



# BiInnovation Africa

Support on mapping, analysing and advising  
on financial instruments for SMEs in the  
Biotrade Sector in Namibia and South Africa

Full Study Report 2025

Copies of this document are available from:  
GIZ BioInnovation Africa Project  
Germany

**Contact:**

Mr. Friedrich zur Heide (Project Coordinator)  
[friedrich.zurheide@giz.de](mailto:friedrich.zurheide@giz.de)

**Authors:**

Dagmar Honsbein (BIA Consultant, lead author), Cyril Lombard (BIA Consultant),  
and assisted by Fillemon Endjala (BIA Project Student Intern)

**Contributors**

Adrie El Mohamadi, Component Manager  
ABS Compliant Biotrade in South(ern) Africa (ABioSA) and BioInnovation Africa –  
South Africa (BIA)

Selma Kakuva, Hallo Angala, Technical Advisors  
BioInnovation Africa – Namibia (BIA)

Christoph Oldenburg, Project Coordinator, GIZ ProBATS – Namibia  
Christian Jagla, Technical Advisor, GIZ ProBATS Financial Systems Development –  
Namibia  
Henning Wahlers, Technical Advisor, GIZ ProSME – Namibia

**Copyright**

All rights reserved. The user acknowledges that the copyright and all other  
intellectual property rights that were created under this publication.

---

## Executive Summary

### Objectives

The specific objectives of the study were:

- a literature review on financial mechanisms for the biotrade sector, and where possible with specific reference to MSMEs or SMMEs in the biotrade sector in Namibia and South Africa.
- a mapping process of the landscape of national, bi-lateral and international - public and private funds and forms of investment for the sector.
- a report that presents the gaps identified in Namibia and South Africa regarding funding mechanisms for MSMEs or SMMEs in the biotrade sector, and
- a report on strengths and weaknesses of MSMEs or SMMEs in the biotrade sector in terms of access to relevant funding mechanisms.

Within the framework of the BioInnovation Africa (BIA) Project, it is the aim of BIA Phase II to strengthen national capacities in such a way that bottlenecks are eliminated for private sector in the biodiversity-based economic sector, specifically relating to biotrade and bioprospecting. These businesses are aimed to become internationally competitive with sustainable access and benefit sharing mechanisms in place. The available timeframe of BIA phase II (2022-2025) should be considered when it comes to what could be achieved for finding and devising relevant financial mechanisms that support this objective. Therefore,

- **BIA Phase I (2019-2022)** focused its attention on setting the scene for biotrade private sector to become ABS compliant and support research and development (R&D) needs. The main aim was to assist SMEs obtain market access for the biodiversity-based products to especially the European markets by overcoming regulatory and market-related (non-tariff) barriers.
- **BIA Phase II (2023-2025)** endeavours to strengthen national capacities to enable private sector to achieve market and export readiness, both for their business and their biotrade and/or bioprospecting-based products. These types of interventions necessarily must be underpinned by relevant financial instruments.

### Problem Statement

SMEs in the biodiversity sector (hereafter referred to a “SMEs in biotrade”) have challenges to access relevant financing, especially those in “the missing middle”. The concerns experienced by the SMEs in biotrade involve the following:

- Limited sustainable financial flows to SMEs in Biotrade
- Limited financial flows to business support organisations (BSOs) with mandate to develop the biotrade sector
- Limited specific funds for biotrade, and if such exist, the ticket sizes offered are not applicable to MSMEs.
- The sector requires a wide variety of interventions and support; biodiversity conservation, training and capacity development, supply chain development, innovation, market access, business and investment readiness support, financial assistance, sector-level actions.
- When there is funding available to the sector, the private sector (including cooperatives, start-up and emerging SMEs) complains about inappropriate eligibility criteria.

## What are the Specific Financing Needs of SMEs in Biotrade?

It is estimated that it costs anything between €10,000 and €100,000 (or more) for an organisation to place a cosmetic product (ingredient, intermediate and/or finished product) based on indigenous natural resources, on the European (EFTA, EU, UK) or the USA market. Equally, it takes anything between two and four years from product conceptualisation to first market placement. Novel food and beverage products, new dietary supplements, and new medicines cost significantly more to place in the market in terms of time and financial resources, than products in the cosmetics sector. The duration from identification of a potential biodiversity-based ingredient up to product placement for food or medicine products can take more than eight years.

All organisations in biotrade must equally comply with regulatory and market requirements along the supply and value chain. The burden is particularly hard on MSMEs, who typically are the providers of the biotrade resource materials (supply chain), like raw materials, and they conduct crucial primary processing of resources in country (first steps of the value chain) or provide ingredients.

Figure 1 provides an example of the typical financing needs of an organisation in the biotrade sector. The SMEs therefore need conventional finance to follow the cause of the business (operations and asset finance). Such SMEs additionally need to raise finance to become compliant with regulatory and market requirements pertaining to products within the realm of the cosmetics, food and beverages and pharmaceutical sectors (sector-specific funding) respectively. The “real hurdle” to overcome is, however, in becoming compliant to international and national regulations pertaining to obtaining access to the rights for biological and genetic resources as well as indigenous knowledge tied to such resources, while sharing benefits with the communities who hold the rights. Often this process also involves building new supply chains, opening new markets and building industry and consumer awareness. These latter parts of overcoming the “real hurdle” are generally not covered by conventional financing mechanisms, and seldom alternative funding is available for the same.

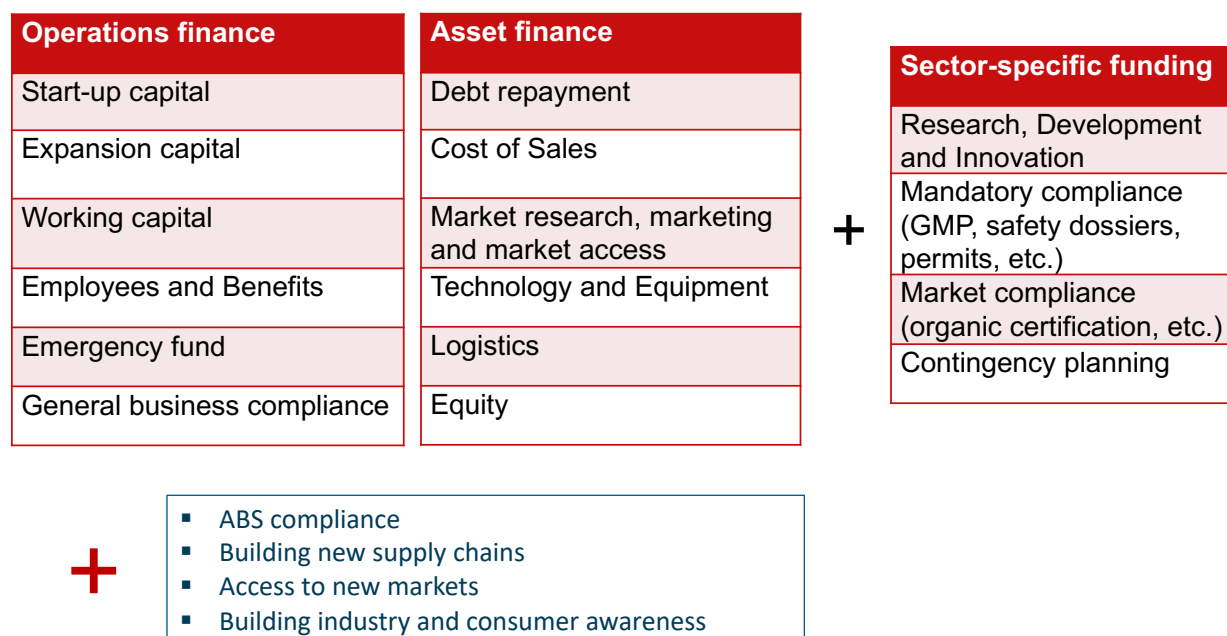


Figure 1. Funding and Finance Needs of SMEs in Biotrade

The conventional finance instruments are equally applicable for businesses in the biotrade sector. However, the terms and conditions under which finance instruments can be applied are not responsive to the biotrade sectors requirements. Often, business in the biotrade

sector operate in niche, untested markets for which a conventional risk profile is not available. Therefore, financial instruments are de facto not available as the risks cannot be costed reliably. Consequently, the general approach of the finance sector is to rather 'not touch' unknown territory, even if a good business case could evolve.

## Who then is funding SMEs in Biotrade? What Type of Financing Mechanisms do these Funders Deploy?

Generally, financial support is concentrated around absorption capacity and ticket sizes for tailored financial products or options. Where an opportunity presents itself or the business case is compelling, paired with the SMEs known credit history, finance may become available, for such organisation.

However, the tailored products were found to be tied to specific funding initiatives with a start and end date. These funding options are often based on calls for proposals and originate in bilaterally or multilaterally agreed programmes and/or projects.

The authors were not able to find relevant information on financial mechanisms for SMEs in biotrade regarding the following financial product categories:

- Guarantee schemes: Credit or Export Guarantee Schemes
- Digital and other Financial Services, including Fintech Solutions and Value and Supply Chain Financing

Several institutions, mainly official development cooperation agencies (ODA), offer market access and trade facilitation as well as capacity building and technical assistance to SMEs, Cooperatives, Communities, NGOs, business support organisations, civil society organisations and community-based organisations. These include for Southern Africa:

- Various GIZ and related programmes: BIA<sup>1</sup> II, CCIU<sup>2</sup>, ABioSA<sup>3</sup>, ProBATS<sup>4</sup>
- USAID programmes in Southern Africa focus their attention on SMEs by contributing some 60% of the costs for market access (e.g. obtaining sector specific certifications) and building the value chain directly to service providers of the SMEs; the remainder of the costs need to be covered by the SMEs as the organisation's own commitment fee. This USAID programme also assists SMEs to become investment ready by linking eligible SMEs with e.g. equity financiers.
- UK's DFID, under its Trade Forward Southern Africa Programme (TFSA)
- UNDP's BIOFIN (Biodiversity Finance Initiative)
- UNCTAD BioTrade Initiative

In Namibia, there is general support towards SMEs from government ministries and/or their agencies regarding equipment and grant funding. Several government ministries support SMEs, but this support is not targeted towards the biotrade sector. The funding generally does not go beyond between €2,500 and €5,000 per company and is usually one-off only. Unfortunately, support programmes between the different ministries and their agencies are not coordinated. Therefore, it can happen that multiple ministries would channel support to a specific SMEs (and/or cooperative, and/or community) and its project at once, leaving out others.

Within the South African context, several government institutions provide support to their specific target groups. Such support interventions are usually a combination of technical assistance, capacity building, trade facilitation, financial incentives as well as grant funding. The following institutions provide biotrade-related or biodiversity relevant support:

---

<sup>1</sup> BIA = GIZ BioInnovation Africa Project, Phase II, 2023 – 2025, funded by German development cooperation

<sup>2</sup> CCIU = Climate Change and Inclusive Use, funded by German and EU development cooperation

<sup>3</sup> ABioSA = ABS Compliant Biotrade in Southern Africa, 2018 – 2021 (Phase I), 2022 – 2025 (Phase II), funded by Swiss and German development cooperation

<sup>4</sup> ProBATS = Promotion of Business Advisory and Economic Transformation Services, 2018 – 2021 (Phase I), 2022 – 2025 (Phase II)

- The Department of Trade, Industry and Competition (DTIC) provides technical assistance programmes, incentives schemes and provide an enabling policy environment for SMEs and cooperatives
- The Department of Science and Innovation (DSI) provides technical and a bio-economy policy framework, and through the Technology Innovation Agency (TIA), technical assistance programmes directed towards bioprospecting
- The Department of Fisheries, Forestry and Environment (DFFE) provides an enabling policy environment, with specific technical support provided towards communities on access and benefit sharing mechanisms.

These three institutions form the leadership of the Bioproducts Advancement Network of South Africa (BioPANZA) which has five clusters through which support is networked for the sector. These clusters are

- (i) Sustainable Supply,
- (ii) Innovation,
- (iii) Finance,
- (iv) Market Access and
- (v) Policy.

The Finance Cluster incorporates the Industrial Development Corporation (IDC) which is currently piloting the Natural and Indigenous Products Programme (NIPP) Fund.

Some private sector initiatives augment or supplement official development cooperation agencies (ODA) initiatives, while other private sector players have established their own civil society organisations to mainly support their suppliers and/or value chain actors to remain compliant to mandatory regulations and market conditions. Examples include:

- German Sparkassenstiftung, which supports SMEs on trade facilitation and financial literacy in target countries, albeit not biotrade specific.
- Swiss Givaudan Foundation, which supports their supplier communities with social welfare projects.
- French L'Oréal, which supports their supplier communities with social welfare projects, traceability and quality improvements of input materials and ingredients.
- Swiss Julius Baer Bank, which supports communities in biotrade supply and value chains with production facilitation and social welfare projects.

Several regional enterprise development programmes are offered by major South African retailers that are active both, in South Africa and Namibia. These assistance programmes include:

- Shoprite Holdings "Home Grown" programme for all locally made products distributed through dedicated outlets to help SMEs obtain scale
- Contract manufacturing for the house brand. Here several retailers aid SMEs to enter the consumer market and reach economies of scale. Particularly Shoprite Holdings, Spar, Food Lovers and Clicks offer opportunities to SMEs.
- Deposits or Invoice Prepayments or Cash on Delivery Payments are offered particularly to SMEs in the perishables industry. This helps SMEs remain afloat with working capital while scaling operations.

SMEs are supported by different types of funding. The biggest source of funding for SMEs in the biotrade sector remains development funding. However, the picture remains bleak for SMEs. Significant financial flows are channelled towards corporates and intermediaries in terms of debt instruments and blended finance. Direct funding towards SMEs is mainly limited to debt instruments. SMEs mostly benefit from various technical assistance (not enumerated) interventions, in the form of trade facilitation, equipment aid, market access and capacity building. Figure 8 provides an overview.

