

Evaluation of Opportunities and Constraints in Kenya's Drive to Green Economy Status

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Abstract

Achieving green economy requires the achievement of a well-balanced economy that values social and environmental issues. The 2012 Rio de Janeiro summit consisted of two agenda items "Green Economy in the context of sustainable development and poverty eradication and international framework for sustainable development (Barbara U. et al., 2012) Ecosystems are facing risks due to the increasing rates of depletion in natural resources to satisfy human needs and wants. A robust and regulatory framework is therefore important for effective implementation and management of green economy policies that will lead to the improvement of well-being such as combating global climate change, energy insecurity and ecological scarcity. Diversity in market facilitation will also support market institutions and participants to encourage green economic development with great support from policies that can be used to build and maintain the market infrastructure, including policies within various sectors. The output of this study recommends the bridging of the gap within Green Economy development and the forestry sector plays a major role in promoting clean, secure and sustainable environments by improving the tree cover through planting of trees and creation of awareness. In addition, weak and fragmented policy coordination among relevant ministries and government agencies such as low technology, innovation and Research and Development (R&D) uptake and weak capacity to meet quality and technical standards to be addressed.

Keywords: Green economy, forest management, forest governance, sustainable development

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1. Introduction

Gradually, information awareness on green economy has greatly improved as people have now gained more interest on sustainable development which has been accelerated by various environmental, social and economic challenges such as; loss of biodiversity, increased levels of poverty and loss of quality diverse cultures (J.A. Puppim de Oliveira et al., 2013). Green economy focuses on the reverse of these negative impacts through sustainable development by making wise decisions in production and consumption of goods and services obtained from the environment so as to sustain economies and livelihoods that are viewed as components of the ecosystem.

The past decade has seen green economy emerge as an essential policy framework for sustainable development in both developed and developing countries. It is a representation of an exciting framework capable of delivering more resource efficient, lower carbon, less environmentally damaging, and more socially inclusive societies (Hiraldo, Rocío; Tanner, Thomas, 2011). There are tensions between competing green economy discourses and a number of different definitions exist, all of which have major shortcomings. This is further complicated by varying underlying concepts of the 'weak', 'transformational' and 'strong' green economy. Several important definitions focus on the aspirational 'transformational green economy' (Afful-Koomsom, 2012). To enable and to track this 'transformation', economic and environmental measurement is essential. Current approaches are still in development, lack available data or show inconsistencies with proposed definitions, and thus may neither support effective decision-making nor efforts to transform economies.

Narrowing down to Kenya, the country displays one the most dynamic economies in Africa; however, it faces considerable economic, environmental and social challenges. From climate change and natural resource depletion to high poverty rates and rising unemployment, the country is addressing these concerns through its commitment to a low-carbon and resource-efficient development pathway. The recent years saw the country adopt a number of green economy-related approaches and policies. Examples of these policies are: implementing renewable energy feed-in tariffs in 2008, embedding sustainable natural resource utilization into its 2010 Constitution and mainstreaming green economy in its Second Medium Term Plan (J.K. Kiplagat et al., 2011)

The following objectives were addressed during the research: a) To evaluate socio-environmental factors that address the adaptation of green economy in Kenya b) To assess opportunities and constraints in achieving green economy development in Kenya c) To examine the impacts of policy interventions within the green economy development

2.0 Materials and Methods

2.1 Study Design

We used a combined evaluation phase that focused on desktop study, field trips consultation exercises with experts and final beneficiaries provided the evaluation team with data, resources and insights to undertake the final analysis.

Methods to be used are specified hereafter.

2.2 Desktop Approach

Literature review from previous work related to the topic were utilized in the desktop approach to gather useful information related to green economy development. The information is independently verifiable, can also be shared among various stakeholders in diverse geographical regions and can be stored for future reference. This information contributed to drafting a questionnaire for the field work.

2.3 Field Work Approach

Purposive sampling was used in selection of the study regions (counties), which were; Kajiado, Nyeri, Nyandarua, and Kiambu Counties whereby KFS, WRUAs, WRMA, CFAs, farmers and youth from these counties were randomly selected. The distance, sustainable cost, and the Memorandum of Understanding (MoU) between KEFRI and selected Counties aided in coming up with the sampling design and selection of sampled counties. The research work focused on the activities of various key actors within the international organizations and national institutions that have inter-linkages with green economy development and also deal with policy issues related to green economy development.

