



Solidarity

Equality

Sustainability

FINANCING THE BIOECONOMY IN SADC COUNTRIES

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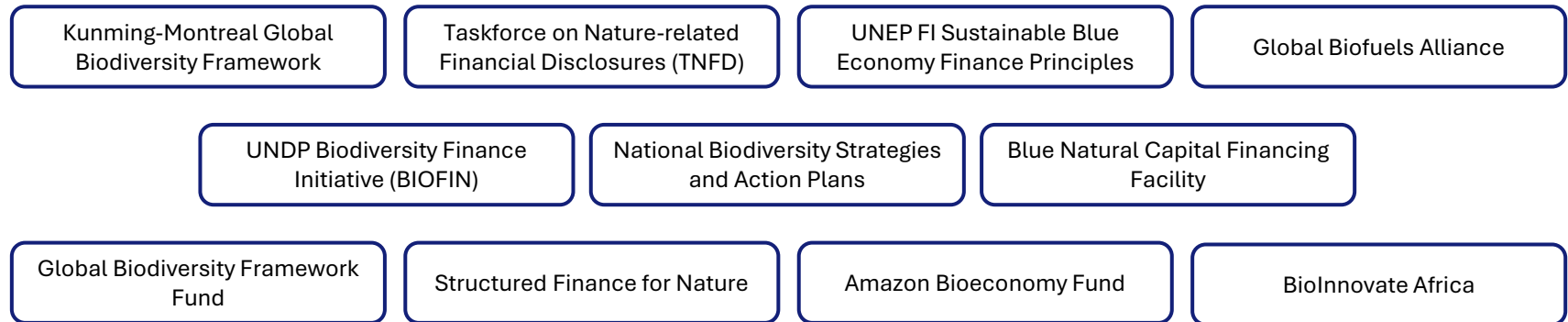
GIB MEETING

Department of International Relations and Cooperation,

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GLOBAL FRAMEWORKS & INITIATIVES

Key bioeconomy financing frameworks and initiatives



Nature-intensive bioeconomy

Advanced bioeconomy

High-tech bioeconomy

Traditional finance instruments

Tax and subsidies

Grants

Commercial debt

Capacity building assistance

Public-private partnerships

Innovative finance instruments

Thematic bonds

Blended finance

Nature markets

Risk-sharing mechanisms

Innovative and impact funds

POLICY & REGULATORY FRAMEWORKS

Regional frameworks: Limited regional cooperation

SADC Business Council
Fosters PPPs, leverage Compendium of SADC Investment Projects

Protocol on Finance and Investment (2006)
Signed by 14 SADC member states, harmonises financial policies

	Nature-intensive bioeconomy	Advanced bioeconomy	High-tech bioeconomy
Policies	<p>South Africa National Biodiversity Economy Strategy</p> <p>Botswana Tourism Policy (1990, Revised 2021)</p> <p>Zambia National Forest Policy 2014</p> <p>Lesotho Climate Smart Agriculture Investment Plan</p>	<p>Mozambique Strategy for New and Renewable Development 2011–2025</p> <p>Tanzania Guidelines for sustainable liquid biofuels development</p> <p>South Africa Biofuels Industrial Strategy, 2007</p> <p>Malawi National Energy Policy (2018)</p>	<p>Lesotho Drug of Abuse (Cannabis) Regulations Act of 2018</p> <p>Zimbabwe Dangerous Drugs (Production of Cannabis for Medicinal and Scientific Use) Regulations, 2018</p> <p>Tanzania National Biotechnology Policy (2010)</p>

Policy & regulatory challenges: A fragmented landscape

Policy inconsistency
Varying definitions and overlapping mandates

Uneven resource allocation
Investment focus on quick returns, and financing disaggregated across sectors

Lack of dedicated bioeconomy financing policies
Only South Africa and Namibia are exceptions

FINANCING LANDSCAPE

Kind	Sectors	Key trends	Narrative	Implication
Nature intensive bioeconomy	Wildlife economy	A growing recognition of wildlife as a viable economic asset, particularly in regions like Botswana, Zambia, Zimbabwe, and the Greater Kruger Area.	Wildlife lodges and ecotourism infrastructure are being developed to support conservation while generating income for local communities.	Markets are increasingly valuing biodiversity, unlocking blended finance options for conservation-related development.
	Sustainable agriculture	Leveraging underused agricultural land (notably 13% of it) in countries like Malawi, Mozambique, and Zambia.	Nature-based agriculture is framed as a path toward resilience and rural development.	There is a shift from aid-based to results-based investment, with an emphasis on soil health, climate adaptation, and employment.
Advanced bioeconomy	Bio-based products	Emerging industries around products like hemp, macadamia nuts, and pineapple for textiles, packaging, and other commercial applications.	Nature is not just a conservation issue but a source of high-value green materials.	Governments and donors are catalysing private sector interest in green industrialisation.
Hi-tech bioeconomy	Biotechnology	Development of CBD, phytomedicine, and plant-based biotechnologies in South Africa, Zimbabwe, and Lesotho.	Biodiversity is being repositioned as a bioeconomic resource.	This is a frontier sector with high growth potential if regulatory frameworks and benefit-sharing models are well designed.