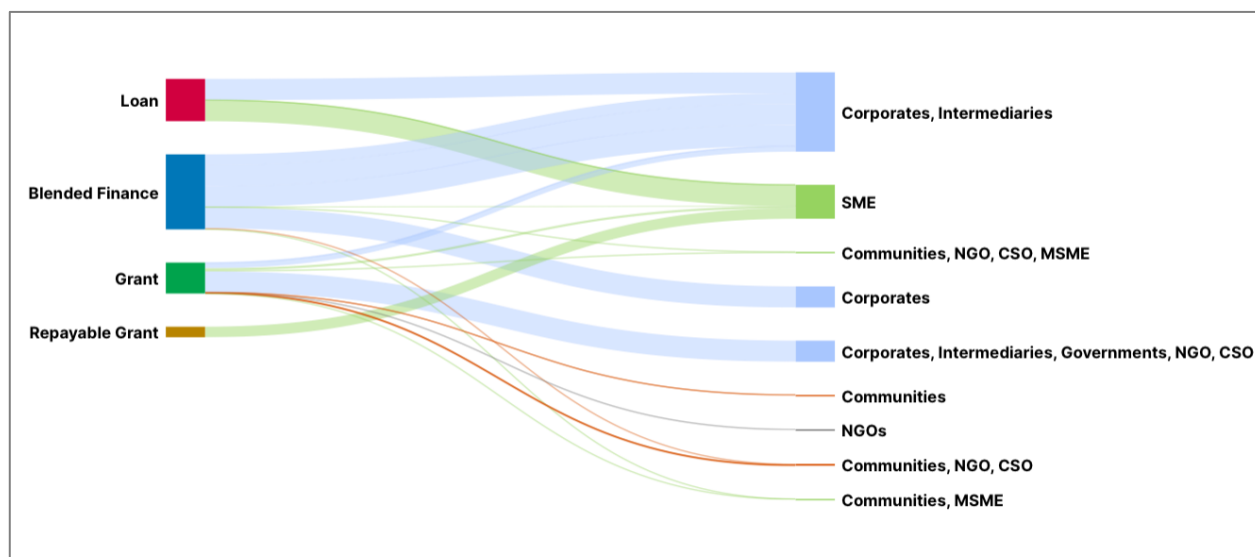


Figure 2. *Relative Financial Flows for Biotrade and Biodiversity Funding based on Type of Financial Product to Target Group(s) based on stakeholder engagements*  
 (Source: Information supplied through study results based on interviews, funders' data, literature review).

## Critical Analyses of SMEs in Biotrade

SMEs are vital to developing and emerging economies and are contributing significantly to employment and GDP. SMEs are seen as key drivers for economic growth and job creation, regardless of whether they are formally incorporated or would still be operating in an informal setting. In the biotrade sector, business is mostly driven by indigenous people and local communities (IPLCs), and/or community-based cooperatives as suppliers of raw materials and ingredients to the biotrade sector. While these are recognised by governments and registered in terms of national mandatory requirements, the financial sector players or intermediaries don't necessarily accept such community structures as credible business entities to whom they could avail finance for commercial purposes. The following figures highlight the various aspects of hurdles to be overcome by SMEs in biotrade.



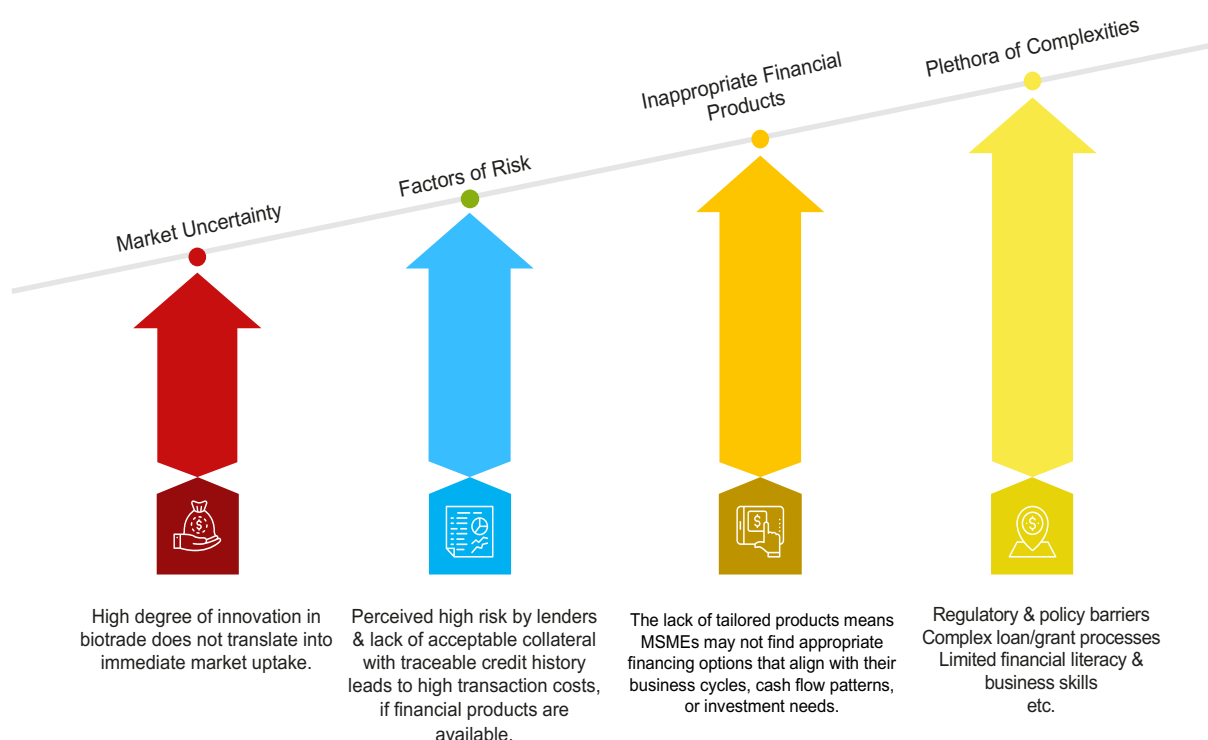


Figure 3. The recurring challenges for SMEs to access relevant financing options; they increase along the supply and value for biotrade-based businesses.

As SMEs in Biotrade progress or build their business and the value addition to biological and genetic resource evolve, the complexities increase, too. Finance needs equally increase, but appropriateness of financial mechanisms decreases. The cost of compliance to various national and international regulatory provisions intensifies, making it even harder for SMEs to expand and grow their businesses.

A detailed PESTEL<sup>5</sup> and SWOT<sup>6</sup> analyses for both the biotrade sector and the SMEs operating in the sector was carried out using various approaches. In a first approach, PESTEL and SWOT analyses were carried out considering the broader spectrum of organisations generally operating in the biotrade sector. In the second approach, PESTEL and SWOT analyses considered the factors that influence “access to finance for SMEs in the biotrade sector”. The resultant PESTEL analysis (Figure 4) highlights, how SMEs in the biotrade sector present themselves as important conduits to socioeconomic and environmental well-being. The PESTEL analyses emphasised various compelling arguments to intensify support to SMEs in the biotrade sector.

<sup>5</sup> PESTEL = Analyses of all Political, Economic, Socio-Cultural, Environmental and Legal aspects of the sector and the business mainly operating therein.

<sup>6</sup> SWOT = Analyses of all Strengths, Weaknesses, Opportunities and Threats, in relation to the various PESTEL factors of the sector and the business mainly operating therein.



P	E	S	T	E	L
POLITICAL	ECONOMIC	SOCIO-CULTURAL	TECHNO-LOGICAL	ENVIRON-MENTAL	LEGAL
<ul style="list-style-type: none"> <li>• Alignment with SDGs and GBP</li> <li>• Geopolitical situations impact negatively on sector due to negative economic impacts (tend to be luxury products)</li> </ul>	<ul style="list-style-type: none"> <li>• Growing demand for sustainable products</li> <li>• Niche product can also find markets</li> <li>• Fast changing consumer preferences</li> <li>• However, bargaining power may be lower, and lack of marketing resources impact such further</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Ethical and fair-trade principles</b></li> <li>• <b>Support for rural development and livelihoods</b></li> <li>• <b>Inclusivity and bridging knowledge gaps where it matters most</b></li> </ul>	<ul style="list-style-type: none"> <li>• Innovation and unique product offerings</li> <li>• Adoption of / adaptation with new ways of production is high</li> <li>• Leveraging technology, research and development leads to higher productivity</li> </ul>	<ul style="list-style-type: none"> <li>• Heavy reliance on on natural resources</li> <li>• Vulnerability to over-exploitation, environmental changes, or depletion, threatening business sustainability</li> <li>• But, high on biodiversity conservation and sustainable use</li> </ul>	<ul style="list-style-type: none"> <li>• Navigation through complex regulations and having to meet international certification standards is challenging</li> <li>• Requires significant time, effort, and resources</li> </ul>

Figure 4. Summarised PESTEL Analysis of the Biotrade Sector and the SMEs operating therein.

SMEs in the biotrade sector face a complex operating landscape, both in terms of regulatory compliance and the financing landscape. However, SMEs in the biotrade sector offer unique opportunities to socioeconomic development and environmental protection, conservation and restoration or regeneration. These SMEs carry out crucial rural economic development, maintain high standards for ethical sourcing of raw materials, respect nature and bridge knowledge gaps where it matters most.

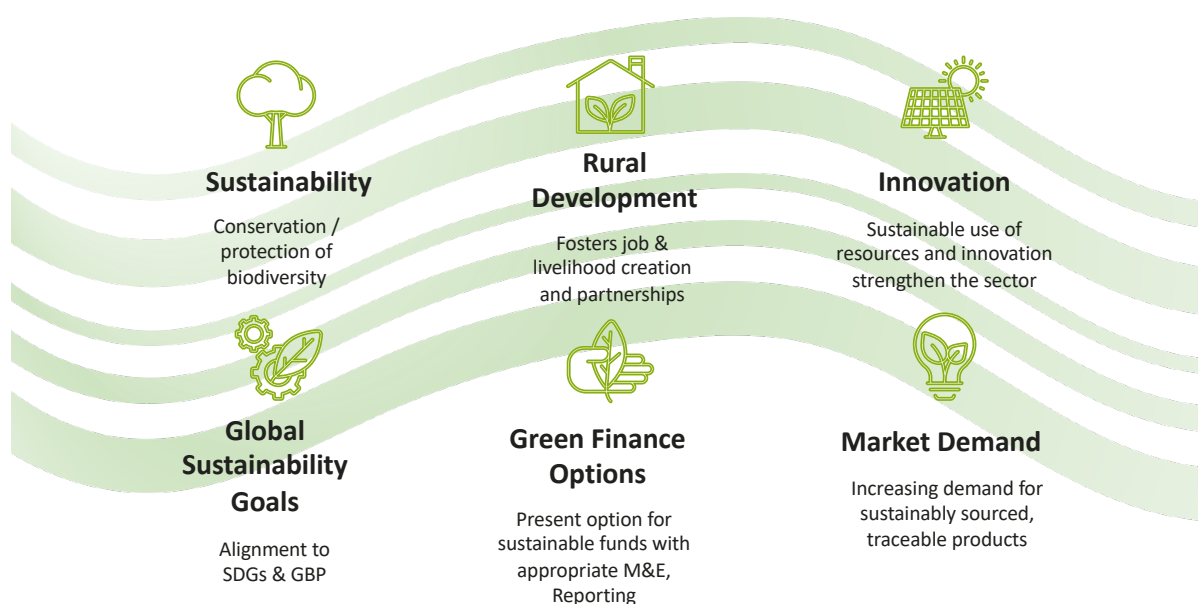


Figure 5. Summarised Strengths of and Opportunities for SMES in Biotrade.

## Summary of Findings

The current range of global biodiversity finance sources, mechanisms, actors and initiatives is diverse and rapidly evolving. It is already comprehensive in its scope and coverage, especially for sectors adjacent to biotrade. Considerable progress has been made since the Convention on Biological Diversity (CBD) first entered into force. However, gaps persist which was re-confirmed at the CBD COP<sup>7</sup> 16. While some topics, issues and instruments are relatively well-served in terms of the level of focus and scale of activities accorded with finance by existing actors and initiatives (even if yet far from being fully addressed or achieved), others remain under-represented or still require significant attention.

SMEs in the biotrade sector face a complex financial landscape. Traditional banking channels often present barriers, but there is a growing trend of alternative financing options, including impact investment, value chain financing, and fintech solutions. Government support and international cooperation remain critical in providing SMEs the financial resources and technical capacity needed to thrive in the sustainable use of biodiversity.

At this stage, the option for blended finance seems to be the most viable for SMEs in the Namibian and South Africa biotrade sector. This is evidenced by the positive examples of blended finance options in the sectors adjacent to biotrade. These options must first be developed though.

The financial sector generally uses the term(s) sustainable finance or sustainable development to describe funding provided to biodiversity related sectors. Other terms generally being used include finance for nature-based solutions or nature-positive production systems or corporate social responsibility/ investment (CSR or CSI), involving element of biodiversity conservation, restoration or regeneration. The authors were not able to trace literature or stakeholders who embraced biodiversity-based business either as social business (instead of calling it CSR or CSI) or would provide such business with conventional finance.

The gaps between demand side (SMEs in biotrade) and supply side (financial institutions and their product offerings) persist. Table 1 provides an overview of the most persistent gaps.

---

<sup>7</sup> CBD COP = Convention for Biological Diversity Conference of the Parties. The most recent one took place in Cali, Colombia from 21 October to 1 November 2024.

