



**THE EAST AFRICAN REGIONAL
BIOECONOMY STRATEGY
2021/22–2031/32**



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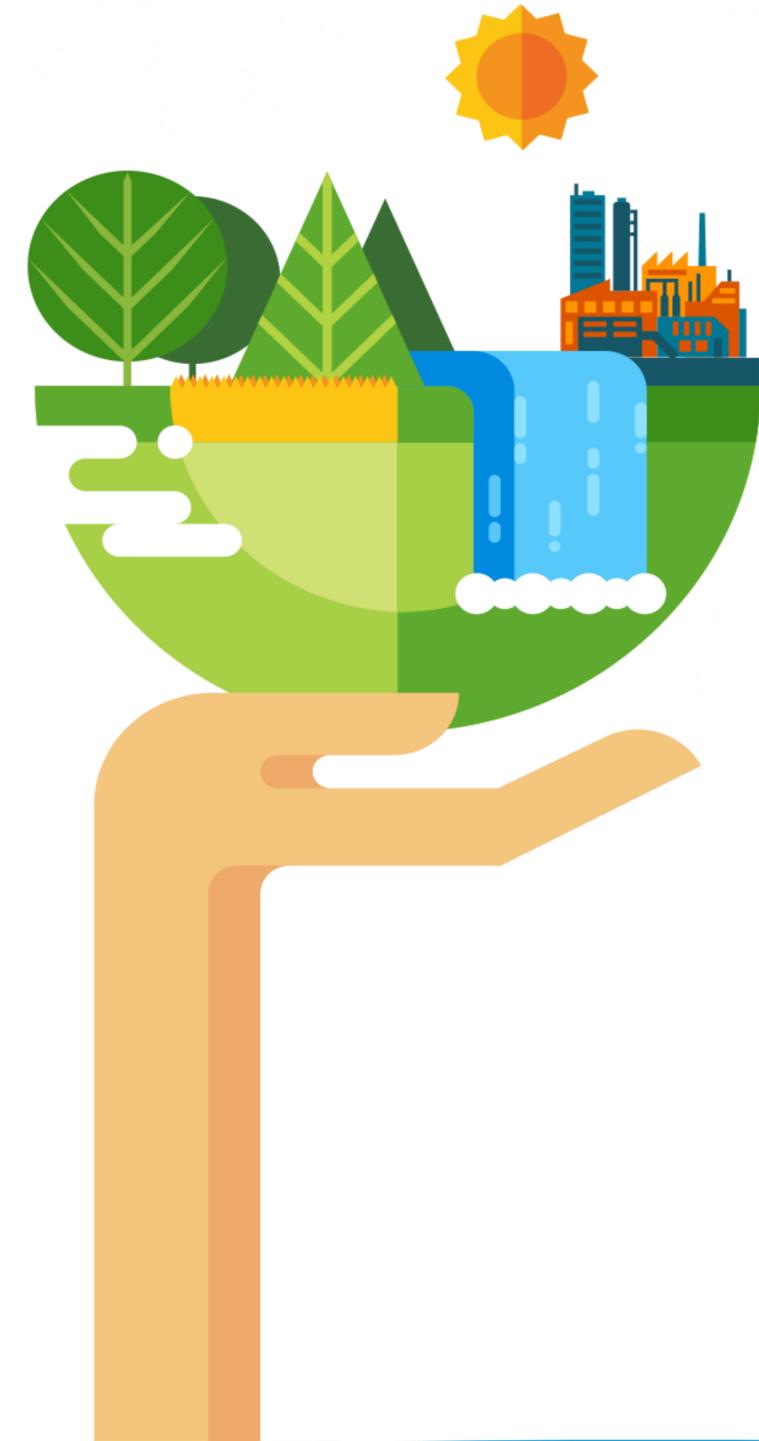
The Bioeconomy context

- Bioeconomy Development- An Opportunity for East Africa
- Bioeconomy in the Regional Context of East Africa
- Scope of the Bioeconomy Strategy and Guiding Principles