FINANCING LANDSCAPE

Sector-wise roles

Public sector participation

Govt Budgets & SOEs - Support biotech, agro-processing, conservation (e.g., South Africa)

Development Finance - AfDB's US \$50.9 million Zambia Aquaculture Project (89% loan-based)

International Donors - USAID, GEF, World Bank fund CSA, wildlife, community forestry

Conservation Trusts & PPPs - Gorongosa Park, Mozambique – restoration via blended finance

Infrastructure & R&D Support - Public funds used to catalyse sustainable agriculture & innovation

Private sector participation

Impact Investors - Focus on sustainable agriculture, ecotourism, and climate-linked sectors

Commercial Investors - Capital in timber, nutraceuticals, and agro-enterprises

Venture Capital (nascent) - South Africa leads in biotech & bio-material startups

Community & Local Finance - Cooperatives, microfinance in beekeeping, agroforestry (FAO)

Funding Gaps Remain - Green startups struggle to scale due to risk & capital barriers

FINANCING CHALLENGES

Challenges in bioeconomy financing

Access to funding
Limited access to diverse and sustainable financing hinders growth and scalability of bioeconomy enterprises

Regulatory uncertainty
Frequent policy changes and unclear regulations increase risk and deter investment

Market conditions and scale
Limited market access, low local demand, and price volatility constrain the growth and profitability of bio-based enterprises

Macroeconomic risks
Climate and currency volatility heighten investment risks and hinder sector growth

	Nature-intensive bioeconomy	Advanced bioeconomy	High-tech bioeconomy
Sectoral challenges	<ul style="list-style-type: none"> Over-reliance on tourism revenue for conservation and local economies Inequitable benefit sharing in community conservancies Lack of scalable financing for small-scale ecotrader (e.g. honey, indigenous flora) Relevant initiatives exist under sectors like agriculture and wildlife tourism, but are not explicitly framed as part of the bioeconomy 	<ul style="list-style-type: none"> Limited biofuel infrastructure in rural areas Slow implementation of biofuel-related policies Biofuel projects often compete with food security priorities 	<ul style="list-style-type: none"> Regulatory ambiguity around bioeconomy practices Limited local research and development (R&D) capacity No standardised benefit-sharing mechanisms for indigenous knowledge systems Very slow development and implementation of supportive frameworks

CAPITAL STACK

Lower risk, higher
risk appetite

Top of the stack

Private equity
Venture capital
Project sponsorship

Sectors

- Wildlife-based ecotourism
- Biofuels (macademia, solaris, moringa feedstocks)
- Sustainable textiles (hemp, pineapple, cactus)

Middle of the stack

Debt
Impact funds
Convertible debt

Sectors

- Sustainable agriculture (smallholder, regenerative)
- Agroforestry
- Bioplastics and bio-packaging
- Biomaterials (e.g. composites, insulation)
- CBD oils and nutraceuticals
- Pharmaceuticals (biotech, vaccines, health R&D)

Bottom of the stack

Grants
Concessional loans
Senior debt

Sectors

- IPLC medicinal flora-based biotech
- Ecotrader (honey, edible insects, flora etc.,)
- Sustainable aquaculture (fish farming)

Higher risk, lower
risk appetite

EMERGING OPPORTUNITIES

Sectors	Emerging opportunities	Innovative financing mechanisms
Nature-intensive bioeconomy		
Wildlife economy	<ul style="list-style-type: none"> • Ecotourism – e.g. high-end lodges, wildlife estates, and nature-based experiences • Eco trade – e.g. honey production, sustainable harvesting of edible insects, or indigenous flower cultivation 	<ul style="list-style-type: none"> • Rhino Bond • Sustainable finance mechanisms • Tax incentives
Sustainable agriculture	<ul style="list-style-type: none"> • Regenerative practices • Sustainable fish farming • Agroforestry 	<ul style="list-style-type: none"> • OPEC Fund for International Development • Aquaculture Technical, Vocational, and Entrepreneurship Training for Improved Private Sector and Smallholder Skills project (AQ TEVET) • GCF Regenerative and Agro-ecological Landscapes Acceleration Facility
Advanced bioeconomy		
Bio-based products	<ul style="list-style-type: none"> • Biofuels – e.g. macadamia nuts • Textiles – e.g. biodegradable packaging from hemp, pineapple leaves, and cactus • Seaweed/kelp farming/processing into fertiliser 	<ul style="list-style-type: none"> • Venture capital • GIZ and UNEP collaboration on green bonds • SADC trade-related facility provides financial and technical support
High-tech bioeconomy		
Biotechnology	<ul style="list-style-type: none"> • CBD oils, health supplements, and therapeutic products • Plant-based wellness and phytomedicine, • IPLC medicinal flora 	<ul style="list-style-type: none"> • Innovation hubs, supporting biotech startups through incubation and funding. Venture capital • Social impact bonds where returns are linked to community beneficiation