Table 1. Summarised Financial Gaps between Demand Side (SMEs in Biotrade) and Supply Side (Financial Institutions and Funders)

Aspect	Demand Side (SMEs in Biotrade)	Supply Side (Financial Institutions/Funders)
<b>Types of Support</b>	<ul style="list-style-type: none"> <li>- Working capital for day-to-day operations</li> <li>- Investment in sustainable practices</li> <li>- Funding for market access and product development</li> <li>- Technical assistance and capacity building for financial management</li> </ul>	<ul style="list-style-type: none"> <li>- Focus on conventional lending products</li> <li>- Preference for short-term financing</li> <li>- Limited provision of non-financial support like technical assistance</li> </ul>
<b>Typical Investments</b>	<ul style="list-style-type: none"> <li>- Sustainable agriculture and resource management practices</li> <li>- Development of nature-based products that align to conventional products in cosmetics, pharmaceuticals</li> <li>- Marketing and branding to reach sustainable/ethical markets</li> <li>- Compliance with international standards and certifications</li> </ul>	<ul style="list-style-type: none"> <li>- Investment focus on traditional sectors with predictable returns</li> <li>- Larger-scale projects with high financial returns</li> <li>- Limited investments in niche markets like biotrade</li> </ul>
<b>Eligibility Criteria</b>	<ul style="list-style-type: none"> <li>- SMEs often have limited collateral and credit history</li> <li>- Small-scale operations may not meet minimum revenue or asset thresholds</li> <li>- Need for flexible and tailored financing solutions to accommodate unique business cycles</li> </ul>	<ul style="list-style-type: none"> <li>- Requirement for substantial collateral or guarantees</li> <li>- Preference for larger, established businesses with proven track records</li> <li>- Strict eligibility criteria, often excluding small-scale and informal sector businesses</li> </ul>
<b>Interest Rates and Terms</b>	<ul style="list-style-type: none"> <li>- Need for affordable interest rates that reflect the social and environmental value of biotrade</li> <li>- Flexible repayment terms that match revenue cycles, particularly for seasonal businesses</li> </ul>	<ul style="list-style-type: none"> <li>- Higher interest rates due to perceived risks</li> <li>- Standardised repayment terms that may not align with the cash flow of biotrade businesses</li> <li>- Focus on short-term returns</li> </ul>
<b>Risk Perception</b>	<ul style="list-style-type: none"> <li>- SMEs in biotrade require recognition of the lower risk associated with sustainable practices and ethical markets</li> <li>- Need for risk-sharing mechanisms, such as credit guarantees or blended financing options</li> </ul>	<ul style="list-style-type: none"> <li>- High perceived risk of lending to SMEs in biotrade due to market volatility and lack of tangible collateral</li> <li>- Limited use of risk mitigation tools</li> </ul>
<b>Alternative Finance</b>	<ul style="list-style-type: none"> <li>- Demand for alternative financing options such as impact investment, green bonds, and crowdfunding</li> <li>- Need for finance that supports innovation and sustainability initiatives</li> </ul>	<ul style="list-style-type: none"> <li>- Limited availability of alternative finance products</li> <li>- Traditional financing models dominate, with limited adaptation to sustainability and impact investing principles</li> <li>- appetite to develop new financing models takes time</li> </ul>

It should further be noted that the lack of agreement on nomenclature for biodiversity finance and biotrade-related production systems itself makes it challenging to adequately describe the sector in financial market terms.

Insights to publications and engagements with stakeholders confirm that SMEs in the biotrade sector remain underserved. The focus for financial institutions regarding matters of biodiversity remains on institutional and socio-environmental compliance, management of financial risks and adherence to international accounting, auditing and reporting standards.

The need remains to conduct a thorough analysis of the local (Namibian and South African) policy and practical contexts to identify the most effective finance mechanisms, engage with stakeholders to understand their specific needs and tailor financial mechanisms accordingly,

and leverage development agencies mandate and capacities to implement finance mechanisms that align with local conditions and objectives.

Creating guidance and frameworks can help financiers navigate complexities in financing biodiversity-based businesses, specifically those related to biotrade. The strengthening of national capacities provides tools and knowledge to address market barriers in the biotrade sector. Equipping financiers allows responsible actors to identify and address obstacles hindering commercialisation of biotrade products.

### Recommendations and Seeking a New Collaborative Approach

The data and analyses done for this study during 2023 and 2024 is proposed to be utilised to conceptualise and pilot a relevant financing mechanism for SMEs in the biotrade sector, e.g. a blended finance approach. The main aim is to develop an implementable joint initiative with identified, selected turnkey/instrumental institutions. The key criteria for this initiative should be to focus on: replicability, scalability, representativeness, efficient bridging between project related intervention and the need to sustain such initiatives. Feasibility, viability and clearly defined milestones need to be achieved that would easily be usable for respective stakeholders and countries.

There is immediate need to develop a pilot scale blended finance approach in a collaborative manner, between national agencies of Namibia and South Africa, the financial sector, selective SMEs in biotrade, and with the support of official development agencies, and proposed to be led by the GIZ BioInnovation Africa Project. Figure 6 provides an overview of the proposed blended finance approach.

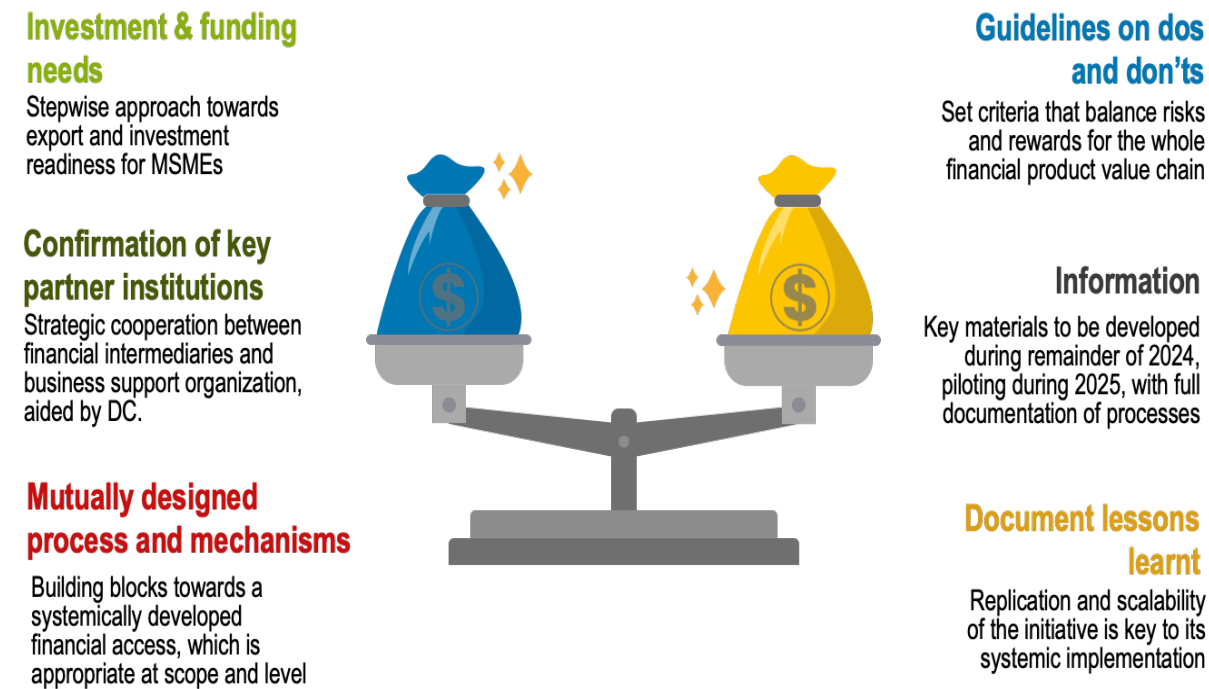


Figure 6. Summarised Approach to Piloting a Blended Finance Product in Collaboration with Suitable service providers.

Key outcomes of such blended finance pilot project or phase should be:

- Provide building blocks to improving a blended-finance ecosystem in (any) country developed and adapted fit for purpose.
- Information on scope and scale of investment opportunities in a country (company- or sector-level)
- Investment and funding needs of SMEs (incl. cooperatives) and sector organisations are assessed; Investment readiness reports on sector companies / SMEs are to be provided.
- Roles and needs for a functioning blended finance ecosystem in country X are defined, and meso-level sector development is assessed by conducting national/regional dialogues.
- Documentation of all lessons and recommendations for replication.
- Identification of key institutions visualised in a financial waterfall flow chart for a strategic cooperation for blended finance (for Namibia and South Africa)
- Together with key stakeholders develop a concept for improving financial instruments, including the creating or developing the required capacities with various, critical stakeholders.
- Provision of guidelines on dos and don'ts of how SMEs should present their business in the biotrade sector.
- Set of criteria to support SMEs and the finance institutions with the due diligence process developed (and then tested).

# Table of Contents

1	Executive Summary.....	i
1.1	Objectives .....	i
1.2	Problem Statement .....	i
1.3	What are the Specific Financing Needs of SMEs in Biotrade? .....	ii
1.4	Who then is funding MSMES in Biotrade? What Type of Financing Mechanisms do these Funders Deploy? .....	iii
1.5	Critical Analyses of SMEs in Biotrade.....	v
1.6	Summary of Findings .....	viii
1.7	Recommendations and Seeking a New Collaborative Approach .....	x
2	Introduction.....	13
2.1	Purpose.....	13
2.2	Context.....	13
2.3	Importance .....	15
3	Theoretical Framework.....	17
3.1	Information Review on Funding Mechanisms in the Biotrade Sector .....	17
3.2	Lessons Learnt from BIA I.....	17
4	Research Methodology.....	21
4.1	Information Search Strategy .....	21
4.2	Information Selection Criteria.....	21
4.3	Evaluation of Information .....	21
5	Review of and Insights from Publications and Stakeholder Engagements .....	23
5.1	Insights from Different Publications.....	23
5.1.1	Sustainable Development and Multilateral Development Banks .....	23
5.1.2	Green Financing, Biodiversity Safeguards and Emerging Markets .....	23
5.1.3	Policy, Governance and Advocacy .....	24
5.1.4	Biodiversity Finance and Global Initiatives .....	24
5.2	Feedback and Insights from Stakeholders.....	24
5.3	Trends, Patterns and Key Learnings.....	30
5.3.1	Challenges and Opportunities in Biotrade .....	30
5.3.2	Global Frameworks and Leadership, and Policy Innovation in Biodiversity Protection .....	31
5.3.3	Role of the Multilateral Development Banks and Sustainable Development Practices .....	32
5.3.4	Biodiversity Safeguards in Development Bank Investments .....	32
5.3.5	Addressing Gaps in Biodiversity Finance .....	32
5.3.6	Building Institutional Capacities and Enhancing Financial Systems.....	34
5.3.7	Key Learnings from Publications .....	34
6	Key Research Results .....	36
6.1	Critical Analysis of Findings from Publications and Stakeholder Engagement.....	36
6.2	Comparison of Findings from Publications and Stakeholder Engagements .....	39
6.2.1	Limited Access to Traditional Finance.....	39
6.2.2	Emergence of Impact Investment and Green Finance .....	39
6.2.3	Government and Donor Support.....	39
6.2.4	Microfinance and Cooperative Financing .....	40
6.2.5	Value Chain and Trade Financing .....	40
6.2.6	Digital and Alternative Financing Models.....	40
6.2.7	Capacity Building and Technical Assistance .....	41
6.2.8	Public-Private Partnerships and Ecosystem-Based Financing.....	41
6.2.9	Challenges of Scaling and Export Market Access .....	41
6.3	Analyses of Access to Finance for SMEs in the Biotrade Sector: PESTEL and SWOT Analyses .....	42
6.3.1	Political and Regulatory Challenges in Namibia and South Africa .....	42
6.3.2	Economic Barriers and Market Constraints .....	43
6.3.3	Sociocultural and Community-Based Finance Considerations.....	44
6.3.4	Technological Barriers and Opportunities.....	44
6.3.5	Environmental Risks and Sustainability-Linked Financing .....	44
6.3.6	Legal Frameworks and Intellectual Property Considerations .....	45
7	Conclusions .....	46
7.1	Summary.....	46
7.2	Implications .....	46
7.3	Recommendations .....	47

7.4	Suggested Implementation Framework for a Blended Finance Instrument to SMEs in the Biotrade Sector	49
8	References	52
9	Annexure 1a: Details of Stakeholder Engagements regarding Types of Financial Mechanisms offered for Biotrade/Biodiversity Funding	56
10	Annexure 1b: Stakeholder Engagement List	62
11	Annexure 2: Literature Review Sheet	63
12	Annexure 3: PESTEL and SWOT Analyses on Financial Mechanisms for SMEs in the Biotrade sector	67
12.1	The role of SMEs in being part of the solution of the biodiversity crisis?	67
12.2	Why focus on SMEs?	68
12.3	Typology and Business Models of SMEs in Biotrade in the Southern African Region	68
12.4	Markets for products from biotrade/ bioprospecting from the Southern African Region	69
12.5	PESTEL Analysis on the Sector, and Financial Services generally available for the Sector	70
12.5.1	PESTEL - Political Factors	71
12.5.2	PESTEL - Economic Factors	71
12.5.3	PESTEL - Sociocultural Factors	72
12.5.4	PESTEL - Technological Factors	72
12.5.5	PESTEL - Environmental Factors	73
12.5.6	PESTEL - Legal Factors	73
12.6	SWOT Analysis on Access to Finance for SMEs in the Biotrade Sector	74
12.6.1	SWOT Analysis for POLITICAL Factors	74
12.6.2	SWOT Analysis for ECONOMIC Factors	75
12.6.3	SWOT Analysis for SOCIOCULTURAL Factors	76
12.6.4	SWOT Analysis for TECHNOLOGICAL Factors	77
12.6.5	SWOT Analysis for ENVIRONMENTAL Factors	78
12.6.6	SWOT Analysis for LEGAL Factors	79

## Table of Boxes

Box 1.	BioTrade or biotrade?	xi
Box 2.	Requirements for a SME to comply with South African BABS regulations	15
Box 3.	What is “the missing middle” in SME or SMME and business finance?	16
Box 4.	The high costs of and the big rewards for gaining access to EU and USA markets	19
Box 5.	Interesting funds serving biotrade adjacent sectors	26
Box 6.	How the biotrade sector can support industry innovation and benefit from it	31
Box 7.	To scale a sustainable biotrade sector a comprehensive strategy will be required	33
Box 8.	LOHAS – an enormous market potential of biotrade	35
Box 9.	No more products like new products like Rooibos, Honeybush, Buchu, Devil’s Claw, Aloe ferox without a funded strategy addressing market access requirements	43



## Table of Figures

Figure 1.	Funding and Finance Needs of SMEs in Biotrade.....	ii
Figure 2.	Relative Financial Flows for Biotrade and Biodiversity Funding based on Type of Financial Product to Target Group(s) based on stakeholder engagements. ....	v
Figure 3.	The recurring challenges for SMEs to access relevant financing options; they increase along the supply and value for biotrade-based businesses. ....	vi
Figure 4.	Summarised PESTEL Analysis of the Biotrade Sector and the SMEs operating therein. ....	vii
Figure 5.	Summarised Strengths of and Opportunities for SMES in Biotrade. ....	vii
Figure 6.	Summarised Approach to Piloting a Blended Finance Product in Collaboration with Suitable service providers. ....	x
Figure 7.	Baobab Sector Development – How the Baobab Industry Developed. ....	19
Figure 8.	Relative Financial Flows for Biotrade and Biodiversity Funding from Type of Financial Product to Target Group(s) based on stakeholder engagements. ....	30