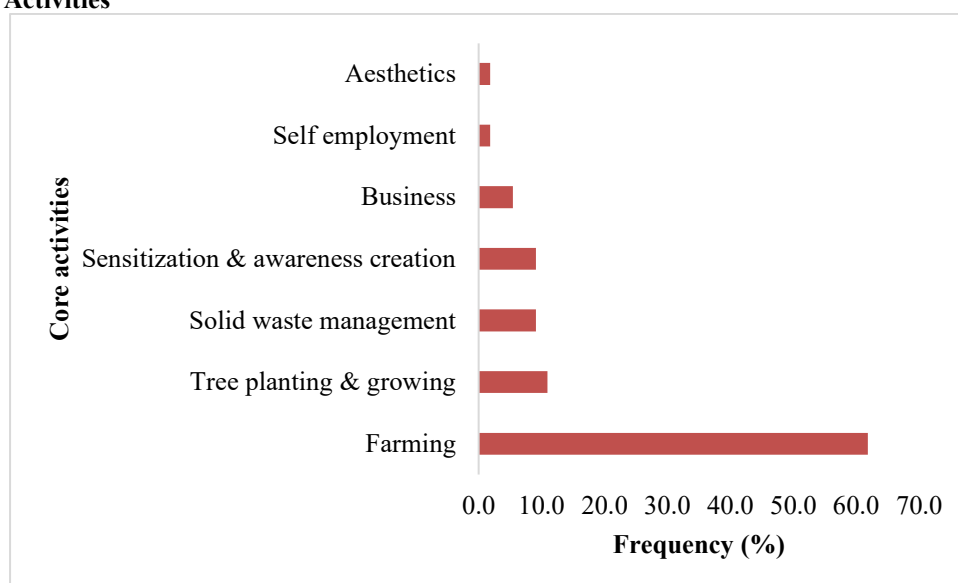
2.4 Research Methods and Data Collection Tools

Focus Group Discussions and Interviews were conducted in three main Counties mainly Kajiado County, Kiambu County, Nyandarua County and Nyeri County so as to identify the counties perception of green economy as well as establish the green economy activities undertaken in the selected counties

3.0 Results and Discussions

3.1 Socio- Environmental Factors

3.1.1 Core Activities



Farming (61.8%) was the major core activity carried out by the majority of the respondents which included dairy farming, poultry rearing. While the rest were not as much popular activities among the respondents.