The East Africa Regional Bioeconomy Strategy

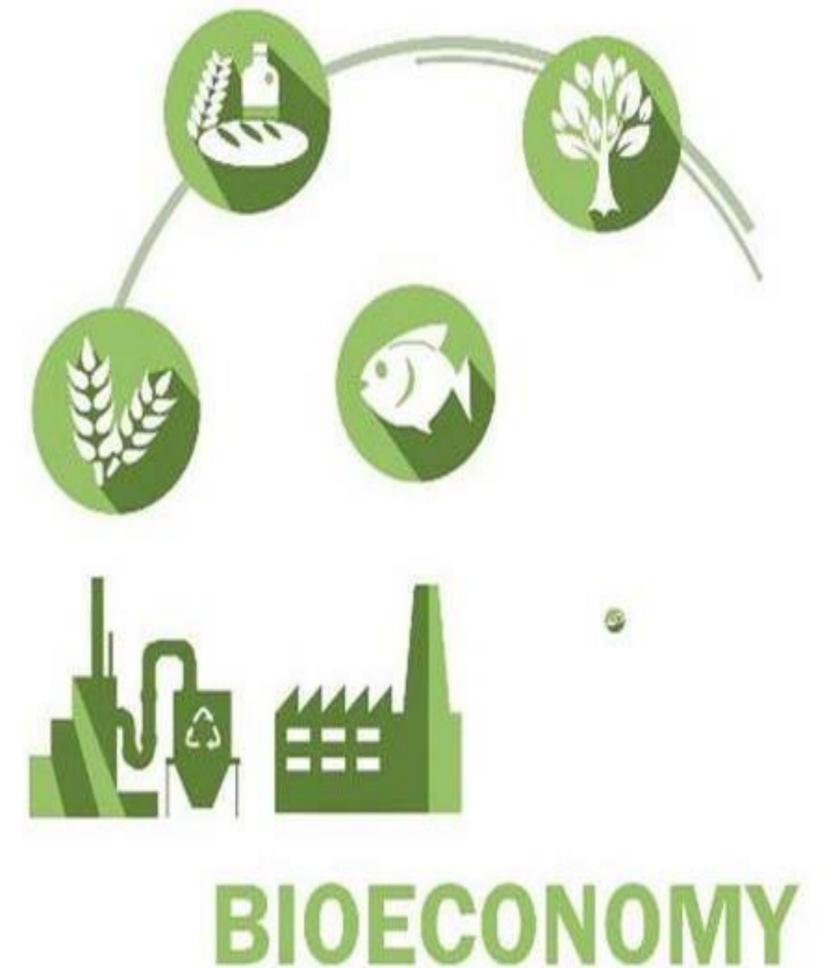
- Strategic Direction
- Vision
- Mission
- Overall Objectives
- Specific Objectives
- Strategic Thematic areas
- Key strategic operational enabling actions

Way forward on Implementation

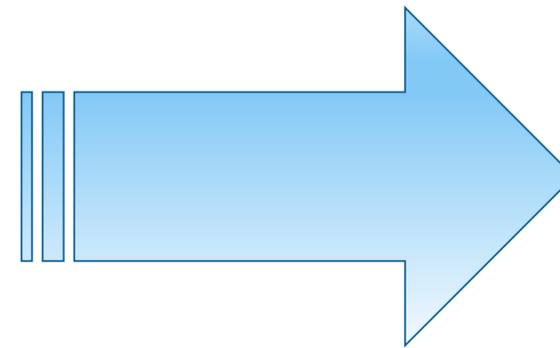


Bioeconomy

- Covers the production of **renewable biological resources** and their conversion (incl. waste streams) into **value-added products**, e.g. food, feed, pharmaceuticals, bio-energy.
- The priority is the **economic growth** achieved on the basis of traditional and new (emerging) industries based on bioresources
- The goal & tool is the creation & development of new markets & the increase in the competitiveness of the entire economy.