## Table of Tables

Table 1.	Terms Used to Describe Financing of the Biotrade Sector in the Context of this Study... ..	vii
Table 2.	Summarised Financial Gaps between Demand Side (SMEs in Biotrade) and Supply Side (Financial Institutions and Funders).....	ix
Table 3.	Extract from the BioInnovation Africa Project (South Africa) Logical Framework.....	14
Table 4.	Typical funding or finance requirements for SMEs in the biotrade sector .....	20
Table 5.	Typical funding offerings and financial mechanisms available in the biotrade sector.....	27
Table 6.	Key challenges faced by SMEs in the biotrade sector as cited by literature and stakeholders.....	37
Table 7.	Matching demand and supply side funding and financing mechanisms for biotrade SMEs .....	47
Table 8.	Implementation Table: Blended Finance Instrument for SMEs in Biotrade .....	50
Table 9.	Thematic categories on SME biotrade financing support mechanisms relevant to the BIA II context .....	56
Table 10.	Stakeholder Engagement List.....	62
Table 11.	BIA 2 – Summary of the Raison d'être of this assignment.....	63
Table 12.	Article reference.....	63
Table 13.	Summary of Literature Cited .....	64

## Table of Abbreviations

<b>Abbreviation</b>	<b>Description</b>
ABIOSA	ABS Compliant Biotrade in Southern Africa
ABF	GIZ Project – Agri-Business Facility for Africa
ABS	Access and Benefit Sharing
ACCF	African Climate Change Fund
AfPQ	GIZ Project – Alliance for Product Quality in Africa
AgriBank	Agricultural Bank of Namibia
AI	Artificial Intelligence
BIA	GIZ Project - BioInnovation Africa
BioPANZA	Bioproducts Advancement Network (of South Africa)
BMZ	German Federal Ministry for Economic Cooperation and Development
BS4CSU	Benefit Sharing for Conservation and Sustainable Use
BSA	Benefit Sharing Agreement(s)
BSO	Business Support Organisation
CBD	Convention on Biological Diversity
CCIU	Climate Change and Inclusive Use, funded by German and EU development cooperation, implemented by GIZ
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CSR or CSI	Corporate Social Responsibility or Corporate Social Investment
DBSA	Development Bank of Southern Africa (of South Africa)
DFFE	Department of Forestry, Fisheries and the Environment
DFID	Department for International Development
DSI	Department of Science and Innovation (of South Africa)
DTIC	Department of Trade, Industry and Competition (of South Africa)
EFTA	European Free Trade Agreement
EGD	European Green Deal
EIF	Environmental Investment Fund (of Namibia)
ESG	Environmental and Social Governance
EU	European Union
FAO	Food and Agricultural Organisation (of the UN)
FFEM	Fonds français pour l'environnement Mondial (French Environment Development Fund)
FICA	Financial Intelligence Compliance Act (of Namibia)
FSD	Financial Systems Development (a project under ProBATS)
(F)PIC	Free, Prior Informed Consent
GBF	The Kunming-Montreal Global Biodiversity Framework 2020 – 2030 as agreed during the CBD COP 15 in 2022.
(G)GAP	(Global) Good Agricultural Practices
GACP	Good Agricultural and Collection Practices

<b>Abbreviation</b>	<b>Description</b>
GIZ	Deutsche Gesellschaft für internationale Zusammenarbeit GmbH
GMP	Good Manufacturing Practices (either for cosmetic or pharmaceutical products)
GR	Genetic Resource(s)
GRI	Global Reporting Initiative (of the IFC)
IDC	Industrial Development Corporation (of South Africa)
IFC	International Finance Corporation (a World Bank Group member)
IFI(s)	International Financial Institutions
IK	Indigenous Knowledge
IPR	Intellectual Property Rights
IPLC	Indigenous People and Local Communities
ISO	International Standards Organization
LOHAS	Lifestyle of Health and Sustainability
MDB(s)	Multilateral Development Banks
MEFT	Ministry of Environment, Forestry and Tourism
MSME	Micro, Small and Medium Enterprise (Namibian context)
NbS	Nature-based Solution
NCA	National Credit Act (of Namibia and South Africa respectively)
NEMBA	National Environmental Management: Biodiversity Act (of South Africa)
NGOs	Non-Governmental Organisations
NNF	Namibia Nature Foundation
NNIP	Natural and Indigenous Products
NTM	Non-Tariff Measures
ODA	Official Development Cooperation Agencies
PESTEL	Political, Economic, Social, Technological, Environmental, Legal (Analysis)
PPP	Public Private Partnership
ProBATS	GIZ Project - Promoting Business Advisory and Economic Transformation Services
R&D	Research and Development
SDG	Sustainable Development Goals
SECO	Swiss Economic Cooperation Organisation
SGP	Small Grants Programme
SIPPO	Swiss Import Promotion Programme
SMME	Small, Micro and Medium Enterprise (South African context)
SWOT	Strengths, Weaknesses, Opportunities, Threats (Analysis)
THMPR	Traditional Herbal Medicinal Product Registration (in the EU)
TFSA	Trade Forward Southern Africa Programme (of UK's DFID)
TIA	Technology Innovation Agency (of South Africa)
TK	Traditional Knowledge
UEBT	Union for Ethical Biotrade
UK	United Kingdom

<b>Abbreviation</b>	<b>Description</b>
UN	United Nations
UNCTAD	United Nations Convention on Trade and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environmental Programme
UNFCCC	United Nations Framework Convention on Climate Change
USA	United States of America
WWF	World Wildlife Fund

## Key Concepts and Terms

It is important to make the distinction of commonly used terms when trading with matters of biological origin and biotrade itself. In this study, the trade with biological resources, e.g. agro-forestry crops like coffee cultivated as fast-moving consumer good under a regenerative agricultural system, is NOT considered as biotrade. Rather, biotrade refers to species for which traditional knowledge on its cultivation, harvesting and value adding or use lies with indigenous people and local communities, and for which access and benefit sharing arrangements must be in place prior to commercialisation of its use. These considerations are aligned with the UNCTAD Biotrade Principles as laid down in the Global Biodiversity Framework 2020-2030.

Furthermore, it is not the goal to define or describe all concepts used in biotrade, but rather focus on those terms that explain financing of the biotrade sector and its supply and value chains. Table 2 highlights the key terms and presents their meaning in the context of this study. The definitions and descriptions were obtained from publicly accessible information.

Table 2. *Terms Used to Describe Financing of the Biotrade Sector in the Context of this Study*

Concept or Term	Explanation
Access and Benefit Sharing	<p>Process through which, as a result of accessing biodiversity components (e.g. specimens, samples, biochemicals), genetic resources and related traditional knowledge, and using them in research and development or value chains, the different types of benefits generated thereby are shared fairly and equitably between the provider and user.</p> <p>Access and Benefit-sharing as required by national legislation and regulations in countries who are signatories to the Convention on Biological Diversity and the Nagoya Protocol is required to be considered. Therefore, it is necessary to assure oneself which definition is used in the respective country.</p> <p>(Source: UNCTAD, CBD)</p>
Biodiversity	<p>Biodiversity is the natural capital base for a sustainable economy. The conservation of biodiversity and the sustainable use and trade of biodiversity-derived products and services can provide countries valuable opportunities for economic development and improvement of livelihoods.</p> <p>(Source: UNCTAD)</p>
Bioprospecting	<p>The CBD does not explicitly define 'bioprospecting' but it addresses the sustainable use of biodiversity and equitable sharing of benefits derived from genetic resources in its objectives.</p> <p>The UNEP/CBD (United Nations Environment Programme/Convention on Biological Diversity) often describes bioprospecting as the search for genetic resources or knowledge to develop commercial products in alignment with sustainable and equitable principles.</p> <p>Please assure yourself which definition is used in your country.</p>
BioTrade	<p>e.g. UNCTAD BioTrade Principles and Criteria</p> <p>BioTrade in this aspect is a formalised term.</p> <p>It represents the concept as defined by specific frameworks, particularly the <b>UNCTAD BioTrade Initiative</b>. It includes principles and practices aligned with sustainability, ethical sourcing, and biodiversity conservation.</p> <p>It is associated with structured programmes, guidelines, and standards, such as the <b>BioTrade Principles and Criteria</b>.</p> <p>In a similar manner, the UEBT (Union for Ethical BioTrade promotes its standard aligned to the UNCTAD BioTrade Principles and BioTrade Initiative.</p> <p>(Sources: UNCTAD; UEBT)</p>

Concept or Term	Explanation
Biotrade	<p>Biotrade is when a product or service sourced from native (indigenous) biodiversity is commercialised and traded in a way that respects people and nature.</p> <p>(Source: UNCTAD)</p> <p>There may be slightly different or specific definitions depending on the country and its national legislations implementing the CBD and its Nagoya Protocol on Access and Benefit-Sharing. Therefore, definitions for 'biotrade' may also be contained in each country's ABS regulations or policies.</p> <p>Biotrade is a commonly used term in Southern Africa to refer to trade in indigenous natural plant products.</p> <p>In South Africa's Bioprospecting Legislation and Access and Benefit-Sharing regulations "biotrade" means the buying and selling of indigenous biological resources for the purposes of a) bioprospecting b) product development or c) product manufacturing.</p> <p>In Namibia's regulation under the Access to Biological and Genetic Resources and Associated Traditional Knowledge Act "biotrade" means an activity relating to the collection, processing and selling of products and services derived from biodiversity, particularly biological resources, for domestic and international markets.</p>
BioTrade Principles	<p>The 'BioTrade Principles and Criteria' developed by UNCTAD is a set of guidelines for businesses, governments and civil society wishing to support the conservation and sustainable use of biodiversity, as well as the fair and equitable sharing of benefits through trade. Today they are implemented and fostered by government organisations, business associations, NGOs, and companies in nearly 100 countries. The UEBT furthermore has developed a voluntary standard to fast-track the implementation of the BioTrade Principles.</p> <p>(Source: UNCTAD)</p>
Biotrade Supply Chains	<p>In biotrade supply chains, raw materials sourced from biodiversity are collected and processed, often involving multiple actors such as indigenous communities, farmers, collectors, intermediaries, researchers, processors, distributors, and traders. These supply chains can be complex, with each participant playing a role in bringing biodiversity-based products to market.</p> <p>(Source: ABS Initiative)</p>
Biotrade Value Chains	<p>Biotrade value chains, focus on adding value at each stage of the process, from the initial sourcing of raw materials to the final product offered to consumers. This includes activities such as research and development, product innovation, quality assurance, branding, and marketing. The goal is to enhance the economic value of biodiversity-based products while ensuring sustainability and equitable benefit-sharing among all participants in the value chain (where ABS is concerned, as in this case, it is also referred to a biodiversity valorisation).</p> <p>(Source: ABS Initiative)</p>
Cooperative – Namibian Context	<p>A cooperative in Namibia refers to an organisation formed under the Cooperative Act to support its members by promoting their shared economic, social, or cultural goals. It can take one of two main forms:</p> <p><b>Workers' Cooperative:</b></p> <p>A cooperative where all members actively work in the cooperative in their capacity as members.</p> <p>At least 70% of the full-time workforce in the cooperative must be members.</p> <p><b>Service Cooperative:</b></p>

Concept or Term	Explanation
	<p>A cooperative designed to serve its members through specific activities, such as:</p> <ul style="list-style-type: none"> <li>• Marketing and supply cooperatives (e.g., for selling members' products).</li> <li>• Consumer cooperatives (e.g., providing affordable goods to members).</li> <li>• Housing cooperatives (e.g., helping members with housing).</li> <li>• Savings and credit cooperatives (e.g., providing financial services like loans).</li> <li>• Other types as determined by the Minister through official notices.</li> </ul> <p>At least 51% of the cooperative's transactions must involve its members.</p> <p>These cooperatives are designed to ensure that most benefits and decisions remain within the membership base.</p> <p>(Source: Cooperatives Act, Act 23 of 1996; Government Gazette GG1467)</p>
Financial Product or Services or	A product that relates to the way in which one manages and uses one's money, such as a bank account, a credit card, insurance, etc.
Financial Instrument	(Source: Cambridge Dictionary)
Financing Mechanism	<p>A mechanism for the provision of financial resources on a grant or concessional basis, including for the transfer of technology.</p> <p>(Source: UNFCCC, Article 11, para 1)</p>
Genetic Resource	<p>Means material of biological origin (plant, animal, microbial or other origin) which has known or potential value. These are the actual parts of biological origin which would be harvested for further processing, for example, leaves, roots, bark or seeds which contain an important biochemical composition which should fulfil a specific purpose.</p> <p>(Source: UNCTAD 2017)</p> <p>In addition, an extract (or any other preparation of the biological material) can either be used by indigenous people and local communities to, e.g., treat an ailment. Alternatively, a commercialised product can be developed from the genetic resource, based on valorisation processes.</p> <p>In this study, we focus on plant genetic resources (PGR).</p>
Good Manufacturing Practices – cosmetic products	<p>Good manufacturing practices (GMP) refer to the procedures in place within a company to ensure that products meet certain quality standards throughout all stages of production, packaging, storage, and shipment. GMP is crucial to avoid adulteration or misbranding for cosmetic products.</p> <p>GMP must be proven according to ISO 22716:2007 when trading with EU, ETFA, USA and Japan.</p>
Good Manufacturing Practices – pharmaceutical products	<p>The manufacture or import of medicinal products is subject to manufacturing or import authorisation. The authorisation holder must comply with the principles and guidelines of good manufacturing practice and use active substances (active pharmaceutical ingredients) which were manufactured in compliance with GMP.</p> <p>GMP must be proven according to EU Directives for human medicinal products 2001/83/EC, 2001/20/EC and 2003/94/EC and for veterinary medicinal products Regulation (EU)2019/6 and Directive 91/412/EEC.</p> <p>There are recognition agreements in place between the EU, EFTA and the USA, as well as the EU and Japan respectively.</p>
Indigenous Peoples	Peoples in independent countries who are regarded as indigenous on account of their descent from the populations which inhabited the country, or a geographical region to which the country belongs, at the time of conquest or



## Concept or Term Explanation

colonisation or the establishment of present state boundaries and who, irrespective of their legal status, retain some or all of their own social, economic, cultural and political institutions.