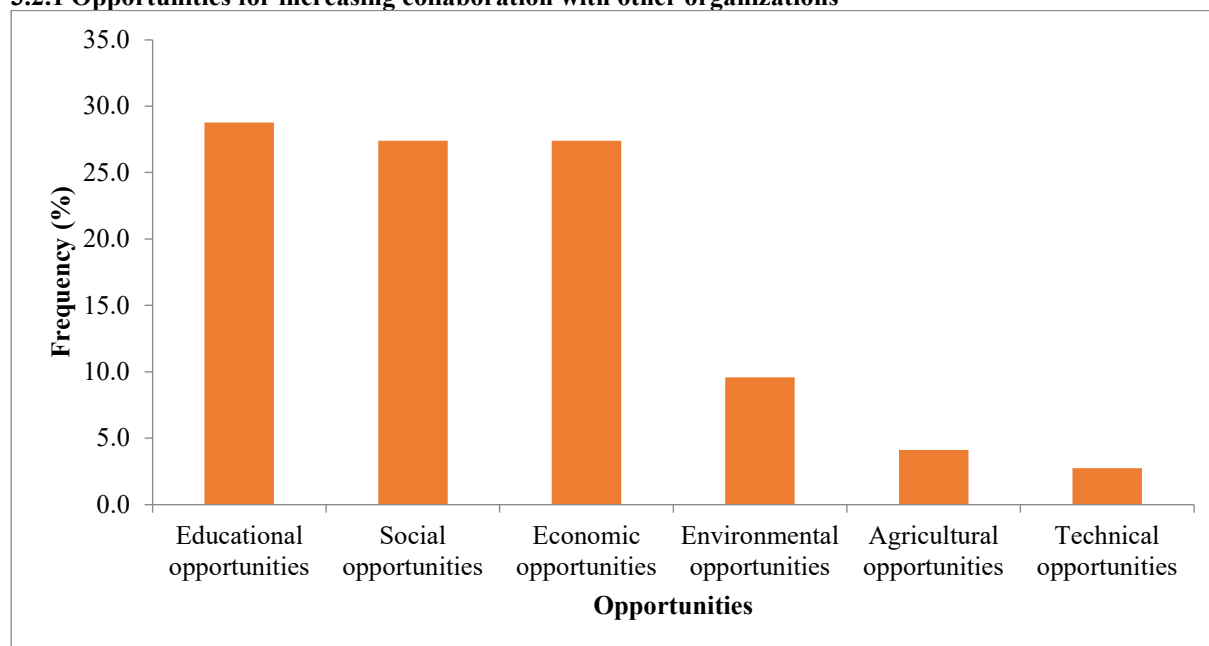
3.1.2 ENVIRONMENTAL AND SOCIAL ACTIVITIES INVOLVED IN GREEN PRACTICES

Environmental and social activities involved in promoting green practices	Frequency	Percentage
Land use activities	24	24.2
Tree related activities	21	21.2
Gender empowerment	16	16.2
Climate change mitigation and adaptation activities	9	9.1
Water provisioning, regulatory and supportive services	7	7.1
Soil improvement activities	6	6.1
Corporate social responsibility	4	4.0
Landscape enhancement	3	3.0
Conflict resolution	3	3.0
Recycling services	3	3.0
Bio energy activities	2	2.0
Infrastructure development	1	1.0
Total	99	100.0

Environmental and social activities which majority of the respondents were involved in to promote green economy practices were land use activities (24.2%), Tree related activities (21.2%), Gender empowerment (16.2%) and Climate change mitigation and adaptation activities (9.1%).

3.2 Opportunities and Constraints in Achieving Green Economy Development in Kenya

3.2.1 Opportunities for increasing collaboration with other organizations



There are various opportunities to increase collaboration with other organizations. These include technical, agricultural environmental, economic social and educational opportunities. Educational opportunities were the most popular among the respondents (28.8%), including social and economic opportunities (27.4% for both).

3.2.2 Resources for Green Economy

Resources that would help promote green economy in your organization	Frequency	Percentage
Technical support	30	29.7
Financing options to promote green economy	26	25.7
Information about specific actions to promote green economy	22	21.8
State-wide award program to recognize businesses that successfully promote green economy	16	15.8
Group creation	4	4.0
Education	3	3.0
Total	101	100.0

The most popular resource that would help in promoting green economy in an organization is technical support. Other resources such as financing options to promote green economy, information about specific actions, statewide award programs to recognize businesses are also popular. The least popular resource is education and

group creation.

3.2.3 Barriers/Challenges for Green Economy

Barriers faced in implementing green economy practices at your organization	Frequency	Percentage
Shortage of available training programs	28	21.2
Lack of information	25	18.9
Costs of implementation	24	18.2
Shortage of workers with knowledge or skills	22	16.7
Government policies/regulations	18	13.6
Economic conditions	15	11.4
Total	132	100.0

Majority of the respondents (21.2%) pointed out that shortage of available training programs is a barrier faced by most in implementing green economy practices at their organizations. Other barriers mentioned include economic conditions, government policies/ regulations, shortage of workers with knowledge or skills, cost of implementation, and lack of information.

