscious move towards encouraging sustainable development. The groundwork that was laid between 1970 with the Stockholm convention culminated with the World Summit on Sustainable Development in Johannesburg 2002. This allowed for targets to be set for sustainable development within economic, environmental and social systems.

Sustainable development (SD) is defined by the Brundtland Commission in WCED 1987 as: "Development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

OECD countries routinely refer to economic growth as a measure of increasing human welfare. That economic growth is used as a proxy for welfare is not surprising. Concern for the interests of future generations will, for many people, be reason enough to look beyond economic growth as an indicator of welfare. The long term sustainability of economic growth itself depends on maintaining basic ecosystem services, a healthy environment and a cohesive society (OECD 2001:9)

The concept of sustainable development presents a fundamentally challenging shift in global politics creating, for the first time, an ethic which encompasses a challenge to the

inevitability of poverty and inequality, which recognizes not only the need for economic development to meet human need, but also the imperative to halt environmental destruction, and which involves maximum community participation, empowerment and local activism (Warburton. 1998:3)

The triple bottomline of sustainable development – environmental, social and economic SD- understanding that the latter two is dependant on the former is the key. But then the question is asked- does this understanding really take hold at all levels from National to local government? more importantly, the people on the ground? How do we integrate this notion of environment first with the myriad of social and economic issues that we face in post Apartheid South Africa. One such attempt at crossing this divide, was through the Working for Water Programme, launched as a national action to eradicate alien vegetation while seeking to uplift the poorest of the poor through job creation and skills transfer trough training and social initiatives. Just how successful are we really at marrying social, environmental and economic developments to produce this wonderfully sustainable environment?

The aim of this paper is to examine the approaches to sustainability and to test this by using the sustainability matrix as a tool to measure sustainability using the St Francis Bay Working for Water project as a case study. The author examines the project from a personal point of view, looking at experiences and attempting to answer the questions put forward: Is a more sustainable world really possible? and whether it is really possible to decouple resource use from consumption?.

## **Approach**

### **Separation/ integration-**

In order to get a sense of the bigger of the picture one has to look at the triple bottom line in separation. Firstly, the natural capital is at the base of or rather the glue that keeps the system functioning, meaning that it is the limiting factor. This correlates with Goodland and Daly, 1996”the goal of environmental sustainability is thus the conservative effort to maintain the traditional meaning and measure of income in an era in which natural capital is no longer a free good, but is more and more the limiting factor in the development.”

The Working for Water Programme has three main core objectives:

1. Hydrological- ensuring water security through removal of alien vegetation.
2. Socio economic- Providing employment opportunities and social intervention strategies to poor communities. Economic spin offs in terms of secondary or value added industries.
3. Ecological- to improve ecological integrity of natural systems through prevention and control of invasive alien plants (IAP's).

These objectives appear to tie in with the triple bottom line, but to what degree is it sustainable within each sphere of ecological, social and economical systems?

### **Ecological/ Hydrological**

The Primary objective of the Programme is to ensure water security. It would appear that this objective carries more weight than the other two, after all this is a natural resource

and a limiting one at that. Bartelmus (1994:) refer to the depletion of natural resources(land/soil, water and forests) and their effects on food and energy supply, marginal conditions in human settlements, environmentally conditioned diseases and natural disasters as high priority issues in developing countries.

The earth's water is finite and small, representing less than 1% of the world's total water stock with the per capita use of water doubling every twenty years, at more than twice the rate of human population growth (Barlow and Clarke. 2002:12).

Beyond the pressures of water demand and pollution another significant threat to our water resources, is that of invasive alien plants (IAPs') and the threat they pose not only to water resources but also biodiversity. Removal of these IAP's allows for freeing up water and to some extent allowing for re-establishment of natural vegetation for improved ecological integrity.

### **Socio- economic**

The definition of SD talks to 'needs' which in itself seems broad and vague in description, however, Dresner (2002:) examines the definition more closely and breaks it down into two concepts that of needs (in particular the essential needs of the poor, to which overriding priority should be given) and limits (on the environment's ability to meet present and future needs).

The second objective is that social upliftment and empowerment through job creation and skills transfer. Employment as a rule for the Programme, is sourced from the poorest of the poor and is usually in rural areas.