(Source: UNCTAD, adapted from ILO, 1989)

### Local Communities

Human population in a distinct ecological area who depend directly on its biodiversity and ecosystem goods and services for all or part of their livelihood and who have developed or acquired traditional knowledge as a result of this dependence, including farmers, fisherfolk, pastoralists, forest dwellers and others.

(Source: UN Environment-CBD, 2006 in UNCTAD 2017a)

**Please note:** within the context of BioInnovation Academy, we combine Indigenous Peoples and Local Communities (IPLC), and place a strong focus on the participation and role of women within the supply chains and biodiversity-based business models.

### Missing Middle

It refers to the gap in financial services and support that SMEs face. These businesses are too large for microfinance but too small or risky for traditional banking loans. This gap hinders their growth and limits their contributions to the biotrade sector.

(Source: Worldbank, 2022)

### MSME – Namibian Context

Micro, Small, Medium Enterprise

This definition is to be seen as a guideline only.

Size of enterprise	Total full-time equivalent of paid employees	Total annual turnover
Medium	31-100	<10.0MNAD
Small	11-30	<3.0MNAD
Micro	0-10	<0.3MNAD

NB: Informal and survivalist enterprises are not included in this definition.

(Source: SME Policy, 2016; Ministry of Trade and Industrialisation)

### Organisational Framework or Structure

Refers to the system or structure that outlines how activities are directed to achieve the goals of an organisation (in our case the MSME (Namibia) or SMME (South Africa) or cooperatives, or in IPLCs). This framework includes the distribution of roles and responsibilities, the arrangement of communication lines, and the procedures that govern decision-making and operational processes. Essentially, it defines the hierarchy, workflow, and reporting relationships within an organisation, facilitating the coordination and management of tasks and resources to ensure effective and efficient operation.

### Readiness

This term is commonly used to describe the development stage at which MSEM/ SMMEs are, in terms of their 'readiness' to respond to

a. common market forces, e.g. Competitive Rivalry, Supplier Power, Buyer Power, Threat of Substitution, and Threat of New Entry (Source: Michael Porter, Harvard Business School)

b. their product being acceptable in the market regarding mandatory (HS codes, consumer protection requirements, quality, etc.) and market requirements (e.g. organic/ natural or processing grades, etc.).

## Concept or Term Explanation

SMME and Cooperatives-South African Context

The terms MSME and SMME are used interchangeably worldwide due to the absence of a universally accepted definition of these terms.

A small enterprise as a separate and distinct business entity, together with its branches or subsidiaries, if any, including cooperative enterprises, managed by one owner or more predominantly carried on in any sector or subsector of the economy for distinct sectors; here we relate to the **agro-sector** as being representative of biotrade.

Size of enterprise	Total full-time equivalent of paid employees	Total annual turnover
Medium	51-250	<35.0MZAR
Small	11-50	<17.0MZAR
Micro	0-10	<7.0MZAR

(Source: SMMEs and Co-Operatives Funding Policy for South Africa; 28 April 2023; DSBD, South Africa)

### Box 1. BioTrade or biotrade?

“BioTrade” and “biotrade” appear to be interchangeable. However, the capitalisation in BioTrade reflects a fundamental difference. Biodiversity provides inputs and ingredients for a range of industries, including agriculture, cosmetics, pharmaceuticals, pulp and paper, horticulture, construction and waste treatment.

In particular, the term “biotrade” is sometimes used to describe the trade in biological resources, such as plant material for use as ingredients or inputs for food, cosmetic or industrial products. Unfortunately, these activities are often conducted without proper consideration of the conservation and sustainable use of biodiversity.

On the other hand, BioTrade activities are characterised by respect for environmental, economic and social criteria. For example, BioTrade activities must maintain the characteristics of ecosystems and natural habitats of the species being collected or cultivated. Income should be generated and distributed at all levels and to all actors of the value chain.

In conclusion, the terms are similar. The products involved may also be comparable, in cases such as non-timber forest products (NTFPs); plant-based extracts, oils and other ingredients or compounds; and natural textiles. However, there is a significant and meaningful difference in the approaches and impacts of “BioTrade” and “biotrade” activities. BioTrade is furthermore governed by a set of formal rules (non-binding), which make it an “institutionalised” activity or process.

Source: UNCTAD, 2017



---

# 1 Introduction

## 1.1 Purpose

The purpose of the study was to investigate funding mechanisms for and present a biotrade-investment market scoping report, including

- **TASK 1** - Mapping of the landscape of national, bi-lateral and international - public and private funds and forms of investment for the SA and Namibian Indigenous Natural Products sector; and identify potential gaps. This task was accomplished by literature review and stakeholder engagements.
- **TASK 2** - Analysis on strengths and weaknesses and accessibility of financing mechanisms generally, and funding for specific activities in the value chain of SMEs in biotrade. The analysis should identify whether focus should be placed on a specific area within the value chain or whether financing gaps appear across the whole value chain. This task was accomplished by an in-depth PESTEL and SWOT analyses.
- **TASK 3** - Advise on gaps. This task was accomplished by conducting a financial and technical assistance supply and demand side analysis.
- **TASK 4** - Provide training and awareness. This task is envisaged to be done during 2025. BIA Phase II together with suitable partners aims to provide mentoring and coaching on the application/ implementation of funding mechanisms, incl. investment instruments.

The report should provide clear recommendations on what could be done to fill funding gaps in the short- medium and long-term.

## 1.2 Context

The BioInnovation Africa (BIA) project supports the African and European private sector in developing mutually beneficial business partnerships based on high ethical, social, and environmental standards, including equitable benefit-sharing and the sustainable use of genetic resources. The project is funded by the German Federal Ministry for Economic Cooperation and Development (BMZ) and implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH.

The support services of the BIA project are primarily aimed at governments, local SMEs, cooperatives, communities and holders of Indigenous / Traditional Knowledge (IK / TK) as well as users of indigenous biological resources in the private sector at international level. Project partners from both European and Southern African companies provide capacity development and technical support to local producers and value chains/sectors. BIA works in close cooperation with the Department of Environment, Forestry, and Fisheries (DEFF) South Africa and the Ministry of Environment, Forestry and Tourism (MEFT) Namibia, which leads the respective government's approach to bioprospecting and biotrade.

BIA phase I was implemented during between July 2019 and December 2022. Phase II is being implemented over the period of January 2023 to December 2025 building on what was developed during the first phase. Phase II focuses on the 3 output areas described below. Each of the countries are implementing these output areas accordingly. The table below illustrates the South African outputs and indicators.

Table 3. Extract from the BioInnovation Africa Project (South Africa) Logical Framework

Component	Outputs	Output indicators
<b>Component 1:</b> African-EU partnerships.	<b>Output 1:</b> “The further development of selected biodiversity-based, African-European value chains in South Africa with regards to national and international market requirements (4 partnerships)”	<b>Output indicator 1.1:</b> The fulfilment of 4 market requirements for biodiversity-based products as part of the supported entrepreneurial partnerships has been confirmed by industrial customers.  <b>Output indicator 1.2:</b> 4 Value Chains in South Africa confirm improvement of their entrepreneurial capacities for export (export readiness)
<b>Component 2:</b> Addressing market barriers (incl. ABS) & institutionalisation	<b>Output 2:</b> “Strengthening national capacities to promote biodiversity-based value chains and to reduce market barriers, including ABS at national level in South Africa”	<b>Output indicator 2.1:</b> 1 – 2 barriers to the commercialisation of biodiversity-based products identified in multi-stakeholder exchange formats are addressed by the responsible actors at national level.  <b>Output indicator 2.2:</b> 10 employees of service providers have successfully been trained with the help of training modules on gender-equitable benefit sharing and sustainability in biodiversity-based value chains.
<b>Component 3:</b> Biodiversity conservation and local communities	<b>Output 3:</b> “Improving biodiversity conservation and the participation of the local population in benefit sharing agreements within biodiversity-based value chains”	<b>Output indicator 3.1:</b> In 1 Value Chain measure(s) from the “National Guidelines on the Use of Benefit Sharing for Biodiversity Conservation” have been implemented.  <b>Output indicator 3.2:</b> For 1 – 2 local community organisations, an improvement in their ability to negotiate gender-based benefit-sharing and purchase prices is confirmed.

The focus of BIA II on the overall financial instruments for biotrade study is **Output 2: “Strengthening national capacities** to promote biodiversity-based value chains and to **reduce market barriers**, including ABS at national level in partner countries”. This is in support of, e.g. the DFFE to address the bottlenecks identified with financial instruments needed under the BioPANZA finance cluster.

In the Namibian case, e.g., several initiatives are pursued to support value chain development and market access, which are mostly limited and linked to donor initiatives in cooperation with MEFT and the Ministry of Industrialisation and Trade (MIT), however, with limited duration. For Namibia too, this study is supported by the GIZ Promoting Business Advisory and Economic Transformation Services (ProBATS), and specifically the Financial Systems Development (FSD) component.

It is the aim of BIA II to strengthen national capacities in such a way that bottlenecks are eliminated for private sector in the bioeconomy sector at large to become internationally competitive with sustainable access and benefit sharing mechanisms in place. The timeframe for this assignment is aligned with the overall BIA II project timeframe.

For a small company in South Africa aiming to produce and export a product derived from an indigenous plant, compliance with Access and Benefit-Sharing (ABS) regulations under South Africa's National Environmental Management: Biodiversity Act (NEMBA) is essential. Here's a summary of the key steps:

**1. Determine ABS Applicability**

- Verify whether the plant species is listed as indigenous and if the planned activities (e.g., research, commercialization) require ABS compliance. ABS applies if the plant is used for bioprospecting or commercialization and if traditional knowledge is involved.

**2. Obtain (Free) Prior Informed Consent (PIC)**

- Secure consent from the landowners or traditional knowledge holders involved in the collection or use of the plant resource. This step is crucial to ensure the project respects local rights and engages stakeholders.

**3. Negotiate a Benefit-Sharing Agreement (BSA)**

- Develop a BSA with stakeholders, which outlines how benefits (monetary or non-monetary) from the commercialization of the indigenous resource will be shared. This agreement should be fair and transparent, promoting equitable benefits to local communities and other stakeholders.

**4. Apply for Bioprospecting Permits**

- Submit a bioprospecting permit application to the Department of Forestry, Fisheries and the Environment (DFFE). The application should include a BSA, research proposals, and details about the intended use of the indigenous resource.

**5. Comply with Ongoing Reporting and Monitoring**

- Once the permit is granted, the company must adhere to ABS reporting requirements, which include regular updates to the DFFE on the use, sales, and benefits shared as per the BSA. This transparency ensures that benefit-sharing commitments are honoured throughout the project.

**6. Prepare for Export Requirements**

- For exports, ensure compliance with any additional documentation or export permits required under South African ABS and biodiversity regulations.

All these activities present considerable costs in time and human resources. Hidden in these activities is the requirement to identify the legitimate holders of traditional knowledge. This can be a multi-year, multi-stakeholder effort perhaps costing millions of Rands. Almost all these activities, and therefore the costs, are required well before any revenue is made by the SME creating a significant bottleneck for the growth of the sector. Absent a revised regulatory scenario, some way of supporting SME's compliance through grants or other concessionary measures will be required if growth of the sector is targeted.

## 1.3 Importance

BIA I focused its attention on setting the scene for private sector to become ABS compliant and conduct R&D for biodiversity-based product development, in the national/ local context. BIA II endeavours to strengthen national capacities to trade biodiversity-based products beyond borders. The type of interventions to assist organisations to become 'export ready' necessarily must be underpinned by relevant financial instruments.

The literature review here presented will focus on mapping and analysing the available financial instruments in South Africa and Namibia, as well as elsewhere in the biotrade sector, with a specific focus on elements that are part of the Nagoya Protocol that speak about monetary and non-monetary benefits to be provided by the user to the provider (see

<https://www.cbd.int/abs/text/articles/?sec=abs-37>). In the context of the COP, the term 'biodiversity finance' is used to describe what and how the biotrade sector is supported financially. However, this assignment focused on what, how and by whom SMEs or SMMEs in the biotrade sector can be supported financially to specifically address the missing middle.

The mapping will assist BIA II in providing information to design relevant funding products for the biotrade sectors in Namibia and South Africa and to engage in peer learning with Cameroon and Madagascar. Ultimately, the outcomes should serve as pilot and peer learning experience to SMEs in the biotrade sector in general. The focus will be to address the needs of the **missing middle**.

*Box 3. What is "the missing middle" in SME or SMME and business finance?*

In the context of micro- small and medium-sized business (MSME) development and finance, the term "missing middle" refers to a gap in financing options available to businesses that are too large to qualify for microfinance but too small or risky to attract traditional bank loans or private equity. This "middle" group often includes MSMEs that have outgrown microcredit but are not yet large enough to meet the minimum requirements or collateral demands of commercial banks and investors.

The "missing middle" problem is significant because MSMEs typically play a vital role in job creation, innovation, and economic growth, especially in emerging economies. However, without access to adequate financing, these businesses face challenges in scaling operations, investing in technology, or accessing new markets. The lack of suitable financing options forces many MSMEs to rely on more expensive or informal sources of funding, which can limit their potential and overall economic impact.

To address this gap, some financial institutions, impact investors, and development finance institutions are creating tailored financing models, such as flexible credit lines, blended finance mechanisms, venture debt, and mezzanine financing. These models aim to provide the "missing middle" with access to appropriate capital, allowing MSMEs to thrive and contribute to economic development more sustainably.

**Please note:** in the Namibian context, the abbreviation MSME is used, while SMME is used in the South African context to refer to micro- small and medium-sized business. In this report we use the abbreviation SME to refer to micro- small and medium-sized business, including cooperatives. The description of these businesses is available in the Key Concepts and Terms (Table 2).



---

## 2 Theoretical Framework

### 2.1 Information Review on Funding Mechanisms in the Biotrade Sector

To provide a relevant information review on financial systems development for the biotrade sector, several theories and models were followed, including a robust framework for understanding the dynamics and complexities involved.