3.2.4 Instruments being used to address challenges in implementing green economy activities

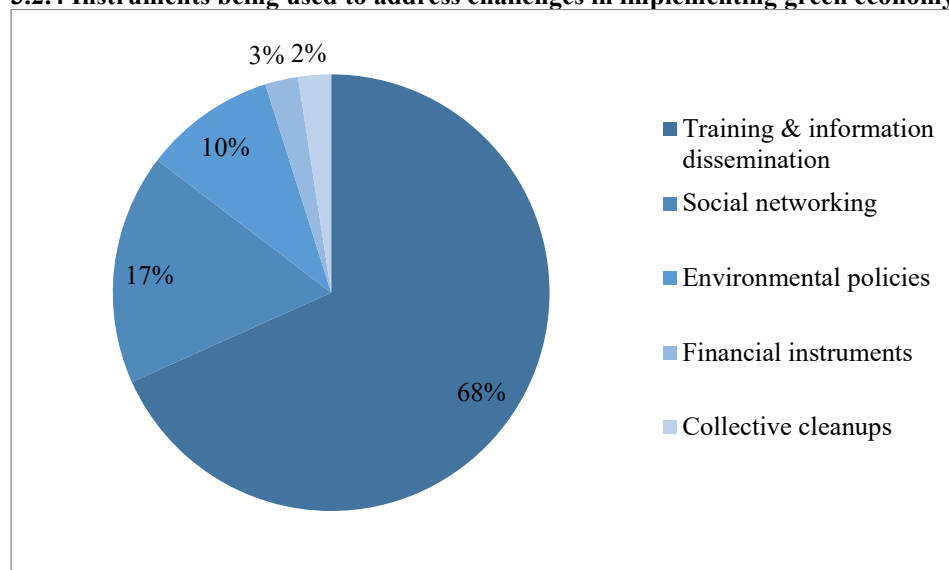
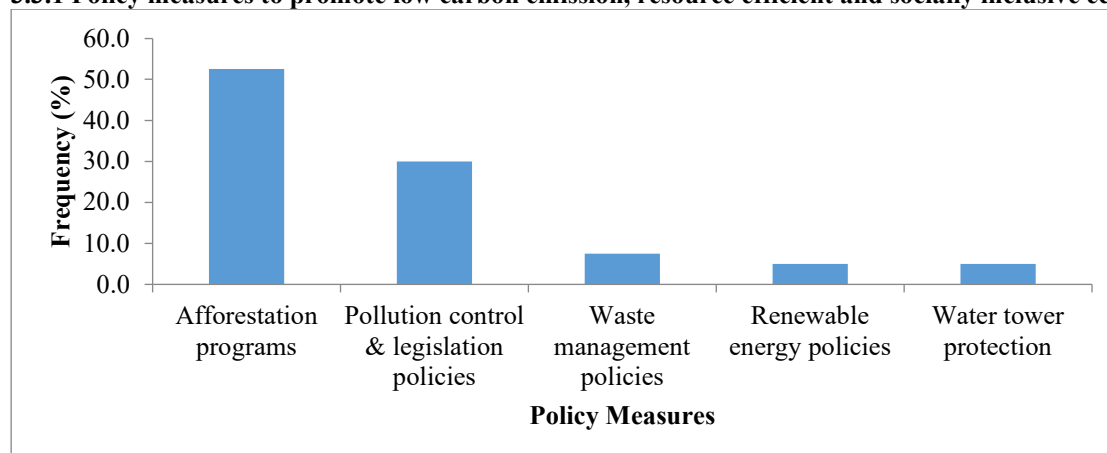


Figure 5

Majority of the respondents (68.3%) pointed out that training and information dissemination of green economy was the mostly used instrument for implementing the green economy activities. Other instruments such as social network, environmental policies, financial instruments and clean-ups were least popular among the respondents.

3.3 Impacts of Policy Interventions in Green Economy Development

3.3.1 Policy measures to promote low carbon emission, resource efficient and socially inclusive economy



Afforestation programs had the majority of respondents (52.5%) agreeing it to be a policy measure that will promote/ influence a low carbon emission, resource efficient and socially inclusive economy. Pollution control and legislation policies were also popular among the respondents with (30%) agreeing to it. Other policy measures

include water tower protection, renewable energy policies and waste management policies. However the latter were less popular among the respondents.