In a country where approximately half of the population can be characterized as poor data shows that most of the poor live in rural areas (May.2002:303)

Skills transfer occur through training programmes and social and developmental interventions at project level.

The economic objective for the programme is seen through its secondary or value added industries, which could be the utilization and or commercial use of biomass in the form of wood for fuel or furniture making, as is the case with the St Francis Bay project- the established natural resources for commercial use.

As stated before – the core objectives of the Working for Water Programme appears to meet the criteria for SD when considering the triple bottom line approach. But how sustainable are we really when examining an individual project with the Programme.

### **Case Study**

#### **Background**

In order to get an idea of the project I will briefly outline the project.

The St Francis Bay thatch farm is situated between the coastal villages of St Francis Bay and Cape St Francis and measures about 211ha in total size which up until 2001 was completely infested with Australian *Acacia Cyclops* and *Acacia saligna* (Rooikrans and Port Jackson willow). The species were introduced by the early settlers in the area, some 40- 50 years back to try and stabilize the headland bypass shifting dune system. The main objective of this project is to address the poverty within the area and by clearing the area of the invasive vegetation and rehabilitating it with indigenous *Thamnochortus insignis*

or more commonly known as the Cape thatching reed. The reed is from the Restionacea family and will act to stabilize the dune system and prevents erosion, it will also be harvestable for commercial use. The reeds can be harvested between 3 and 5 times in a twenty year cycle and requires very little maintenance once established. The removal of the alien vegetation has also encouraged the reestablishment of indigenous vegetation.

With the growth of the villages and its exclusive vacation and coastal investment status, came a new wave of settlers, mainly from the rural parts of the Eastern Cape, in search of employment. The expansion of the local community demanded the attention of local government to provide housing and free basic services.

Labour is sourced from the local community. The clearing of the invasive alien vegetation is labour intensive and the remuneration of workers is on the minimum wage as set out by the Dept of Labour.

Community participation is at the core of trying to make this project grow and develop into an entity that the community can truly benefit from. This is a challenge considering the community is not as cohesive. The cultural and traditional differences pose a challenge. The growth of this coastal town and some of the industries such as building and chokka/fisheries has encouraged the influx of labour. This is, however, short term employment and leaves the new members of the community without sustainable jobs. Another potential challenge is that of land for housing- with the influx of new people into the local area the demand for land for housing has become a pressing issue for the local municipality. The local area of Sea Vista is expanding with informal settlements crammed into a small piece of land. Because the area of the project or thatch farm is just south of the informal settlements, it would be an obvious choice for land for housing- however the land is under the custodianship of Department of Environmental Affairs, Economic and Tourism and a large portion of forms part of a Nature Reserve. The thatch farm itself is situated above an aquifer which stretches up to the area currently being occupied by informal settlements.

It would however not be possible to commit this part of the land to housing due to the possible contamination of underground water sources.

The introduction to this paper is a poem speaks to the situation around the informal settlements and the situation of the local community.



Photo 1- An aerial view of Port St Francis on the fore with the Santareme Village adjacent to it and Cape St Francis to the left upper part of the photo. The airfield is situated visible in the centre of this photo with the St Francis Bay Thatch Farm Project to the upper right hand side. The grey areas are the rows of slash that remains after a clearing operation.

Photo courtesy of Mr. D. Tudhope, St. Francis Bay,





Photo2- An aerial photo of the Thatch Farm with the local Community of Sea Vista on the foreground. Photo courtesy of Mr. D. Tudhope, St Francis Bay.

### **Sustainability Matrix**

The sustainability matrix is used as a tool to measure sustainability and in this case to measure the sustainability of this project.