The information search targeted Natural Capital Theory combined with Microfinance and Inclusive Finance as well as Environmental and Ecological Economics, Institutional and Development Theories, and Business and Management Models in the Biotrade Sector. Case studies underpin the strengths, weaknesses, opportunities and threat analyses.

The information analysed focused on the period 2019 until to date. This period coincides with the Covid 19 pandemic, the COP15 with the Global Biodiversity Framework (2020-2030, and the NBSAP process, as well as the BIA I and BIA II timelines.

The overall study seeks to present plausible approaches to assist the **missing middle** in the biotrade sector. Therefore, finance and funding solutions are sought for the following target groups:

1. Start-ups
2. SMEs or SMMEs, including entrepreneurs (hereafter called **SMEs**)
  - Cooperatives and farmer groups
  - Trade associations and business support organisations, incubators, accelerators
  - Industrial and research institutions
3. Projects and programmes of development organisations (BioPANZA, GIZ ABioSA, BIA, etc), including specialised funds
  - The European or international private sector players who would prioritise partnerships, funding and financing in the biotrade/bioprospecting sector in African botanicals-based biodiversity.

This support is specifically sought for business in Namibia and South Africa, in a pilot approach. There is need to transition from conventional finance and funding mechanisms towards mechanisms that are responsive to biotrade needs. Once a pilot renders results, support should then also target biotrade business in Madagascar and Cameroon specifically, and/or biotrade emerging markets generally.

### 2.2 Lessons Learnt from BIA I

During phase I of the BIA project, it was recognised that one of the challenges for enterprises in the biotrade sector is access to financing, especially those in “the missing middle” that include SMMEs and Cooperatives. The burden of also having to finance or fund ABS compliance, innovation and market access is an additional and separate issue. These challenges are exacerbated by a unique combination of challenges in the biotrade sector, including trying to access funding for:

- ABS compliance, which can take years and incur substantial costs
- Innovation, as the biotrade sector is often dealing with new or novel products as opposed to well-established commodities; and

- Market access, as many biotrade products are required to conform to consumer protection regulations especially in export markets.

This is particularly important the context of governments striving to support of a pipeline of SMMEs to become export ready, where financing plays a major role. Funding to the biotrade sector is assumed to follow blended mechanisms, and such funding is targeted to address the following requirements which organisations have, including:

- Maintaining an appropriate organisational framework
- Complying with national and regional regulatory frameworks (e.g. various resource related permits, licenses as well as production certification), including the provisions of the Nagoya Protocol (e.g., as well as ABS in Namibia and BABS in South Africa)
- Establishing and maintaining appropriate biotrade supply chains
- Establishing and maintaining appropriate biotrade value chains, including production sites
- Readiness to meet EU/ European mandatory requirements
- Readiness to meet the export markets' product and associated requirements
- Achieving greater impacts regarding benefit sharing for conservation and sustainable use of natural resources (BS4CSU); and
- Creating consumer awareness.

It is estimated that it costs anything between €10,000 and €100,000 (or more) for an organisation to place a novel food or cosmetic product (ingredient, intermediate and/or finished product) based on indigenous<sup>8</sup> natural resources on the European (EFTA, EU, UK or US) market. Equally, it takes anything between 2 and 4 years from product conceptualisation to first market placement. New products for dietary supplements, and medicines cost significantly more than the latter products to place in the market in terms of time and financial resources (Box 4).

---

<sup>8</sup> Baobab as dried fruit pulp was accepted in the EU as novel food ingredient on 27 June 2008 under Regulation (EC) No 258/97. In 2009, the U.S. Food and Drug Administration (FDA) deemed baobab dried fruit pulp as a Generally Recognized As Safe (GRAS) food ingredient.

In an ambitious strategy to significantly scale the biotrade sector over of 10-year period a market access scenario could include concerted plans for new ingredients gaining access to the EU market. For the sake of estimation of cost the scenario could include 10 new food / beverage ingredients, 5 new essential oils, and 20 new cosmetic ingredients.

#### 1. Novel Food Notification (10 Ingredients)

- Estimated Cost per Ingredient: €400,000 - €700,000
- Total for 10 Ingredients:
  - Minimum: €4,000,000 (10 x €400,000)
  - Maximum: €7,000,000 (10 x €700,000)

#### 2. REACH Regulations for Essential Oils (5 Ingredients)

- Estimated Cost per Essential Oil: €50,000 - €250,000
- Total for 5 Essential Oils:
  - Minimum: €250,000 (5 x €50,000)
  - Maximum: €1,250,000 (5 x €250,000)

#### 3. EU Cosmetics Directive (20 Ingredients)

- Estimated Cost per Cosmetic Ingredient: €50,000 - €100,000
- Total for 20 Cosmetic Ingredients:
  - Minimum: €1,000,000 (20 x €50,000)
  - Maximum: €2,000,000 (20 x €100,000)

#### Updated Total Estimated Costs

1. Novel Foods (10 Ingredients): €4,000,000 - €7,000,000
2. Essential Oils (5 Ingredients): €250,000 - €1,250,000
3. Cosmetic Ingredients (20 Ingredients): €1,000,000 - €2,000,000

#### Overall Total Estimate

- **Minimum Total: €5,250,000**
- **Maximum Total: €10,250,000**

It would be necessary to consider timing and prioritisation, and what costs are to be covered by grants and what might be possible to be covered through loans and private investments.

But what are the economic benefits?

We can make an estimate based on the example of Baobab fruit. Until 2007 for the EU and 2008 for the USA, this product had no legal access to the respective markets. PhytoTrade Africa prepared the required dossiers and managed the notification processes at a cost of approximately €500,000.

Baobab fruit export sales are approximately 450 tonnes per year. At an average price of €6/kg that is approximately €2,700,000 revenue / economic value per year. Over the past 15 years that could be around €40 million revenue in the Southern African value chains, which is approximately R800 million that would not have been possible without addressing these market access barriers.

In summary: for Baobab fruit alone, and investment by trade association, supported by donors, and in cooperation with its members, made an initial investment of roughly R10 million which resulted in a sector with a size not less than R800 million over 15 years.

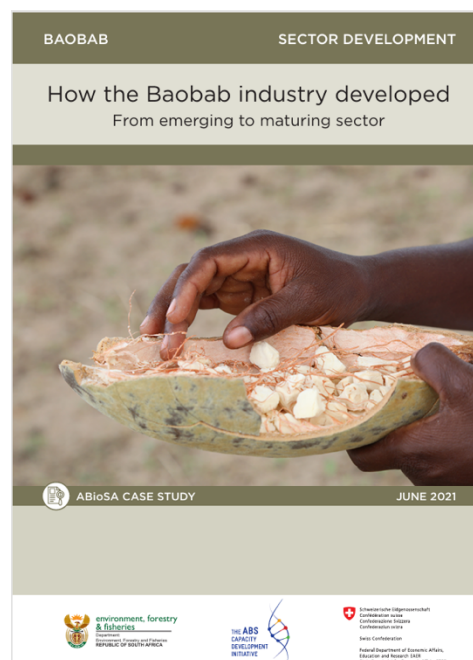


Figure 7. Baobab Sector Development – How the Baobab Industry Developed.

(Source: ABIOISA, 2021)

Conventional financial instruments can be applied to biotrade businesses, but their terms and conditions often fail to meet the sector's needs. Biotrade businesses typically operate in niche, and often untested markets with no conventional risk profiles, making it difficult to assess risks reliably. As a result, financial institutions tend to avoid providing financial instruments to biotrade businesses, despite their potential for strong business cases.

It is furthermore assumed that business in the biotrade sector equally need the following types of conventional funding, in addition to being able to master ABS compliance funding:

*Table 4. Typical funding or finance requirements for SMEs in the biotrade sector  
(Source: various interviews)*

<b>Operations funding</b>	<b>Asset finance</b>	<b>Biotrade specific funding</b>
Start-up Capital	Debt Repayment	Research, Development and Innovation
Expansion Capital	Cost of Sales	Mandatory Compliance (e.g. ABS permits)
Working Capital	Marketing and Market Access	Market market (e.g. GMP, dossiers)
Employees and Benefits	Technology and Equipment	Contingency planning
Emergency fund	Logistics	
General Business Compliance	Equity	

---

## 3 Research Methodology

### 3.1 Information Search Strategy

The following type of information and sources of information were considered:

- Peer reviewed articles published in journals, and which were freely accessible from e.g., Research Gate™, Academia™, Google Scholar™ and related platforms.
- Publications by interested and affected communities, such as NGOs, business agencies or associations, community-based organisations, international development partners, multilateral cooperation partners, governmental institutions, and others found as printed versions and/or online publications.
- Documentation, publications and information provided by GIZ and BIA related colleagues, stakeholders and persons interested in the research or active in the fields of financial services and/or biotrade/ biodiversity programmes.
- One-on-one discussions with stakeholders, key informants, and possible additional leads they provided on where further information could be retrieved.
- Participation in webinars and/or seminars, e.g., the 'GIZ Community of Practice for Biodiversity Finance™' bi-monthly sessions, and
- Resources on the internet: either these were retrieved by own information searches, or URL were provided to the team to retrieve relevant information.

Typical key words used for the searches for resources on the internet included: biotrade, biodiversity finance, nature-based solutions, net-positive economy solutions, finance/funding for biotrade, natural capital, SME / SMME finance/funding in biotrade, (blended) finance for biotrade, grants for biodiversity, funding global biodiversity plan, micro or SME finance in natural products/ ingredients sector.

Both, digital and paper-based sources of information were considered.

A detailed list of citations is provided in the section 'References', including the identified stakeholders and their activities and touchpoints for finance in the biotrade sector.

### 3.2 Information Selection Criteria

Priority was given to information that satisfied the definitions as highlighted in section 'Definitions' and that was published between 2019 until to date. The same principles were applied to contacting stakeholders (see stakeholder contact summary sheet Annexure 1); they must directly work in the biotrade and/or related sectors (e.g. financial services sector which has a biotrade relevant product on offer) and/or organisations/institutions or have worked in these sectors in the recent past.

Secondary attention was given to information that satisfied the definitions but was dated prior to 2019.

Information that fell outside the date and definitions parameters was noted, and where findings were possibly relevant, a follow up was made to establish its significance for this study; otherwise, such information was disregarded for further analyses.

### 3.3 Evaluation of Information

A publication, website search and literature review template was set up (Annexure 2). In such manner, each source of published information was reviewed in the same way. This

helped to structure the review and ensure that the focus remained on 'finance in the biotrade sector'.

The conducting of stakeholder interviews (via email, via web-conference and in person), was accomplished by following a general guideline agenda, e.g.:

- Introduction of participants
- Overview of BIA II, the hypotheses of the study, and the intended outcomes
- Details the counterpart may want to offer in proofing the hypotheses and innovative solutions that could be pursued to finance of the biotrade sector
- Sharing of any relevant, published and/or written further information
- Any further leads to publications and/or information or stakeholders that could augment the already shared information
- Request for a follow engagement, if/when necessary

The interviews were conducted by a combination of efforts with various BIA II resource persons being involved. Either, interviews/webinars were arranged by GIZ, and BIA II external colleagues were invited to participate in such; or the BIA II external colleagues conducted the interviews with stakeholders and informants and provided verbal and written feedback (e.g., minutes or meeting notes) on the outcome of such interviews and further literature review.

All publications, literature, minutes and meeting notes are deposited on the BIA II MS Teams Channel, which is accessible to the BIA II colleagues.

---

## **4 Review of and Insights from Publications and Stakeholder Engagements**

### **4.1 Insights from Different Publications**

Insights to publications seem to confirm that SMEs in the biotrade sector remain underserved. The focus for financial institutions regarding matters of biodiversity remains on institutional and socio-environmental compliance, management of financial risks and adherence to international accounting, auditing and report standards. The financial sector generally uses the term(s) sustainable finance or sustainable development to describe funding provided to biodiversity related sectors. Other terms generally being used include finance for nature-based solutions or nature-positive production systems. It should be noted though that the lack of agreement on nomenclature for biodiversity finance and biotrade-related production systems itself makes it challenging to adequately describe the sector in financial market terms.

#### **4.1.1 Sustainable Development and Multilateral Development Banks**

International Financial Institutions (IFIs) play a critical role in promoting sustainable development, as explored by Park (2005). Transnational advocacy networks have influenced IFIs by employing strategies like lobbying, persuasion, and social influence, leading to the internalization of sustainable development norms. The International Finance Corporation (IFC), for instance, has evolved into a financier of sustainable development by incorporating these norms into its policies and projects.

Adeyemi (2014) further investigated the role of regulatory instruments in advancing sustainability, focusing on the IFC's 2012 Performance Standards. These standards guide Multilateral Development Banks (MDBs) in setting sustainable project financing practices. However, the study critiqued commercial banks' financing activities, highlighting the gap between financial practices and sustainable development goals. García-Sánchez et al. (2019) expanded on this by analysing the integration of IFC Performance Standards with Global Reporting Initiative (GRI) guidelines in corporate social responsibility (CSR) reports. This GRI-IFC disclosure strategy was found to enhance the accuracy of financial analysts' forecasts while strengthening the reflection of environmental and social dimensions in corporate reports.

#### **4.1.2 Green Financing, Biodiversity Safeguards and Emerging Markets**

The green bond market's growth since 2008, as detailed by Bolton et al. (2020), reflects increasing interest in financing sustainable infrastructure. However, green bonds remain limited in emerging markets, where investments are most needed. To address this gap, the authors proposed the AP EGO fund, a global public-private investment partnership (GPPIP) involving public agencies, private operators, development banks like the IFC, and institutional investors. This initiative introduces emerging-market green bonds, reimagining public-private partnerships to channel institutional savings into sustainable infrastructure.

Biodiversity and its interplay with business have also gained attention. Destailleur (2022) emphasised the mutual dependence between businesses and biodiversity, advocating for nature-based economic models where companies contribute to conservation while benefiting from ecosystem services. Similarly, Pettinotti and Quevedo (2023) highlighted the fragmented finance landscape for nature-based solutions (NbS), particularly in Africa. Despite the limited private sector investment, they noted increasing corporate interest in NBS to secure long-term value along supply chains. Narain et al. (2023) focused on biodiversity safeguards in infrastructure investments, showing that nearly half of public development banks adopt safeguards aligned with IFC Performance Standard 6 to mitigate biodiversity loss.