- All ecosystems on land and sea
- All **sectors & systems** that use / produce / process/ are driven by biological resources
- Sectors incl. food, health, energy & industrial goods
- Primary production systems – agriculture incl. grassland, forestry, aquaculture / fisheries
- Industry - Production of food, feed, wood & paper, fibres, clothes, medicines, fuels and bio-energy
- incl. waste/side streams
- Science-based & Innovation-driven beyond sectors



Hence need for one overarching strategy with **strategic choices** for sustained **economic growth** through the bioeconomy



The Bioeconomy strategy will provide the guidance needed for the optimal production & value addition of bioresources for improved economic growth

creating jobs **Adding more value to**

primary produce *generating wealth*

CONNECTING SMALLHOLDER FARMERS TO NEW BIOBASED VALUE CHAINS *Sustainable Industrialisation*

Regional competitiveness

Development of the EAC Regional Bioeconomy Strategy

- The BiSEA project funded by BA/icipe
- Country & Regional Level Consultations
- National Working Groups
- Regional Drafting Group
- Thematic Studies to support the drafting process
- Validation workshops (National & Regional)



Bioeconomy Development- An Opportunity for East Africa

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The bioeconomy in East Africa has significant potential to support several critical development goals and targets for the region, and will help deliver the following outcomes:



Sustainable industrialisation, job creation and green growth, revitalising bioprocessing, and biomass value chains in the region, and promoting circular economy production systems with reduced emissions



Improved food security through enhanced value chains and processing promoting a more secure and resilient food supply



Improved health using the biodiversity in the region to develop cost effective biobased production systems for various biopharmaceutical products

Bioeconomy Development- An Opportunity for East Africa

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The creation of new biobased products including biomaterials for construction, bio-inputs for agriculture, enzymes for industry, and biobased feedstocks (e.g., bio-fertilizers, bio-packaging) to substitute products derived from petrochemicals



Linking farmers and bio-entrepreneurs to market opportunities and to local, national, regional, and international markets



Creating new forms of clean sustainable modern bioenergy such as biofuels, for transportation and electricity generation from biowaste and industrial by-products



Protecting the environment through converting waste through converting waste, which today threatens ecosystems and freshwater resources, to useful products.

Bioeconomy in the Regional Context of East Africa 9

- Countries in East Africa have rich biodiversity and strong bio-resource production base.
- Over 30% of the region's GDP is directly attributed to agriculture and other bioeconomy-related sectors.
- The low degree of bioprocessing and value addition to primary produce
- The region has increasingly supported stronger research and innovation capabilities,

However,

- There has been insufficient development of industrial capacity relevant to the bioeconomy.
- Weak linkages between researchers, research institutions and industry, and funding
- Inadequate business incubation, financing resources and lack of venture capital
- Inadequate systems for standard setting, certification, and accreditation of products limits trade of biobased products

The above context underpins the need for a regional bioeconomy strategy. This Strategy builds upon existing national and regional STI policies and is aligned with expressed commitments to environmental sustainability