3.3.2 Responsibilities of citizens in terms of actions responding to green economy

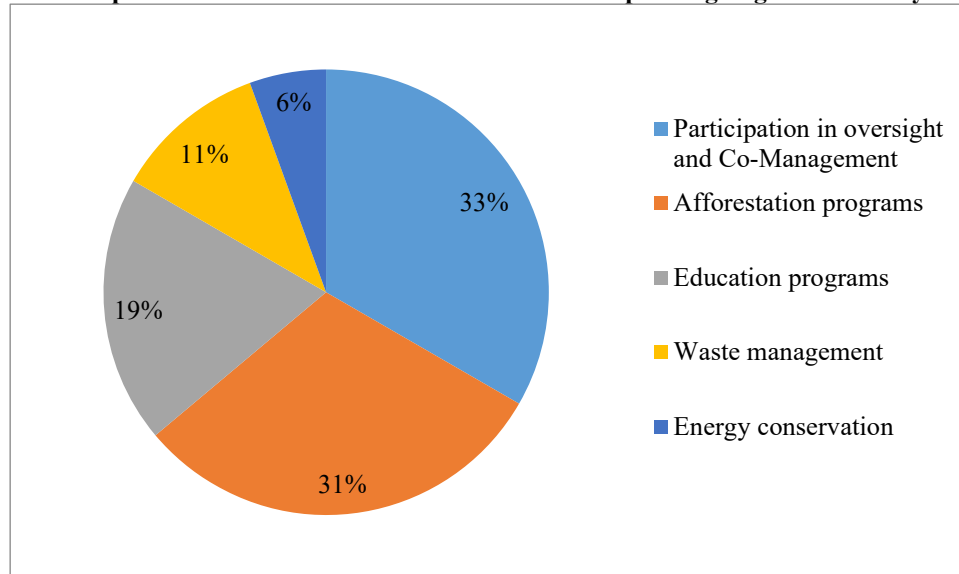
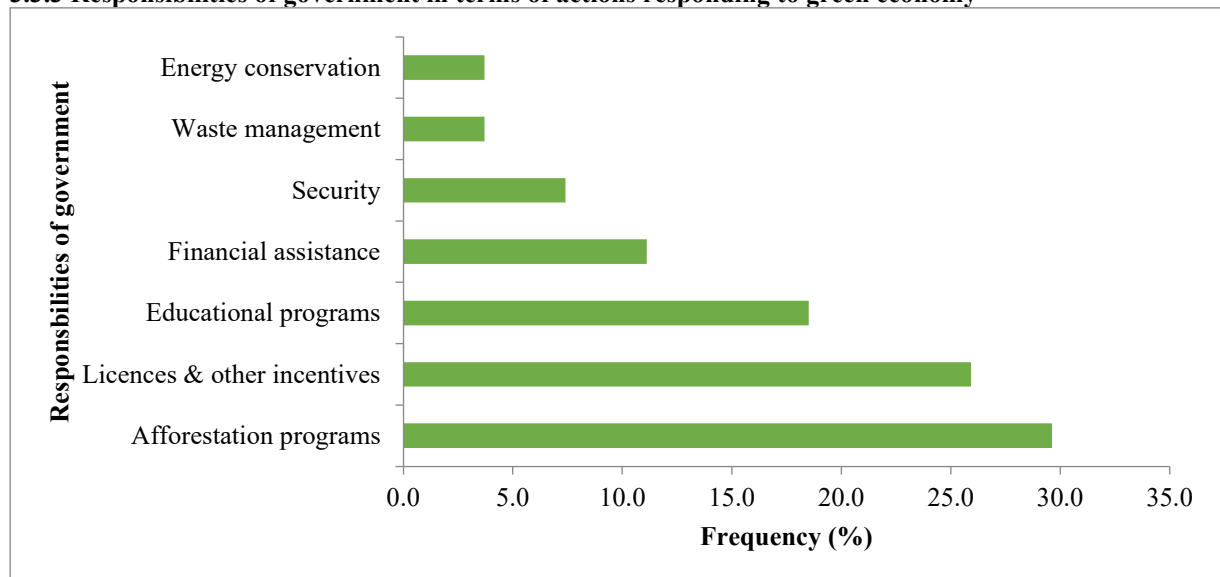


Figure 6

Majority of the respondents (33.3%) agree that participation in oversight and co-management programs is a responsibility of the citizen. other responsibilities of the citizens that arose include Afforestation programs, education programs, waste management and energy conservation.

