

## **Advancing bioinnovations for a sustainable bioeconomy in Africa: Opportunities and implications for future growth**

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Currently, bioeconomy is defined and best understood in the context of its application, although several attempts are being made to arrive at an internationally accepted definition. In the African context, bioeconomy is often associated with the use of scientific knowledge to add social and economic value to biological resources in a sustainable way. Understood this way, bioeconomy becomes synonymous with advancement in the chemical, engineering and biological sciences in a way that promotes an economic system that is driven by circular and renewable production and consumption. Bioeconomy evolved in Africa with initial discussions on conservation, access to and benefit sharing of genetic resources in the early 1990s. Later, initiatives were introduced that built capacity for biotechnology (and more broadly biosciences) in the continent in the 2000s. When the wave on innovation began sweeping through the continent around 2010, the idea of bioscience innovation systems was nurtured, and soon after opportunities for biological innovations started to emerge. This evolution over a 20-year horizon positions Africa to advance its bio innovation capabilities and develop competitive sustainable businesses of tomorrow that use the continent's rich biodiversity to provide climate resilient solutions for farming, biologically based alternatives to fossil fuel products, and healthier and safer alternatives for food, housing, and medicines. Taking advantage of the global advancements of bioeconomy development, Africa should already position itself to not only develop sustainable bioinnovations, but also have a clear strategy of linking them to the rest of the world given its comparative advantage in biodiversity richness and arable land. These issues and their implications for innovation collaboration, economic growth, and sustainable development in the continent are discussed in this paper.