CONCEPT NOTE:

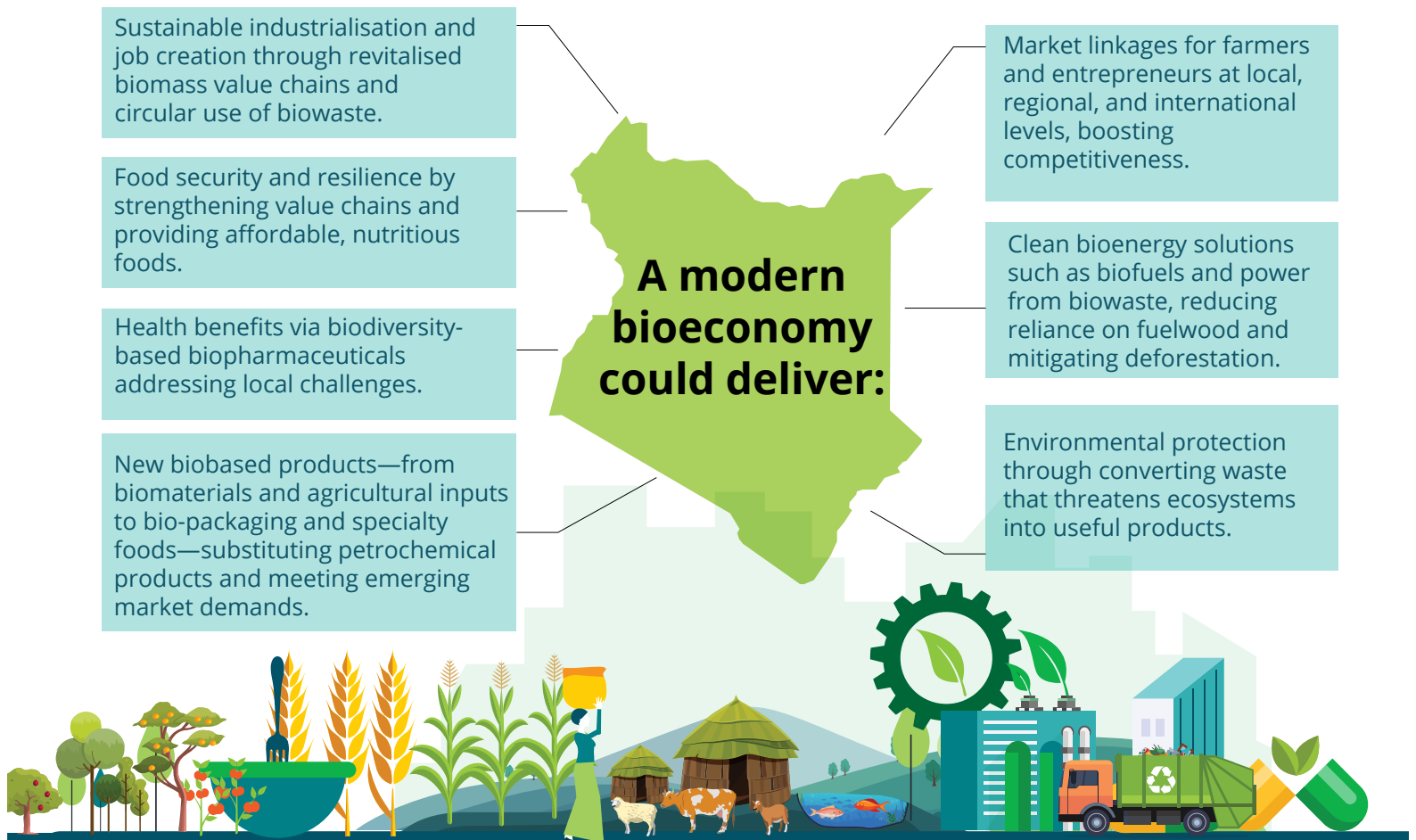
Why Kenya Should Pursue Bioeconomy Growth and Roadmaps

The Promises of Modern Bioeconomies

Over the past two decades, the **bioeconomy** has gained global recognition as a driver of sustainable economic transformation. It can be defined as the **knowledge-based use of biological resources, processes, and principles** to provide goods and services across sectors. Rooted in innovation, it regenerates renewable resources while creating opportunities for local business development, climate action, and biobased economic growth. In doing so**, it generates business opportunities, jobs, safeguards livelihoods, and strengthens future food and health security—offering major development potential for countries such as Kenya.** A central feature of the bioeconomy is the application of science, knowledge, and innovation not only to food, feed, fibre, and fuel but also to a wide range of agro-industrial a nd high-value products including biowaste. By focusing on value addition, farmers, value chain actors and bioentrepreneurs can earn more from processed products than from raw commodities. Just as importantly, the bioeconomy seeks to maximise the use of all parts of biological resources, including waste, turning them into valuable inputs. In short, a modern bioeconomy is a foundation for green growth and job creation, grounded in renewable resources, resilient ecosystems, biowaste circularity, and efficient biomass production.