Infrastructure development's impact on biodiversity, as examined by Redmond and Nasir (2020), reveals contrasting effects. While natural resource abundance supports economic growth, it often undermines human development. Trade openness was found to have a more significant positive effect than institutional quality, highlighting the complex relationship between growth and sustainability. Paley (2022) addressed government subsidies harmful to biodiversity, critiquing the slow progress toward reforming incentives under the Aichi Biodiversity Targets. These harmful subsidies, pervasive in agriculture and forestry, underscore the need for international support to achieve biodiversity goals under the post-2020 Global Biodiversity Framework.

#### **4.1.3 Policy, Governance and Advocacy**

The role of governance and advocacy in sustainability was explored by D'Alisa and Kallis (2020), who proposed a Gramscian theory of the state to bridge the gap in degrowth scholarship. They argued for a combination of grassroots and institutional actions to achieve radical policy and social change. Mont'Alverne and Lima (2023) highlighted the European Union's role as a global norm shaper through the European Green Deal (EGD). Despite the EU's progress in monitoring the EGD, consistent implementation among Member States remains a challenge.

#### **4.1.4 Biodiversity Finance and Global Initiatives**

Nature-based solutions (NBS) offer promising strategies for sustainable agriculture and biodiversity conservation. Hodson et al. (2020) explored how NBS balance the restoration of productive systems with environmental protection to meet growing population demands. Wyman (2024) reinforced the potential of the financial sector to accelerate NBS adoption by developing investable market opportunities. However, the current US\$35 billion invested in biodiversity financing pales in comparison to the US\$5 trillion directed to conventional economic activities, underscoring the urgent need to redirect capital toward sustainability.

Finally, Emerton (2023) highlighted the evolving nature of biodiversity finance mechanisms, noting significant gaps in funding to achieve the Kunming-Montreal Global Biodiversity Framework targets. While some areas receive adequate attention, many developing countries remain underfunded. Strengthening biodiversity finance requires not only increased investment but also structural reforms, better management capacities, and incentives that promote conservation at local levels.

This comprehensive exploration across publications emphasises the interplay between financial mechanisms, biodiversity conservation, governance, and sustainable development. It highlights the need for innovative solutions and coordinated efforts to address the multifaceted challenges of sustainability.

### **4.2 Feedback and Insights from Stakeholders**

The information presented by key stakeholders on various financing themes for SMEs in the biotrade sector is provided in Table 5. It should be noted that generally financial support is concentrated around absorption capacity and ticket sizes for tailored financial products or options. The tailored products were found to be tied to specific initiatives with a start and end date. The latter products are not generally available in the market but are based on calls for proposals and specifically bilaterally or multilaterally agreed programmes and/or projects. Furthermore, Figure 8 provides an overview of these relative financial flows for biotrade and biodiversity-based value chains in Southern Africa, specifically Namibia and South Africa.

SIPPO (Swiss Import Promotion Programme) does provide guarantee schemes, however, details are not available for Southern African businesses.

Several institutions, mainly official development cooperation agencies (ODA), offer market access and trade facilitation as well as capacity building and technical assistance to SMEs,

Cooperatives, Communities, NGOs, business support organisations, civil society organisations and community-based organisations. These include for Southern Africa:

- Various GIZ programmes: BIA II, CCIU, ABioSA, ProBATS
- USAID, which pays up to 60% of the costs of such interventions; the remainder is considered the organisation's own commitment fee
- UK DFID, under its Trade Forward Southern Africa Programme (TFSA)
- UNDP's BIOFIN (Biodiversity Finance Initiative)
- UNCTAD BioTrade Initiative

In Namibia, there is general support towards SMEs from the government regarding equipment and grant funding. Several ministries support SMEs, but this support is not targeted towards biotrade and bioprospecting. The funding generally does not go beyond between €2,500 to 5,000 per company; one-off only. However, support programmes between the different ministries are not coordinated. Therefore, it can happen that multiple ministries would channel support to a specific SME and/or cooperative, and/or community.

Within the South African context, several government institutions provide support to their specific target groups. Such support interventions are usually a combination of technical assistance, capacity building, trade facilitation, financial incentives as well as grant funding. The following institutions provide biotrade-related or biodiversity relevant support:

- The Department of Trade, Industry and Competition (DTIC) provides technical assistance programmes, incentives schemes and provide an enabling policy environment for SMEs and cooperatives
- The Department of Science and Innovation (DSI) provides technical and a bio-economy policy framework, and through the Technology Innovation Agency (TIA), technical assistance programmes directed towards bioprospecting
- The Department of Fisheries, Forestry and Environment (DFFE) on an enabling policy environment, with specific technical support provided towards communities on access and benefit sharing mechanisms.

These three institutions form the leadership of the Bioproducts Advancement Network of South Africa (BioPANZA) which has five clusters through which support is networked for the sector. These clusters are (i) Sustainable Supply, (ii) Innovation, (iii) Finance, (iv) Market Access and (v) Policy. The Finance Cluster incorporates the Industrial Development Corporation (IDC) which is currently piloting the Natural and Indigenous Products (NNIP) Fund.

Some private sector initiatives augment or supplement ODA initiatives, while other private sector players have established their own civil society organisations to mainly support their suppliers and/or value chain actors to remain compliant to mandatory regulations and market conditions. These include:

- German Sparkassenstiftung, which supports SMEs on trade facilitation and financial literacy in target countries, albeit not biotrade specific.
- Swiss Givaudan Foundation, which supports their supplier communities with social welfare projects.
- French L'Oréal, which supports their supplier communities with social welfare projects, traceability and quality improvements of input materials and ingredients.
- Swiss Julius Baer Bank, which supports communities in biotrade supply and value chains with production facilitation and social welfare projects.

## Box 5. *Interesting funds serving biotrade adjacent sectors*

During the study we looked for funds specifically serving the “biotrade” sector. Our interpretation of “biotrade” is informed by the Southern Africa definition which refers to the processing and trading of products from indigenous species. This led to a realisation that “biotrade” to people outside of Southern Africa can mean a wide variety of other types of products. These include products from:

- Agroforestry
- Organic agriculture
- Fair-trade
- Regenerative agriculture
- Agricultural practices linked to biodiversity or conservation indicators
- Agriculture and forestry leading to carbon sequestrations with carbon credits and biodiversity credits opportunities for investors.

We can term these related sectors “adjacent” to biotrade.

These adjacent sectors are increasingly well served with specialised and innovative funds. They included funds with a wide variety of investors and supporters such as private investors and banks with ESG emphases and impact investors, companies supporting funds which invest in value chains of specific interest to them, development finance institutions, development cooperation organisations and environmental NGOs.

The funds include:

- Amazon Biodiversity Fund
- Climate Fund for Nature
- Conservation International’s CI Ventures
- Regenerative Fund for Nature
- Livelihoods Funds
- Various funds of The Nature Conservancy
- Funds supported by Rabobank
- Moringa Fund
- EcoEnterprises Fund
- Clarmondial and the Food Securities Fund
- Nature Finance initiatives

These funds and initiatives provide interesting insights into how funds and other initiatives to invest in biotrade could be put together. Blended finance, environmental goals, technical assistance are common themes. Further details of these initiatives can be found in the presentation “Examples of interesting funds in biotrade “adjacent” sectors”.

Enterprise development programmes run by major South African retailers that are active both, in South Africa and Namibia. These assistance programmes include:

- Shoprite Holdings “Home Grown” programme for all locally made products distributed through dedicated outlets to help SMEs obtain scale
- Contract manufacturing for the house brand. Here several retailers aid SMEs to enter the consumer market and reach economies of scale. Particularly Shoprite Holdings, Spar, Food Lovers and Clicks offer opportunities to SMEs.
- Deposits or Invoice Prepayments or Cash on Delivery Payments are offered particularly to SMEs in the perishables industry. This helps SMEs remain afloat with working capital while scaling operations.

Details of the various stakeholders consulted, and their support programmes are provided for in Annexure 1a and Annexure 1b. Table 5 provides an overview of funding institutions and the type of financial instruments offered for the biotrade sector in general.

Table 5. Typical funding offerings and financial mechanisms available in the biotrade sector

Thematic category	Institution	Source of Funding	Financial Mechanism	Target	Minimum Funding Size (EUR)	Maximum Funding Size (EUR)
Tailored Financial Products	International Finance Corporation (IFC)	Development Finance	Loan	Corporates, Intermediaries	1,000,000	100,000,000
	Development Bank of Namibia (DBN)	Development Finance	Loan	SME	2,500	5,000,000
	Agricultural Bank of Namibia	Development Finance	Loan	SME	5,000	5,000,000
	Environmental Investment Fund of Namibia (EIF)	Development Finance	Blended Finance	Communities, NGO, CSO, SME	5,000	250,000
	Kreditanstalt für Wiederaufbau (KfW)	Development Finance	Blended Finance	Corporates	1,000,000	20,000,000
	Fonds Français pour l'Environnement Mondial (FFEM)	Development Finance	Blended Finance	Corporates, Intermediaries	500,000	2,000,000
	EEP Africa	Development Finance	Grant	SME	100,000	500,000
		Development Finance	Repayable Grant	SME	500,000	5,000,000
		Development Finance	Loan	SME	1,000,000	10,000,000
	Global Environment Facility (GEF)	Development Finance	Blended Finance	Corporates, Intermediaries	1,000,000	100,000,000

	USAID	Development Finance	Blended Finance	SME	2,500	100,000
	Global Environment Facility (GEF) Small Grants Scheme	Development Finance	Grant	Communities, NGO, CSO, SME	45,000	900,000
	Green Climate Fund	Development Finance	Blended Finance	Corporates, Intermediaries	1,000,000	100,000,000
	EU Biodiversity for Life (B4Life) initiative	Development Finance	Grant	Corporates, Intermediaries, Governments, NGO, CSO	1,000,000	10,000,000
	KfW	Development Finance	Grant	Communities	500	2,500
	International Climate Initiative (IKI)	Development Finance	Grant	Corporates, Intermediaries	20,000	200,000
	Critical Ecosystem Partnership Fund (CEPF)	Development Finance	Grant	NGOs	9,000	450,000
	South African National Biodiversity Institute (SANBI)	Development Finance	Grant	Communities	5,000	50,000
	National Lotteries Commission (ZA NLC)	Development Finance	Grant	Communities, NGO, CSO	2,750	250,000
	Development Bank of Southern Africa (DBSA) Green Fund	Development Finance	Blended Finance	Communities, SME	12,500	100,000,000

	United Nations Development Programme (UNDP) – Small Grants Programme (SGP)	Development Finance	Blended Finance	Communities, NGO, CSO	45,000	1,000,000
	African Climate Change Fund (ACCF)	Development Finance	Grant	Corporates, Intermediaries	250,000	100,000,000
	WWF South Africa Green Trust	Civil Society Finance	Grant	Communities, NGO, CSO	10,000	100,000
	Darwin Initiative	Civil Society Finance	Grant	Communities, NGO, CSO	20,000	3,000,000
	Rufford Foundation	Civil Society Finance	Grant	Communities, NGO, CSO	7,000	100,000
	Nedbank NNF GoGreenFund	Private Sector Finance	Grant	Communities, SME	500	5,000

SMEs are supported by different types of funding. The biggest source of funding for SMEs in the biotrade sector remains development funding. However, the picture remains bleak for SMEs. Significant financial flows are channelled towards corporates and intermediaries in terms of debt instruments and blended finance. Direct funding towards SMEs is mainly limited to debt instruments. SMEs mostly benefit from various technical assistance (not enumerated) interventions, in the form of trade facilitation, market access and capacity building. Figure 8 provides an overview.

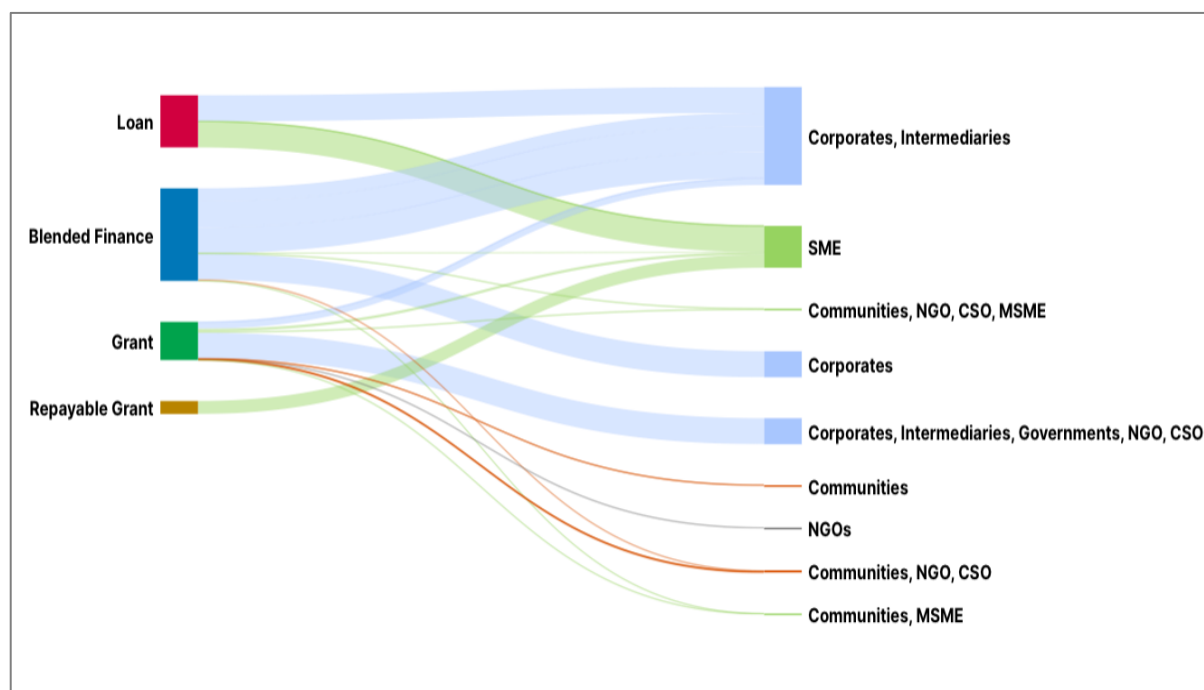


Figure 8. *Relative Financial Flows for Biotrade and Biodiversity Funding from Type of Financial Product to Target Group(s) based on stakeholder engagements (Annexure 1).*

## 4.3 Trends, Patterns and Key Learnings

### 4.3.1 Challenges and Opportunities in Biotrade

Hodson et al. (2020) identified challenges in nature-positive production, such as weak knowledge systems, higher transaction costs, prejudices against its effectiveness, and time lags in benefits. These challenges hinder the commercialisation of biodiversity-based products, highlighting the need for better coordination, investment, and knowledge dissemination.