3.3.3 Responsibilities of government in terms of actions responding to green economy



Majority of the respondents (29.6%) agree that Afforestation programs are the responsibility of the government. Other responsibilities of the government that arose include energy conservation, waste management, security, financial assistance, educational programs and licenses and other incentives.

3.3.4 Responsibilities of private sector in terms of actions responding to green economy

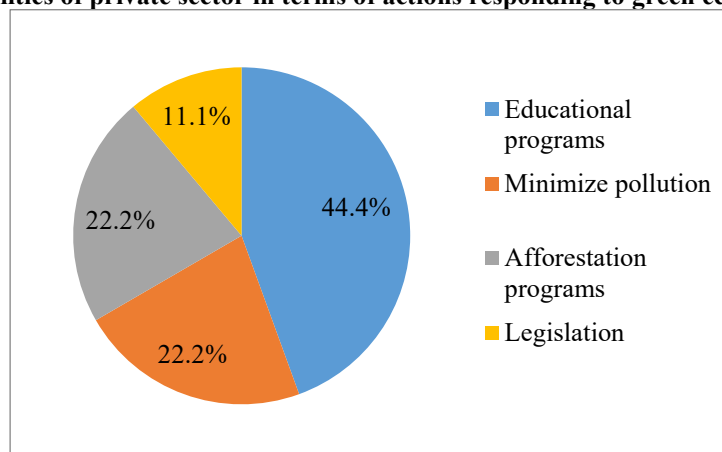


Figure 7

Among the various responsibilities of the private sector such as minimize pollution, Afforestation programs, legislation and educational programs, most respondents (44.4%) pointed out that educational programs as a key responsibility of the sector in response to green economy.

3.3.5 Policy tools for Green Economy

Policy tools and actions the government can use to enable green economy and creation of green jobs	Frequency	Percentage
Education & empowerment	22	52.4
Afforestation programs	7	16.7
Economic policies	6	14.3
Job creation	3	7.1
Enforce compliancy	2	4.8
Implementation of environmental laws	1	2.4
Solid waste management policies	1	2.4
Total	42	100.0

Education and empowerment had the most respondents (52.4%) point in it out as a policy tool / action the government can use to enable green economy and creation of green jobs. the other policy tools and actions were least popular among the respondents. They include solid waste management policies, implementation of environmental laws; enforce compliancy, job creation, economic policies and Afforestation programs.

4.0 Conclusion and Recommendations

The study concludes that globally and mostly in developing countries women are thought to contribute less than men towards Green economy since they don't hold management positions so it is paramount to develop policies that would assure a fuller role for women, including putting female empowerment at the Centre of development assistance programmes that aim to promote the green economy.

Farmers have the capacity to influence green economy development either positively or negatively. Farmers in CFAs and WRUAs are more informed in green economy practices hence they tend to contribute more to its achievement.

Training on environmental activities such as land use activities, tree related activities and Climate change mitigation and adaptation activities and promotion of skills such as pollution reduction and waste control minimization all the while maintaining activities such as resource conservation and infrastructural development will contribute to economic growth through environmental sustenance, income generation and job creation.

Organisational regulations such as *environmental benefits, Cost savings, community recognition and decentralization* and resources such as *technical support, financing options, information about specific actions and state-wide award programs to recognize businesses* put in place promote green economy practices will lead to benefits and opportunities to organisations which include technical, agricultural, environmental, economic social and educational opportunities

Policy measures put in place to promote green economy practices lead increased afforestation programs, Pollution control, water tower protection and legislation policies for renewable energy and waste management

Institutional training programs on green economy practices, establishment of stable financial instruments, establishment of environmental policies, creation of job opportunities, provision of income opportunities, establishment of stakeholder forums, social networking, promotion of good leadership and enhanced mitigation, information dissemination of green economy practices and adaptation measures against negative causes of climate change are important to development a low carbon emission, resource efficient and socially inclusive economy.

Data Availability

The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.

Conflicts of Interests

The authors declare that they have no conflict of interest

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