Role of the Vetiver System in the Achievement of Kenya Vision 2030

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EXTENDED ABSTRACT

Introduction

Kenya has in the past had two long-term policies and several 5-Year Development Plans that have guided planning and investment: The first was Sessional Paper No. 10 of 1965: African Socialism and its Application to Kenya, and the second was Sessional Paper No.1 1986: Economic Management for Renewed Growth. These plans attempted to confront the country's most entrenched problems by charting a vision of how development would tackle them. Whereas the country grew by an average of 6% over 1964-1980 and 4.1% over 1980-1990, the period 1990-2002 was a period of declining per capita income with GDP growth of 1.9% against a population growth of 2.9%. However, since 2003, there has been tremendous effort to get the economy back on track through the Economic Recovery Strategy (ERS) with the GDP growth rate shooting back to 6.1% by 2006.

While Kenya fares well in social indicators when compared to Sub-Saharan Africa, it does poorly compared to the middle-income countries, and especially the second-generation Newly Industrialising Countries, such as Malaysia Indonesia and Thailand that 35 years ago were at the same stage of development as Kenya. To remain relevant and competitive regionally and globally, Kenya must plan for the future. There is therefore the need for Kenya to chart a new road map by learning from the past failures, build on the strengths and confront the realities of poverty, unemployment and globalization. This culminated into the need for the Kenya vision 2030 which lays the foundation for an economic revolution for the present and future leadership.

In charting the path for the realization of the Kenya Vision 2030 the Vetiver Systems which, is a cost-effective, low maintenance and very effective technology for soil and water conservation, sediment control, soil rehabilitation, slope stabilization, ground water recharge, water quality improvement and treatment of contaminated lands will have a very crucial role to play in the Economic and Social strategies of the vision.

The Vetiver System (VS)

The Vetiver System is based on the application of Vetiver grass, *Chrysopogon zizanioides* (formerly - *Vetiveria zizanioides*) which has extraordinary and unique morphological and physiological characteristics, including a deep rooting system with a strong soil-binding capacity and stiff stems.

Vetiver grass is both economically and ecologically important and is one of the few plants that

have emerged from obscurity to prominence in a very short time. Since the mid 1980s its application has been widely extended as an important plant for erosion control, land stabilization, water quality improvement, slope stabilization, pollution control, handicrafts, and other important applications associated with natural resources management and protection.

Kenya Vision 2030

Kenya Vision 2030 is the new country's development blueprint covering the period 2008 to 2030. It aims at making Kenya a newly industrializing, "middle income country providing high quality life for all its citizens by the year 2030".The Vision has been developed through an all-inclusive stakeholder consultative process, involving Kenyans from all parts of the country. The vision is based on three "pillars" namely; the economic pillar, the social pillar and the political pillar. This vision's programme plan comes after the successful implementation of the Economic Recovery Strategy for Wealth and Employment Creation (ERS) which has seen the country's economy back on the path to rapid growth since 2002, when GDP grew at 0.6% rising to 6.1% in 2006. The relationships between the pillars can be seen in figure 1 below.