The sustainability matrix as put forward by Swilling (2006) outlines the matrix as follows:

1).Weak vs Strong SD Weak vs Strong SD:

Nature must pay the price for development vs strict limits beyond which we cannot go

2).Egalitarian vs Non Egalitarian SD:

Overconsumption by the rich at the expense of the poor vs defense of middle class living stds

3).Top Top-down vs Participatory SD:

Grassroots mobilisation (NGOs, CBOs) vs policy think tanks and round tables (UN, business, Summits)

4).Narrow vs Broad SD:

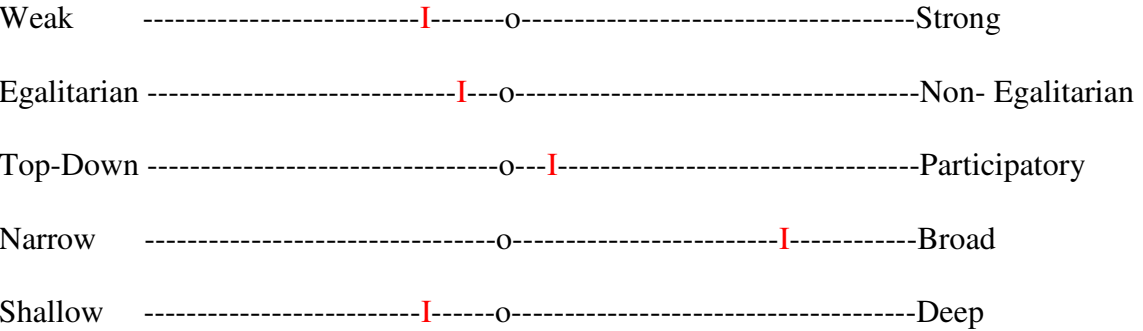
Green conservationist agenda vs SD as inclusive vision for a better future (triple bottom line)

5).Shallow vs Deep SD:

Nature is important only because it is useful to humans vs nature has intrinsic spiritual value.

**Analysis**

The matrix is applied to the case study by looking at the degree to which either of the criteria is being met with a central point at which equilibrium occurs/or indecisiveness. The markers used to indicate the degree of sustainability is marked in red intentionally as this is a subjective view.



**Discussion**

**Weak vs Strong SD**

Considering the background of the area of St Francis Bay, the sustainability measure of weak vs strong shifts to the left in favour of weak SD. It was because of development that the natural pristine dune system had to be altered, favouring the needs of humans above those of the environment even more so the need of a few rich people. Another point of concern has been the decline in the shoreline in the St Francis Bay which has been linked to the stabilization of the dune systems, preventing sand deposition on the beach. The project attempts to change this by removal of the problem plants and substituting it with indigenous plants, however, it is still for commercial use which lends itself to weak SD.

There is still no decoupling of resource use from consumption..

As Pierce (2003:28) points out, coastal mobile dunefields, which are unique ecosystems in their own right, play a crucial role in providing sand for replenishing beaches after winter storms. Most mobile dune fields along the coast the coast have been stabilized either by alien plants or by urban developments, especially holiday resorts. The net result being ,that many beaches are being eroded and this process is likely to be worsened under the influence of global warming.

A concern at local government level is first and foremost to address poverty, housing and better service delivery overall. Ecological issues are sometimes secondary concerns in the face of socio- economic challenges at local government level.

This can be overcome to some extent as Pierce (2003:29) further points out that restoration projects provide municipalities with the opportunities for integrated development- to acquire external funding for IDP projects, to create work for the poorest of the poor, to improve the natural environment, and to avoid future costs associated with environmental degradation.

### **Egalitarian vs Non-Egalitarian SD**

The analysis shows a move toward a stronger egalitarian SD as the beneficiaries are the poor, there is however, a finite number of people that can be employed at a specific time dependent on available funding.

As mentioned before the aim of this project is to address poverty but poverty in itself is not a single issue. The need for housing, sanitation, access to proper health care and education are just some of the factors required to build social capital.

Harris et al.,(2001:55) describes social capital as the ways in which economic actors interact and organize themselves, magnifying the production from the combination of the three more widely accepted forms of capital: physical, natural, and human. But in order to address this- building of social capital- human development needs to be encouraged. Within the same chapter Harris et al, (2001:59) goes on to identify the essential components of human development: equity, sustainability, productivity and empowerment.

There are still huge disparities between communities even on a small scale as presented here. In terms of equity the playing field is not level at all, land, education and access is still a challenge. Productivity and empowerment depends on education and investment in physical and human capital with the understanding that sustainability can only be achieved if there is a balance in sustaining human, physical, natural and financial capital as pointed out by Harris et al, (2001:60).