Bioeconomy Development – An Opportunity for Kenya and Kenyan biobased companies

In Kenya, over 40% of the population relies on biological resources for food, energy, and medicine, while agriculture contributes more than 30% of GDP. The country has rich biodiversity and a strong bioresource base, but limited application of modern technologies and bioprocessing has constrained value addition and economic growth. The low level of bioprocessing—using biological systems to turn raw produce and waste into higher-value products—means Kenya and Eastern Africa have yet to unlock the full potential of their bioresources.



The SEI ABDK project

Stockholm Environment Institute (SEI) is implementing a Swedish International Development Cooperation Agency(Sida) supported project with the title "Advancing Bioeconomy Development in Kenya (ABDK)" with a set activities aimed at supporting partnership building between Swedish and Kenyan actors in pursuing an industrialization, modernization and scaling up of the bioeconomy in Kenya with lessons for the broader East Africa region. Some of the key ABDK interventions are

- Map bioeconomy private sector actors and agripreneurs in Kenya and Sweden
- Develop bioeconomy roadmaps for different Kenyan bioeconomy actor clusters
- Promote collaboration& technology exchange between Sweden& Kenya bioeconomy practitioners

A vital part of the ABDK project is to arrange roadmapping exercises with different bioeconomy clusters and use these roadmaps and different clusters platforms to connect to Swedish potential business collaborators supporting B2B collaboration with Kenyan MSME bioeconomy enterprises and Swedish Bioeconomy businesses. Kenya Bioeconomy status report "Advancing the Kenyan Bioeconomy report)

Cluster development and roadmapping are useful for Kenyan biobased companies

The Development of biobased business clusters give Kenyan micro, small, medium biobased enterpises (MSMEs) collective strength, while roadmaps provide strategic direction. Together, they help Kenyan biobased companies grow faster, innovate more effectively, scale up their businesses and attract international business partners. In more detail they contribute to:

Strengthening Collaboration & Networks

- Clusters bring together companies, researchers, investors, entrepreneurs creating stronger local innovation ecosystems and enable SMEs and startups to access partners, shared facilities, and joint projects that would be difficult to achieve alone.

Reducing Costs & Sharing Resources

- Shared infrastructure (e.g., labs, pilot plants, logistics facilities) reduces individual investment burdens., where joint marketing/ awareness raising can lower costs and improve market reach.

Building Market Visibility & Credibility

- A cluster gives companies more visibility, helping them attract investment and government support. Being part of a recognized cluster signals reliability and innovation capacity to potential partners and investors.

Influencing Policy & Regulation

- Collective voices are stronger than individual ones. Clusters help companies articulate common needs to government (e.g., standards, incentives, trade policies).Roadmaps provide evidence-based priorities that can shape supportive policies and guide interventions.

Strategic Planning & Risk Reduction

- Roadmapping helps companies understand long-term trends in technology, markets, and regulation and clarifies short-, medium-, and long-term actions, making investments less risky.

Access to Finance & Investment

- Investors prefer organized, clustered sectors with clear growth pathways. Roadmaps highlight opportunities and de-risk investments by showing credible sector trajectories.

Innovation & Knowledge Exchange

- Clusters encourage knowledge exchange between universities, startups, and industry. Roadmaps help identify gaps in R&D, training, and technology transfer that clusters can fill.

International Positioning

- Bioeconomy is a global trend; clusters and roadmaps allow Kenyan companies to align with international standards, attract partnerships, and integrate into global value chains.

The ABDK Micro, Small, Medium Enterprise (MSME) Clusters

ABDK Cluster 1

Value addition to Value addition to primary produce and circular food systems

MSMEs involved in agri-processing, novel food development, aquaculture and insect-based feed transforming primary agricultural, marine, and insect-based resources into higher-value products involving actors such as Prosoya, Organi Ltd, BSF InsectiPro, and the Avocado private sector

ABDK Cluster 2

Biobased agricultural inputs

MSMEs producing environmentally sustainable inputs for agriculture such as biofertilizers, biopesticides, biostimulants. microbial soil enhancers other regenerative agricultural inputs. Involving actors such as Real IPM, Osho Chemicals, and Koppert Kenya

ABDK Cluster 3

Biobased industrial development.

MSMEs producing alternatives to plastic, such as biodegradable packaging made from wood fiber, water hyacinth and biowaste. MSMEs producing developing building materials from local, renewable resources such as bamboo, treated wood, or biocomposites involving actors such Fibertext, HyaPak, Eco packaging Kenya, Kenyan Woodlife Group,

ABDK Cluster 4

Sustainable bioenergy

MSMEs producing clean energy solutions from biomass and biowaste producing biobriquettes, biogas, and biofuels. Involving actors such Sanivation, Koko Networks, and Biojoule

For more information about the ABDK project, please visit

https://www.sei.org/events/kenya-sweden-bioeconomy-business-and-innovation-fair/.