Scope of the Bioeconomy Strategy

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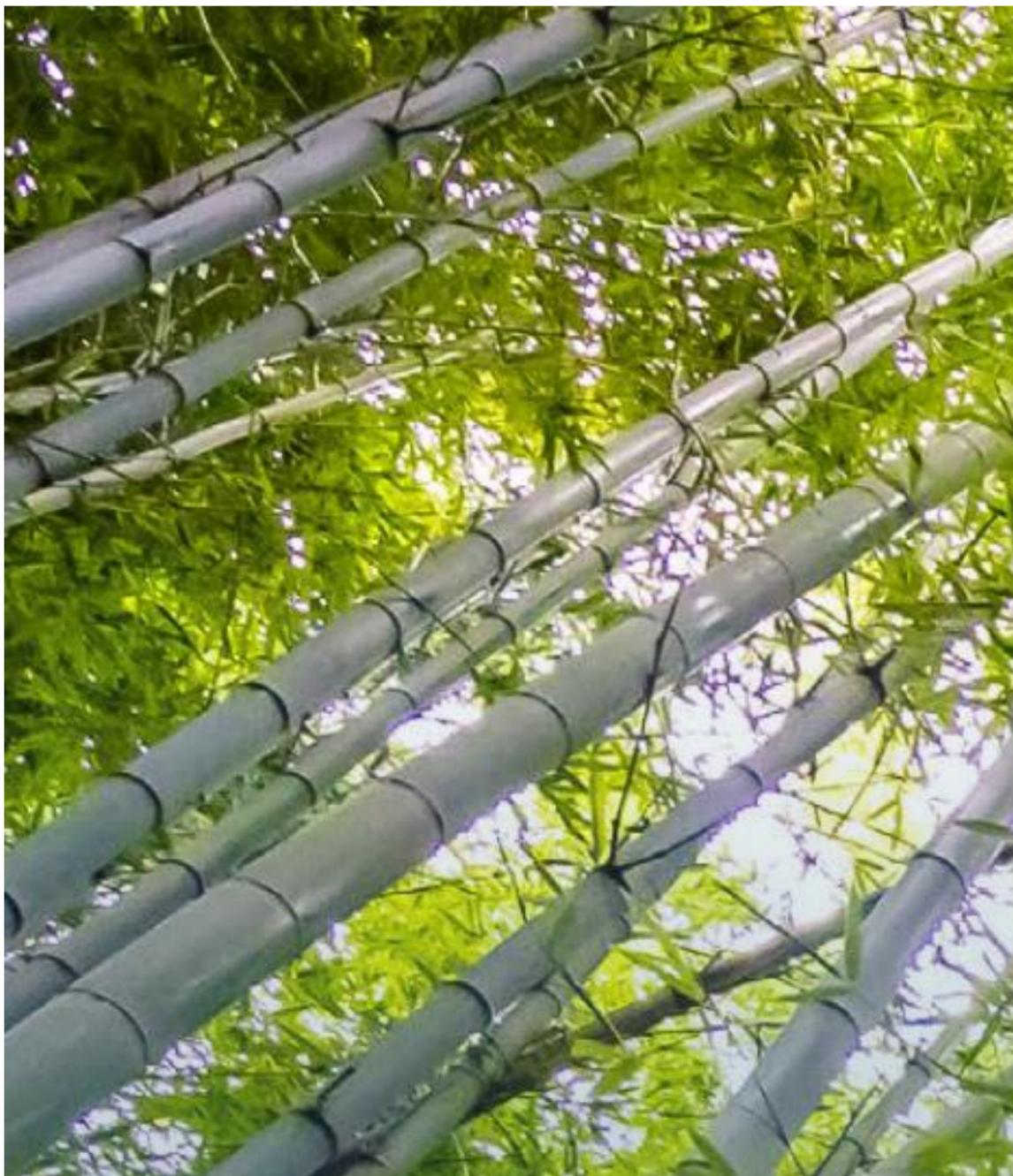


The Strategy focuses on the creation of new or improved biobased products that add value at local level and/or use resources in novel and innovative and sustainable ways.

Specifically, covers optimisation and innovative use of biomass and biological resources produced from agriculture, aquaculture, bioprospecting, and forestry

The scope of the Strategy includes alternative sources of food and feed, health and bioenergy services and ecosystem services.

Strategy Guiding Principles



The Strategy focuses on those interventions which:

- Have a high potential for impact in the region a high likelihood of success.
- Are based on sound scientific evidence and risk assessments
- Focus on actions that can be accomplished at the regional level, while facilitating those at national level that synergies with and amplify regional public goods
- Use the East African Community (EAC) as an opportunity to leverage relationships with other Regional Economic Communities
- Are '*trans-boundary*' in nature, such that successful pilot projects can be scaled up to multiple countries in the region
- Are economically and environmentally sustainable
- Are aligned with regional policies on intellectual property, access, and benefit sharing
- Support and strengthen existing and new regional policies and strategies

1. Food security and sustainable agriculture



2. Health and wellbeing



3. Biobased industrial development



4. Sustainable energy



Vision

A vibrant, inclusive and innovative bioeconomy contributing to sustainable economic growth and development in East Africa

Mission

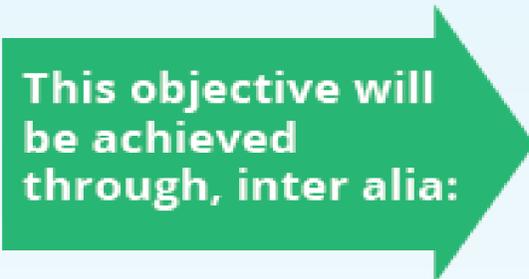
To catalyse and support innovative and sustainable use of bioresources as a major driver of inclusive economic growth and development in East Africa.