SUCCESSFUL FINANCING MECHANISMS IN THE REGION

Initiative	Country/region	Instrument	Key features/outcomes	Uniqueness in structure
Gabon Blue Bond	Gabon	Blue bond / debt conversion	Historic US \$500 million "Blue Bonds" project unlocks US \$163 million for ocean protection and management	Model for ocean-based conservation financing in coastal SADC countries
DBSA Green Bond	South Africa	Green bond	€200 million raised for sustainable agriculture, forestry, and energy	Highlights MDB role in scaling green infrastructure and bioeconomy financing
Acumen Resilient Agriculture Fund (ARAF)	Ghana, Kenya, Nigeria, Uganda	Impact equity fund	US \$58 million fund supporting climate-resilient agri-SMEs	Replicable model for de-risking smallholder-focused bioeconomy ventures
African Local Currency Bond Fund	Africa-wide	Blended finance facility	Supports domestic bond markets, SDG-aligned investments	Enhances local capital mobilisation for SADC bioeconomy priorities
African Guarantee Fund (AGF)	Africa-wide	Credit guarantees	US \$200 million unlocked for SMEs, 7,000 women-led businesses	Boosts SME access to credit for climate-smart, bio-based enterprises
SADC Transfrontier Conservation Area (TFCA) Financing Facility (Peace Parks Foundation)	Mozambique	Grant	US \$1.62 million grant supports community-led conservation in Limpopo National Park, addressing gaps in private investment	Demonstrates the essential role of grants for funding community-based and small-scale projects
Smallholder Agriculture Cluster Project (SACP) (OPEC Fund , IFAD, private sector)	Zimbabwe	Concessional loan	US \$15 million loan boosts smallholder incomes through climate-smart, market-linked farming	Highlights the importance of concessional loans for agricultural incentives and transformation
Akagera National Park PPP	Rwanda	Conservation PPP	Increased wildlife, tourism income, forest product business development, non-timber forest products, fisheries revenue sharing	Scalable model for eco-tourism and community-benefit sharing in parks
Continental Africa Water Investment Programme	SADC	Blended finance	Support in de-risking and mobilising large-scale investment for climate-resilient water infrastructure	Aims to reduce dependence on grants and aid, fostering sustainable, long-term financing for water security

RECOMMENDATIONS

	Recommendation	Value proposition
Policymakers and regulators	Create a G20-endorsed guiding framework for national bioeconomy strategies that aligns biodiversity, climate, agriculture, and finance	Encourages coherent national planning and unlocks donor and private support through predictable policy pathways
	Expand technical assistance and concessional funding to support the development of green taxonomies and TNFD-aligned regulatory frameworks	Helps developing countries participate in global sustainable finance markets and attract ESG-aligned capital
	Support the development of natural capital accounts and MRV infrastructure through shared G20 toolkits and data partnerships	Builds public sector capacity to integrate nature into budgeting and investment planning
Financial institutions (local and regional)	Establish risk-sharing facilities, guarantee funds, and FX hedging tools through G20-blessed MDB mandates (e.g. AGF-style green guarantees)	Reduces lending risk for local banks and unlocks credit for early-stage, nature-based enterprises
	Develop model green lending guidelines and disclosure templates for nature-related risks under the G20 Sustainable Finance Working Group	Standardises biodiversity risk integration across banks and lowers compliance costs for regional lenders
Markets and enterprises	Mobilise G20-backed investment in public bioeconomy infrastructure (cold storage, processing zones, bio hubs) via blended facilities	Reduces fixed costs for enterprises and improves access to value chains and global markets
	Establish international certification and eco-labelling support programmes for developing countries	Helps local producers comply with import standards (e.g. EU deforestation regulation) and secure premium markets
	Develop investment aggregation platforms under the G20 DFI coalition to bundle small-scale nature-based projects	Lowers transaction costs and creates investable pipelines for institutional capital
Communities and civil society	Fund community-based technical assistance and financial literacy programmes through MDB social development arms	Builds capacity for local project design, governance, and engagement in sustainable supply chains
	Support the implementation of inclusive benefit-sharing frameworks through legal and institutional support from global partners	Ensures that communities receive equitable returns and strengthens social license for conservation finance



Thank you