Bioeconomy Contributions to Uganda's Economic Growth and Policy Implications

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Introduction

- Bioeconomy is the knowledge-based production and use of biological resources to provide products, processes and services in all economic sectors within the frame a sustainable economic system
- Bioeconomy also encompasses the conversion of biological residues, by-products and side streams into value added products, such as food, feed, biobased products, services and bioenergy
- An important aspect of the bioeconomy is understanding the mechanisms and processes at the genetic, molecular, and genomic levels
- Agriculture, Forestry and Fisheries are the core sectors of Uganda's economy
- A number of institutions and policies on agriculture and natural resources are in place
- These policies concentrate mainly on regulation and enforcement
- They don't concentrate on addressing the critical issues to harness Uganda's Bioeconomy

Objectives

Main Objective

To examine the Bioeconomy contributions to Uganda's social, economic and environmental paradigms

Specific Objectives

1. To examine the contributions of the Bioeconomy to Uganda's economic growth and employment
2. To examine the contributions of the Bioeconomy to the Environment
3. To examine the Institutional and policy support to these contributions

Methods

Contributions of the Bioeconomy to Uganda's economic growth, employment and environment

Documentary review

- MAAIF
- MoWE
- UBOS
- MoFPED
- MoSTI
- Ministry of Tourism, Wildlife and Antiques
- Published Papers

Institutional and policy support to these contributions

Regulatory Impact Assessment

- Conducted consultative meetings in which stakeholder mapping was done
- Citizens, Innovators, MDAs, Development partners, Civil society, Media, Business, Private sector, Academia, Religious institutions, Researchers, Professional bodies and Political leaders
- A 5 day workshop was held to conduct the regulatory impact assessment.

Option selection

a. Do nothing by not taking any action/Maintaining the status quo
b. Enhancing awareness creation
c. Enhancing coordination
d. Enhancing implementation of existing frameworks
e. Mainstreaming into existing frameworks
f. Revision or amendments of the existing frameworks
g. Coming up with new Innovation Ideas to address the problems at hand
h. Drafting a new framework

Results

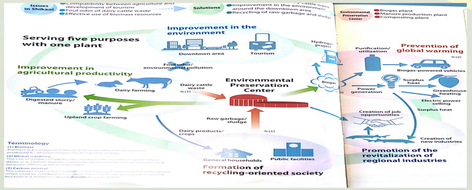
Contributions of the Bioeconomy to Uganda's economic growth and employment

- Agriculture, Forestry and Fisheries are the core sectors of Uganda's economy
- Agriculture, Forestry and Fisheries employed 64.3% of the working population in 2018/19 and contributed 21.9% of the GDP in current prices (20,625 of 128,499 billion shillings)
- Agricultural exports accounted to 48.5% of total exports in 2012/2019
- 83% of women are employed in agriculture as primary producers
- Agriculture is the catalyst behind most of the local agro-based industries in Uganda which contributes much to the country's exports
- The Fisheries sector contributed 2.1% of the national GDP and 13.1% to the agricultural GDP and employs 1.2 million people
- Fisheries also provides over 50% of high-quality animal protein to the population and generates over 150 million US$ in exports earnings and an equivalent of about 800 million US$ at fish landing sites
- Forests and forest products contributed 3.8% to the National GDP in 2018/2019
- Over 90% of the total energy resources used in Uganda is derived from fuel wood
- The Forest Department currently earns over Ug shs. 600 million a year from timber sales
- The value of Non-Wood Forest Products (NWFPs) is estimated at Ug shs. 66 billion per year
- The local use of NWFPs is estimated at Ug shs. 30,000 to 130,000 per household per year
- Uganda's tourism sector contributed 7.3% of GDP, foreign exchange earnings worth USD 1.45 billion and more than 600,000 jobs in 2017
- Tourism is currently Uganda's leading foreign exchange earner with US$1.45 billion in 2017
- The Uganda Wildlife Authority (UWA) received 304,882 visitors and collected revenue amounting to Ug shs 93,628,231,456 in financial year 2017/18

Contributions of the Bioeconomy to the Environment

- One of the main objectives of the Bioeconomy is to contribute to a more sustainable industry by the conservation of natural resources and by reduction in greenhouse gas emissions (GHG) and other pollutants

Fig 1: Using biotechnology to generate products and services that conserve the environment



Results

Institutional and policy support to these contributions

Table 1: Tallying of the options and shortlisting for further analysis

SN	Options	Score	First Rank
1.	Awareness creation and sensitization	17	1
2.	Enforcement	6	5
3.	Review existing frameworks	5	6
4.	innovation	15	2
5.	Coordination	10	4
6.	New Framework	13	3
7.	Mainstream	1	7

Options analysis

Table 2: Option selection

Selection criteria	OPTIONS				
	Coordination	Awareness creation and sensitization	New frameworks	Innovation	Do Nothing
Benefits	11	9	14	11	1
Rank	2	4	1	2	5
Costs	8	9	3	5	14
Rank	3	4	1	2	5
Positive impact	3	7	8	6	1
Rank	4	2	1	3	5
Negative impact	3	2	2	5	4
Rank	3	1	1	5	4
Implementation Rank	4	2	3	5	1
M&E Rank	1	3	2	4	5
Total	17	16	9	21	25
Overall Rank**	3	2	1	4	5

Conclusion

- The Bioeconomy has tremendous contributions to Uganda's economic growth, employment and the environment
- The Bioeconomy will contribute to the transformation of Uganda'seconomy to middle income status by 2040
- The National Bioeconomy Policy needs to be drafted and implemented
- The National Bioeconomy Strategy needs to be drafted and implemented

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