Overall Objective

The overall objective of this Strategy is to achieve:

Sustainable economic growth and job creation, making use of the region's bioresources to develop products in the areas of food and nutrition, health, biobased industrial products, and bio-energy, while contributing to an improved environment and climate change mitigation.



Specific objectives

Regional and international collaboration sharing knowledge and building capacity.

Promoting regional markets for biobased trade.

A harmonised regional approach to create structures for innovation and deployment of technologies and know-how for value addition to primary produce and biowaste.

Development of national bioeconomy strategies and policy agendas in the region.

Joint monitoring and information sharing of bioeconomy development, such as a regional Bioeconomy Observatory.

Strategic Thematic Areas

STRATEGIC THEMATIC AREA 1:

FOOD SECURITY AND SUSTAINABLE AGRICULTURE

The specific objective of this STA is to introduce new biobased technologies and solutions to strengthen food and feed production, ensuring food security. It has three KRAs:



Value addition to food crops, livestock, forestry, marine and aquatic resources and microbial products: To deliver economic growth and provide opportunities for smallholder farmers and SMEs by adding more value to primary produce and the use of agricultural residues.



Novel food and feed products: To produce a variety of novel and healthy food and feed products for growing local, regional and international markets.



Biobased agricultural inputs: To support and enhance sustainable agricultural production through the growth of bio-based agricultural inputs (e.g. biopesticides and bio-fertilizers) produced in the region.



Strategic Thematic Areas

STRATEGIC THEMATIC AREA 2:

HEALTH AND WELLBEING

The specific objective of this STA is to develop a biobased healthcare sector contributing towards a healthy population with improved well-being, addressing regional priorities and building on indigenous knowledge and practices. It has three KRAs:



Biobased pharmaceuticals: To strengthen research, development and innovation capabilities to screen for and manufacture active pharmaceutical ingredients, biopharmaceuticals, diagnostics and vaccines targeting key diseases in the region.



Biobased traditional medicines: To promote indigenous knowledge in traditional medicines through the identification of available biological resources in the region with verifiable and validated health benefits, and to understand the active ingredients involved.



Bio-based cosmetics and well-being products: To develop an East African based personal care industry, basing production on local and regional bioresources and targeting expanding regional and international niche markets. Such production will be based on fair trade values while protecting and sustainably using the biodiversity of the region.



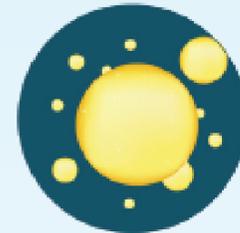
STRATEGIC THEMATIC AREA 3:

BIOBASED INDUSTRIAL DEVELOPMENT

The specific objective of this STA is to develop industries that stimulate sustainable economic growth and add value to under-utilised renewable resources in the region. It has five KRAs:



Biobased and biodegradable packaging materials: To establish a manufacturing base for standardised biopackaging materials, together with appropriate regulatory systems and infrastructure.



Bioprocessing enzymes: To develop enzymes for industrial applications, based on the region's microbial biodiversity.



Biobased construction materials: To transform the local construction industry into one that is low carbon and climate smart, and based on locally produced renewable building materials.



Biobased textile fibres: To achieve a more productive and sustainable biobased fibre industry, complemented by the production of a range of textile fibres generated from local agro-waste materials.



Renewable bio-based oils: To develop an industry based on sustainable production of renewable oils derived from the bioresources of the region.



STRATEGIC THEMATIC AREA 4:

SUSTAINABLE ENERGY

The goal of this STA is to develop a range of bioenergy products for both household and industrial purposes. It has three KRAs:



Biomass briquettes and pellets as alternative to charcoal and firewood: Promoting initiatives in bioenergy briquette and pellet production from waste materials to substantially reduce the unsustainable use of wood fuel.



Production of biogas from organic waste: Stimulating and support uptake of biogas technologies in the region for household and industrial use.



Advanced biofuels: Supporting the research and development of biofuels produced from lignocellulosic materials and algae.



a) Enabling policy and regulations environment

Action required: Policy makers should create an enabling policy environment in East Africa for the emergence of bioeconomy as a major driver for environmentally sustainable and inclusive economic development.

b) Financing.