One way in which this can be implemented is societal mobilization- which can be a solution and a challenge, moving from a “welfare” state to enabling self sufficiency. This would require government to invest more money in supportive social and development programmes, at an inter-sectoral level, to promote skills development. May (2002:314) points out, however, that budget constraints along with a lack in capacity (human resources) as well as the difficulty of collaboration between governmental departments as governmental bureaucracies are not designed to facilitate inter- sectoral work, are still challenging factors.

### **Top-Down vs Participatory SD**

The initial starting point was top-down approach and developing structures for participation from the local community has been challenging because the dynamics of the community- not being able to build a cohesive community. There is still a level of apathy as people generally want quick results and instant benefits.

Etzioni (1998:40-41) views the environmental and communitarian movements as a parallel progression where reference is made to sustainable communities and not merely sustainable environments.

Findings by Forsythe et al, (1998: 36) indicates that much research on poverty has indicated that poverty exists when people are not included in large scale schemes. Local people may reduce the impact of demographic, economic and environmental change, and direct these processes in a positive way through local institutions that allow access to and management of environmental resources and services. The environmental entitlements so generated contribute and contribute towards so-called sustainable livelihoods.

The participation for these marginalized communities is essential to in making such projects work.

### **Narrow vs Broad SD**

Since the project aims to be inclusive- trying to meet the needs of the poor, restoring the natural environment and putting structures in place to encourage economic development- the analysis shows movement towards broad SD. There is scope for more economic development through biomass utilization from alien vegetation for the local community.

The resource use and democratic decision-making within governments and firms must be linked, not because it is fashionable or morally correct, but because it is essential for the efficient management of human and natural resources. Development activities should minimize the release of toxins, "close" resource flows in production cycles, and base these on renewable resources, biological processes, and extensive recycling, whenever possible. Development should raise incomes without necessarily raising material throughput (Lichtman, 2003:4).

This integration will have to take shape at all spheres of government but most notably so at the local government level. It is important, however, to remember that some smaller Municipalities still do not yet possess the capacity to effectively put this into practice.

### **Deep vs Shallow SD**

The value of the project to meet the demands of humans far outweighs that of restoring the natural capital and the SD tends to be shallow.

In contrast to reform environmentalism, which treats the symptoms of ecological degradation- clean up a river here or a dump there for human well being- deep ecology questions fundamental premises of the Industrial Growth Society. It challenges the assumptions, that humans are the crown of creation and the ultimate measure of value (Macy & Young Brown. Undated: 45-46).

In her acceptance speech for the Nobel Peace Prize, Wangari Maathai explains that what started thirty years earlier as a community effort to plant trees to restore the declining forests grew into a movement that planted trees not only to address the environmental issues at hand but became part of a symbol of peace and democracy. What started as a community challenge turned into a National movement reaching into spheres far beyond that which they had envisioned from their humble beginning. This is just one example of the power of community mobilization.

This correlates to the view by Macy & Young Brown (Undated:55) that the nature of synergy, the first property of living systems- that as parts self- organize into a larger whole, capacities emerge which could never have been predicted, and which the individual parts did not possess.

### **Conclusion**

The overall analysis indicates that there is a good level of sustainability, mainly because there is an attempt at meeting the triple bottom line. Research findings have proven that sustainable development or economic growth cannot be efficient whilst poverty is not being fully addressed. Poverty is at the cornerstone of challenges for the South African Economy- beyond trying to provide housing and creating jobs there is a need to create an

enabling environment for the marginalized of our society, to be participative, in creating a better life for themselves. More so there needs to be a positive and encouraging action from Government in promotion of community mobilization in addressing these issues. The Extended Public Works Programmes within the Government has been an import link in addressing poverty from a National scale and Programmes such as Working for Water attempts to address this by addressing poverty by engaging in natural capital restoration. The St Francis Bay project is a promising initiative of sustainable resource use that could be replicated.

Returning to the question of whether a more sustainable world is really possible one I would have to say that it is. There will however be challenges that need to be met, whether it is within the developed countries or the developing countries. It does not at this point in time seem practical to decouple resource use from consumption. The focus should rather be to minimize resource use and to find alternatives to address issues of over-consumption of non-renewable resources.

It is important to remember that sustainable development is a process and not a fixed point in time.

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