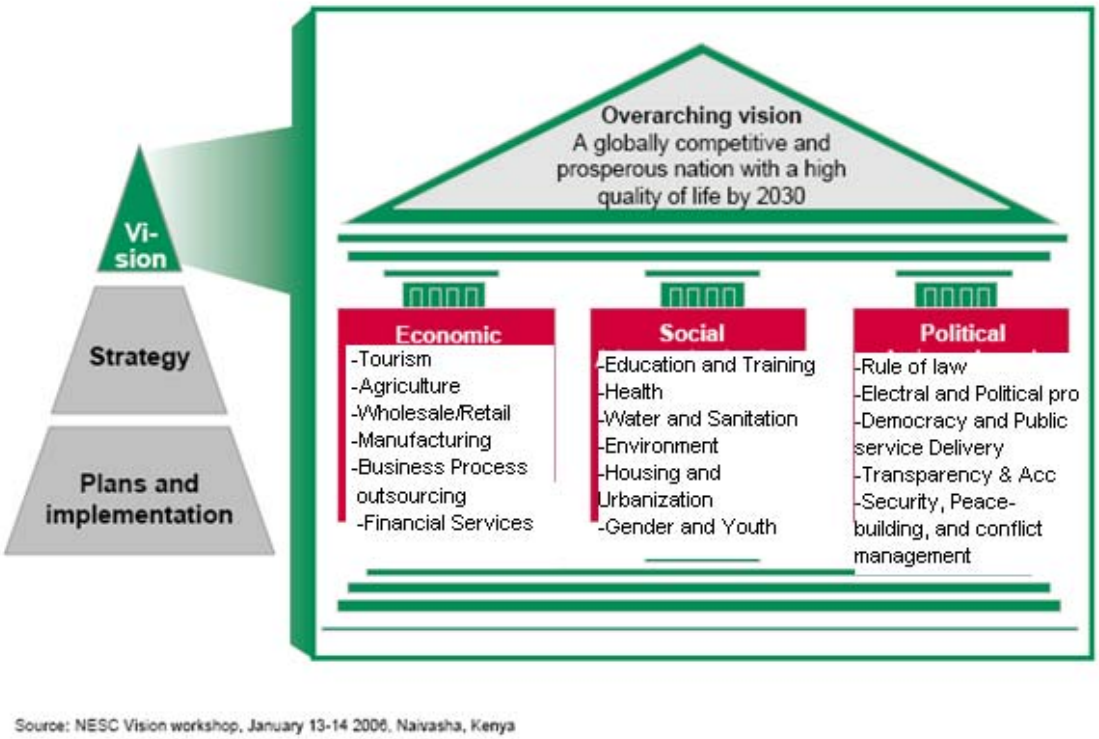

Figure 1: The Kenya Vision 2030

The Vision 2030 development process involved a number of provincial consultative meetings. The objective of the consultations was to provide in depth understanding

of the country's development problems and the necessary strategies to achieve the 2030 results, by the people involved in the implementation of Vision 2030.

The Economic Vision And Strategy

Under Vision 2030, Kenya aims to increase annual GDP growth rates to 10% and to maintain that average till 2030. The six key sectors of tourism, agriculture wholesale and retail trade, munfacturing, business process off shoring and financial services have been given priority in acting as key growth drivers in the journey to 2030.

The Social Strategy

Kenya's journey towards prosperity also involves the building of a just and cohesive society, enjoying equitable social development in a clean and secure environment. This quest is the basis of transformation in eight key social sectors; Education and Training; Health; Water and Sanitation; the Environment; Housing and Urbanization; as well as in Gender, Youth Sports and Culture, equity and poverty reduction. It also makes special provisions for Kenyans with various disabilities and previously marginalized communities. These policies (and those in the economic pillar) will be founded on all-round adoption of science, technology and innovation (STI) as an implementation tool.

Role of the Vetiver System

Vetiver System is a technology that has been tested and proven and is currently being used in several countries throughout the world. It impacts positively on a wide range of environmental problems and will work fast in dealing with problems and sustainability issues that Kenya is currently facing as it strives to achieve the vision 2030. The Vetiver Systems is appropriate for use in the sectors involved in rural and community development in Kenya and it can be easily incorporated, into the Kenya vision 2030. If all the sectors use it, there is then an opportunity for vetiver grass producers, to get involved with VS as an income generating enterprise, either by producing planting material, contracting as landscapers for slope stabilization and other needs, or selling vetiver by-products such as handicrafts, mulch, thatch, forage and other material.

Given that all the vision 2030 strategies and flagship projects have to exploit knowledge in science, technology and innovation (STI), the vetiver system can play a crucial role in their implementation. The role of the vetiver system in the vision best fits in the following areas of Economic and Social pillars of the vision:

Tourism

Vetiver handicraft business can be developed to produce products that would be appealing the tourists. This would be an important means of income generation and job creation as seen in Thailand, Indonesia, Philippines, Latin America, and some countries in Africa. In developing the three resort cities of Isiolo, Kilifi and Diani, vetiver grass could be use in construction of cottages in the hotels using the thatching material and vetiver bricks. Most hotels in the rural settings are faced with the problem of waste water disposal and the vetiver system would be most appropriate is solving this problem.

Agriculture, livestock and fishing

Vetiver system can help increase crop production through soil and water conservation. Vetiver hedges along the contour results in terrace formation. Vetiver mulch is very effective in moisture conservation and weed control. Vetiver grass is also quite effective in pest t control e.g. stem borer in maize. Vetiver grass can be used as fodder to increase livestock production. Young vetiver grass is quite nutritious and is comparable to mature Rhodes and Kikuyu grass. It can be used to stabilize fish ponds in aquaculture systems.

Education and training

Introduction of the vetiver system into the curriculum at all levels (primary, secondary and tertiary) of education in Kenya will help in promoting the vetiver system. This approach was successfully used in East Bali, Indonesia where school children were able to disseminate the vetiver technology successfully.

The Health Sector

The vetiver system can be used to improve the overall livelihoods of Kenyans, especially through improved water quality and application of vetiver for herbal medicinal use.

Environment, Water and Sanitation

The major challenges under this sector include environmental degradation; deterioration of water quality and quantity; pollution and waste management; impacts of Climate change and Global Warming; inadequate adoption of Bio-Technology. The vetiver system would be most appropriate in dealing with these challenges. Apart from its extraordinary attributes to soil and water conservation, vetiver also possesses unique physiological and morphological characteristics particularly well suited to environmental protection, particularly in the prevention and treatment of contaminated water and land. These remarkable characteristics include a high level of tolerance to elevated and even toxic levels of salinity, acidity, alkalinity, sodicity, and a whole range of heavy metals and agrochemicals, as well as exceptional ability to absorb and tolerate elevated levels of nutrients.

Keywords: Kenya, vision, vetiver, social, economic, strategy

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Brief introduction of the speaker

Dr. James O. Owino is the coordinator the vetiver network in Kenya. He is a senior lecturer in the department of Agricultural Engineering at Egerton University, Kenya where he teaches and does research in the area of Soil and Water Management. He has been involved with vetiver grass for over ten years.