Action required: Facilitate access to appropriate financing to support implementation of priority strategic initiatives that deliver or catalyse the delivery of regional bioeconomy outcomes and impacts.

c) Capacity development.

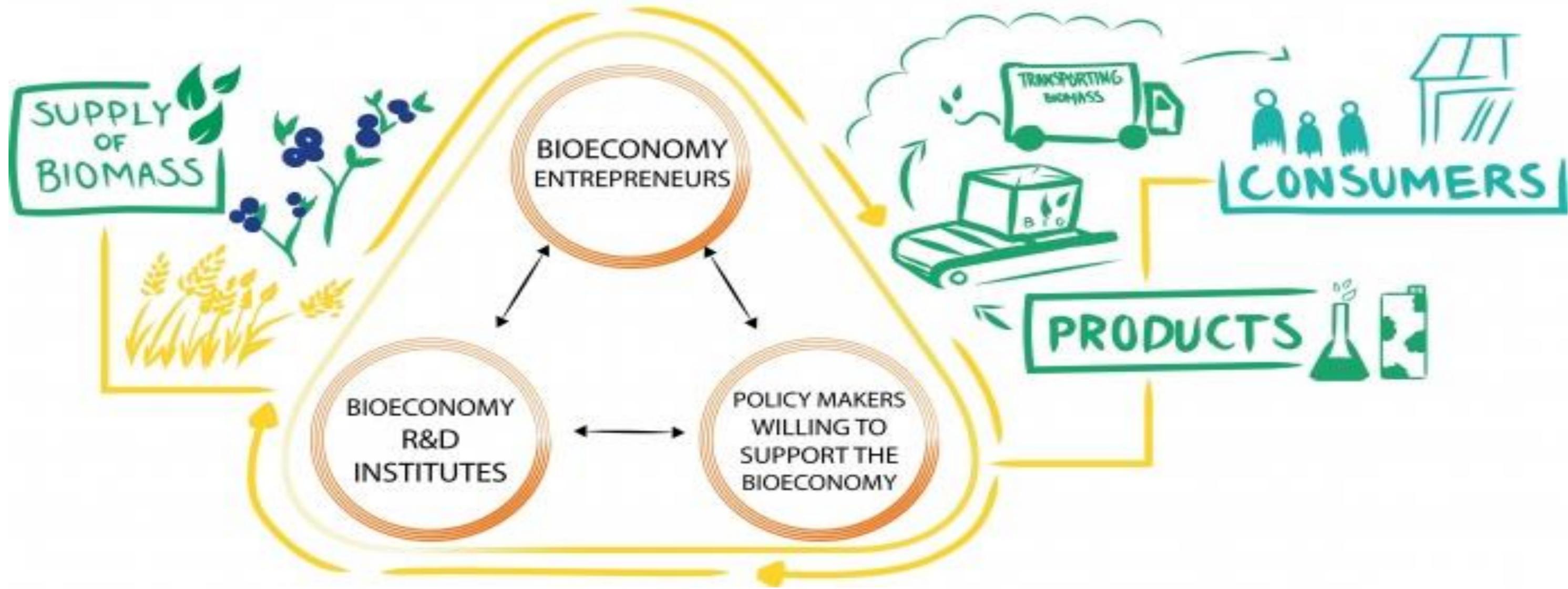
Action required: Build human and infrastructural capacity for research, entrepreneurship and business development required to drive strong bioeconomy value chains in the region.

d) **Effective Partnerships and collaborations**

Action required: *The EAC must provide leadership and support to the development and deployment of well-coordinated, functional innovative partnerships and collaborations at national, regional, continental, and global levels needed to create a thriving and sustainable bioeconomy across East Africa.*

e) **Effective leadership and communication**

Action required: *To build an understanding amongst the key actors and the general population of the region about the concept of a bioeconomy, the need for its development in the region, and its contribution to the Sustainable Development Goals and combatting climate change.*



In order to realise the promises of a modern bioeconomy, countries in the region need to develop an enabling environment, where strategic capacity building, partnerships, business incubation, financing mechanisms and supportive policies are key.

Regional Bioeconomy Strategy Implementation



National Bioeconomy Strategies - where detailed action plans can be developed that are relevant and appropriate for each country in the region



EAST AFRICAN COMMUNITY
Regional Bioeconomy Portal



Bioeconomy Observatory knowledge sharing Portal- that provides a regional open access repository for bio-economy data and information.



2nd Eastern Africa
Bioeconomy Conference

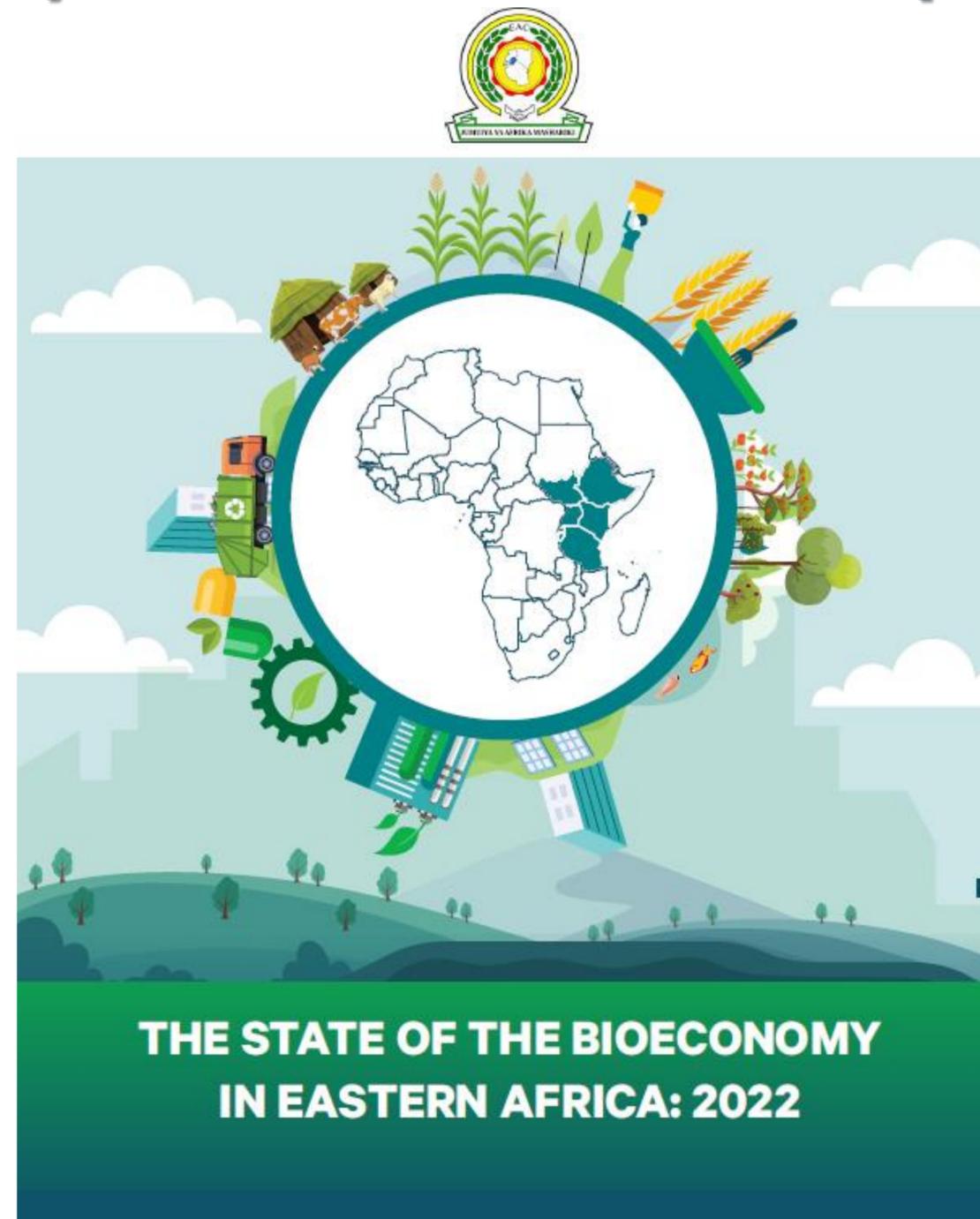
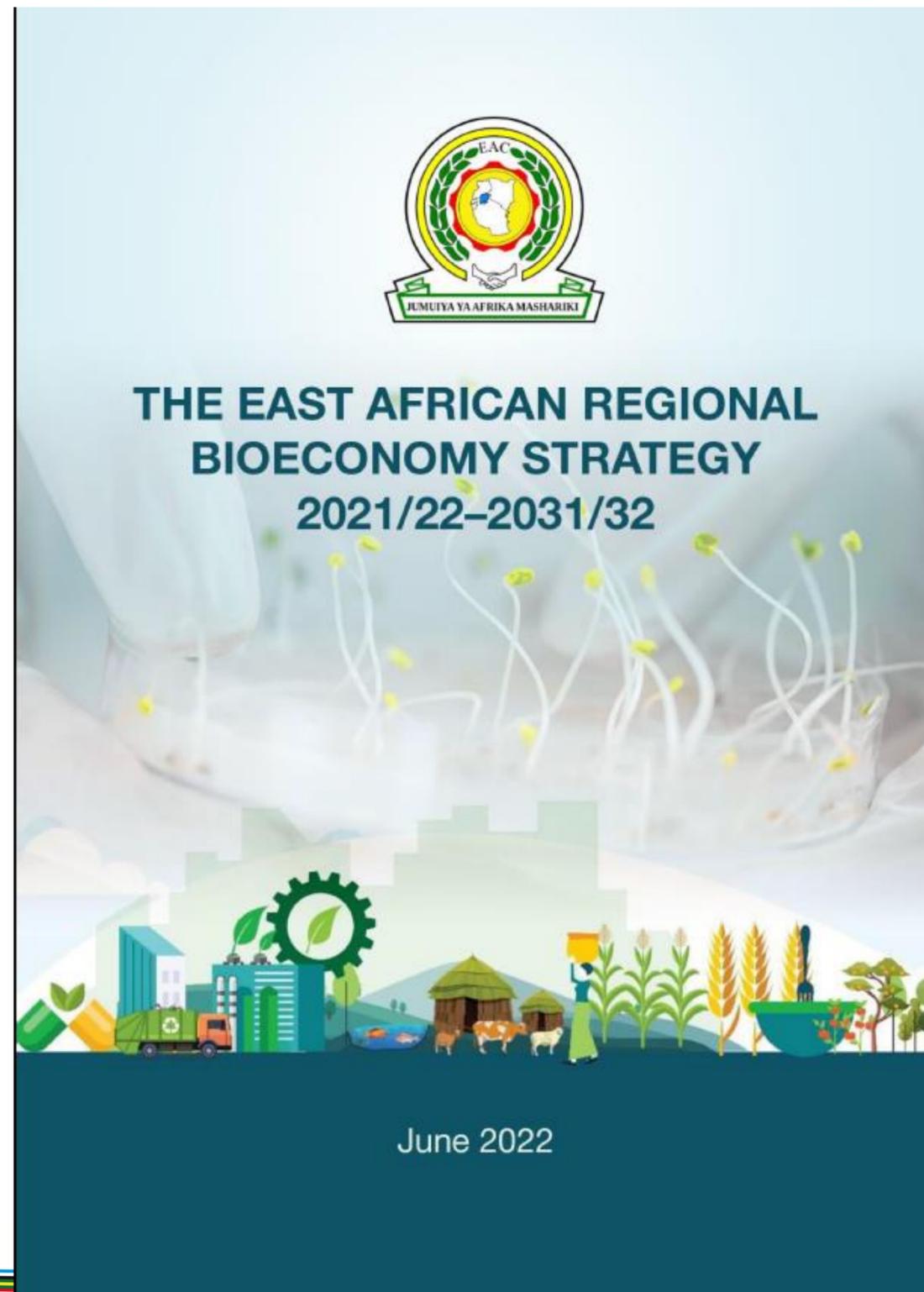
Bioeconomy Regional Conferences- Increased awareness of stakeholders on bioeconomy, enhanced Stakeholders' commitment and strengthened coordination of bioeconomy initiatives.



Bioeconomy Regional Status report- which provides the latest scientific evidence of the status of the bioeconomy in the region.



Launch of the Regional Bioeconomy Strategy & State of the Bioeconomy in Eastern Africa Report



Thank you
for
listening!