Box 6. *How the biotrade sector can support industry innovation and benefit from it*

Plant genetic resources (PGR) and plant biodiversity offer significant innovation opportunities across various sectors, including cosmetics, foods and beverages, dietary supplements, and perfumery.

**Innovation Opportunities in Various Sectors**

1. **Cosmetics:**
  - **Natural Ingredients:** PGR provides a wide array of natural ingredients that can be used in skincare, haircare, and makeup products. Plant extracts, oils, and active compounds derived from diverse plants can enhance skin health and appearance.
  - **Sustainability:** The use of plant-based ingredients aligns with the growing demand for sustainable and eco-friendly products, appealing to environmentally conscious consumers.
2. **Foods and Beverages:**
  - **Flavour and Aroma Compounds:** Many plants produce unique flavour and aroma compounds that can enhance the taste and scent of food and beverages. This includes spices, herbs, and other botanicals that have culinary and therapeutic uses.
  - **Nutritional Benefits:** PGR can be harnessed to create functional foods and beverages that provide additional health benefits, such as antioxidant properties, vitamins, and minerals.
3. **Dietary / Food Supplements:**
  - **Bioactive Compounds:** Many dietary supplements are derived from plants known for their health-promoting properties. PGR serves as a source of bioactive compounds that can support various health claims, such as anti-inflammatory, immune-boosting, and anti-aging effects.
4. **Perfumery:**
  - **Franchise Ingredients:** Plants are a primary source of essential oils and aromatic compounds used in perfumes and scented products. The diversity of plant species offers a vast palette of scents that perfumers can explore.

**The Value of Plant Genetic Resources**

Plant genetic resources and biodiversity are treasure troves of millions, if not billions, of unique molecules and compounds. Here's how this diversity translates into value:

- **Chemical Diversity:** Each plant species can produce a multitude of chemical compounds, including terpenoids, flavonoids, alkaloids, and phenolics. This chemical diversity allows for a wide range of applications and the potential for novel discoveries in various industries.
- **Innovation Potential:** The untapped genetic diversity within plants can lead to the discovery of new compounds that can be developed into innovative products. For instance, screening lesser-known plant species might reveal novel anti-aging agents for cosmetics or new flavours for the food industry.
- **Traditional Knowledge:** Indigenous communities often possess extensive knowledge about the uses of local plant species. Integrating this traditional knowledge with modern research can enhance product development and create unique offerings in the marketplace.
- **Biodiversity Conservation:** Utilizing PGR encourages the conservation of plant biodiversity, which is crucial for maintaining ecological balance and ensuring the sustainability of these industries.

In summary, the rich tapestry of plant genetic resources provides immense opportunities for innovation across multiple sectors by leveraging the vast array of unique molecules and compounds they offer. The continued exploration and application of these resources can lead to groundbreaking products that cater to the evolving demands of consumers.

### 4.3.2 Global Frameworks and Leadership, and Policy Innovation in Biodiversity Protection

Mont'Alverne and Lima (2023) analysed the EU's leadership in biodiversity protection through the European Green Deal (EGD), which sets high environmental standards and influences global governance. Tools like the EGD Barometer monitor progress, but challenges such as member state commitment and expert access persist.



Wyman (2024) argued for the development of guidance and frameworks to help financiers navigate the complexities of biodiversity-based investments. Creating pipelines for investable market opportunities can facilitate nature-positive economic transitions.

### **4.3.3 Role of the Multilateral Development Banks and Sustainable Development Practices**

Adeyemi (2014) emphasised the importance of the IFC in improving corporate governance, risk management, and sustainable financing. By providing debt and equity financing to private institutions, the IFC has influenced corporate practices, strengthened accountability, and supported sustainable development initiatives in developing countries. This evolution reflects a shift towards greater consideration of social and environmental impacts in project finance.

### **4.3.4 Biodiversity Safeguards in Development Bank Investments**

Narain et al. (2023) revealed significant gaps in biodiversity safeguards among development banks, with only a small percentage adopting robust guidelines like IFC Performance Standard 6. These safeguards are crucial for mitigating biodiversity loss in infrastructure projects.

### **4.3.5 Addressing Gaps in Biodiversity Finance**

Pettinotti and Quevedo (2023) highlighted challenges in accessing international climate finance, including lengthy accreditation processes, high transaction costs, and a lack of coordination among climate funds. Successful projects in Africa, such as those in Rwanda and Kenya, demonstrated the potential of decentralized finance models to support biodiversity-based initiatives.

Emerton (2023) identified structural constraints and underfunded areas in biodiversity finance, emphasising the need for enhanced capacities, systems, and financial mechanisms. Development agencies like GIZ were suggested as key actors in scaling up biodiversity finance.

*Box 7. To scale a sustainable biotrade sector a comprehensive strategy will be required*

South Africa and Namibia possess remarkable indigenous plant and tree biodiversity, a natural asset that holds significant potential for driving sustainable economic development. Many of these indigenous resources, such as rooibos, marula, and devil's claw, are intricately tied to traditional knowledge, offering both comparative and competitive advantages on the global stage. By leveraging these resources, South Africa and Namibia can cultivate a unique position in the international biotrade sector, creating value-added products that reflect rich cultural heritage while meeting growing global demand for natural and sustainably sourced ingredients.

To harness this potential, however, these countries need a comprehensive strategy to address the unique and layered challenges of the biotrade sector. Gaining access to international markets is often a complex and costly process, involving strict non-tariff measures (NTMs) related to quality standards, regulatory approvals, and sustainability certifications. Many of these measures necessitate substantial financial investments and expertise, which can be prohibitive for small and emerging producers. Furthermore, the industry requires consistent innovation, research and development (R&D), and new product development to stay competitive and meet evolving consumer demands. This demands investment in both scientific research to validate the traditional uses of indigenous plants and development in processing technologies to maintain product integrity while achieving scalability.

In addition to these logistical and technical barriers, it is critical that South Africa and Namibia promote inclusive economic models that ensure those at the beginning of the value chains—such as harvesters, farmers, and cooperatives—benefit equitably. Empowering these individuals and groups to act as value-adders and enterprise owners can transform them from raw material suppliers into stakeholders with long-term vested interests in the industry's success. Achieving this would require targeted policies and support for capacity-building, infrastructure development, and market linkage programs that facilitate shared ownership and decision-making. A well-structured strategy that holistically addresses these challenges can enable South Africa and Namibia to position their indigenous resources not only as commodities but as sustainable growth engines, fostering economic resilience, environmental stewardship, and cultural preservation in an increasingly competitive global biotrade landscape.

As South Africa and Namibia work to scale industries based on indigenous plant resources, demonstrating, verifying, and certifying sustainable conservation practices become essential. With rising global consumer awareness of sustainability, companies sourcing and using indigenous resources are expected to adhere to conservation practices that prevent overharvesting and protect biodiversity. Failure to do so risks not only environmental degradation but also potential backlash from increasingly eco-conscious consumers and regulatory bodies in international markets. Conservation certification or verification signals to consumers and stakeholders that the industry values the preservation of natural resources, enhancing brand credibility and creating a competitive advantage.

Certifying conservation practices also requires systematic approaches to verify that indigenous plant resources are being harvested responsibly, preserving ecosystems, and supporting biodiversity. Many certification frameworks, such as FairWild or the Union for Ethical BioTrade, provide structured protocols for sustainable resource management, and securing these certifications often requires collaboration with local communities, environmental organizations, and government agencies. By investing in conservation certification, South Africa and Namibia can set a global standard for biotrade, ensuring that commercial activities not only protect but enhance the natural landscapes and ecosystems these industries rely upon. In doing so, they strengthen the long-term viability of the industry and contribute positively to the global narrative around ethical and sustainable sourcing of natural products.

### **4.3.6 Building Institutional Capacities and Enhancing Financial Systems**

Redmond and Nasir (2020) underlined the significance of robust institutions and monitoring systems for effective resource management and economic growth. Investments in human capital, R&D, and financial development were recommended to enhance absorptive capacities and foster innovation in the biodiversity sector.

### **4.3.7 Key Learnings from Publications**

The key learnings from the publications highlight the critical steps necessary to promote biodiversity-based value chains and sustainable development. First, adopting lessons from the International Finance Corporation's (IFC) approach to corporate governance, risk management, and sustainable finance can help actors in regions like South Africa and Namibia institutionalise practices that align with social and environmental accountability standards. Addressing challenges in biodiversity-based production systems, such as knowledge gaps, high transaction costs, and weak advisory systems, is essential for facilitating commercialisation and equipping stakeholders with the skills needed to overcome these barriers. Investments in human capital, research and development (R&D), and institutional quality are vital to fostering innovation, competitiveness, and financial development, which are key to creating a conducive environment for biodiversity-based industries.

Efforts to streamline accreditation processes, improve coordination among international climate funds, and learn from successful decentralised financing models can reduce barriers to accessing finance and enhance national capacities for biodiversity initiatives. Encouraging development banks to adopt biodiversity safeguards, aligned with international best practices, is essential for mitigating biodiversity loss in infrastructure projects. Globally, leveraging policy innovation and leadership, such as the European Green Deal, can inspire sustainable biodiversity governance and strengthen environmental standards.

Additionally, addressing gaps in biodiversity finance through tailored financial mechanisms and targeted stakeholder engagement can enhance resource allocation and sustainability. Development agencies like GIZ can play a pivotal role in scaling biodiversity finance.

Finally, providing financiers with comprehensive guidance and frameworks can help navigate market complexities, develop investable opportunities, and accelerate the transition to nature-positive economic systems, ultimately supporting biodiversity conservation and sustainable development.

**Box 8.**      *LOHAS – an enormous market potential of biotrade*

The "Lifestyle of Health and Sustainability" (LOHAS) is a powerful, long-term market trend emphasising health, eco-consciousness, and social responsibility. This shift in consumer values is creating significant demand for products that align with these principles, driving opportunities for industries that can offer sustainable, ethically produced goods.

**1. Core LOHAS Values and Market Appeal**

- **Health & Wellness:** LOHAS consumers prioritize natural, minimally processed products for personal health. They increasingly seek ingredients sourced from nature, particularly those with holistic or therapeutic benefits, which directly aligns with biotrade offerings.
- **Sustainability & Environmental Impact:** Sustainability is central to LOHAS, with consumers preferring products with a low environmental footprint. The biotrade industry's emphasis on preserving biodiversity and responsibly sourcing raw materials from indigenous plants meets this demand.
- **Social Responsibility:** LOHAS consumers are interested in products that provide benefits beyond the individual, such as supporting fair wages and community development. Biotrade companies, by generating local jobs and supporting community infrastructure, address these values directly.

**2. Market Potential for Biotrade**

- The biotrade sector can benefit greatly from LOHAS, as consumers seek authenticity, tradition, and stories behind products—qualities that biotrade naturally offers through its use of indigenous plants and community-driven processes. Products derived from indigenous plants hold appeal for their unique benefits, connecting consumers to nature while supporting ecosystems and local communities.
- With LOHAS expected to grow as a long-term trend, biotrade companies can expect enduring demand, especially in categories like natural personal care, wellness, and functional foods. Consumers in the LOHAS segment are often willing to pay premium prices, offering strong revenue potential for biotrade products.

**3. Long-Term Market Pull**

- As consumers become more aware of the environmental and social impacts of their purchases, the pull for biotrade products is only expected to strengthen. This demand extends beyond niche markets, as sustainability and wellness continue entering the mainstream, impacting sectors like food, cosmetics, pharmaceuticals, and fashion.
- By supporting LOHAS values, biotrade companies are positioned for growth, as their practices align with consumer preferences for sustainability, fairness, and natural products. This also creates room for unique product branding, focusing on the authenticity of ingredients, their origins, and positive community impact.

**4. Economic and Social Impacts**

- The biotrade industry not only captures market potential by catering to LOHAS consumers but also generates substantial community benefits. Sourcing from indigenous plants often involves local farming and harvesting methods, which creates jobs, supports community economies, and protects biodiversity.
- LOHAS thus provides a mutually beneficial platform for biotrade industries, promoting sustainable consumption while contributing to rural development, fair wages, and preservation of cultural heritage.

In summary, LOHAS represents a compelling, long-term driver of market demand, offering sustained growth and premium pricing potential for biotrade products. This trend not only satisfies consumers' sustainability and health goals but also ensures significant social and economic benefits for local communities and the environment.

---

## 5 Key Research Results

### 5.1 Critical Analysis of Findings from Publications and Stakeholder Engagement

We were not able to find relevant information on financial mechanisms in the biotrade sector regarding the following financial product categories:

- Guarantee schemes: Credit or Export Guarantee Schemes
- Digital and other Financial Services, including Fintech Solutions and Value and Supply Chain Financing

SMEs are vital to developing and emerging economies, contributing significantly to employment and GDP. They are seen as key drivers for economic growth and job creation, regardless of whether they are formally incorporated or set-up or operating in an informal setting. In the biotrade sector, business is mostly driven by IPLCs, community forests, conservancies and/or cooperatives as suppliers of raw materials and ingredients to the biotrade sector. While these are recognised by governments and registered in terms of national mandatory requirements, the financial sector players or intermediaries don't necessarily accept such community structures as credible business entities to whom they could avail funding or provide lending products for commercial purposes (divers discussions with stakeholders (2024), Annexure 1).

The literature reviewed and stakeholders engaged confirmed the hypothesis that SMEs find it challenging to impossible to obtain appropriate funding or access financial mechanisms that fit their business expansion and product development and marketing requirements over the short to long term. The additional requirements that SMEs need to fulfil in the biotrade sector exacerbate these challenges. The main findings of the studies and stakeholders cited the following pertinent short comings (Table 6).

In addition, there is a noticeable absence of academic studies/ research focusing specifically on the financing of biodiversity in Namibia. Most available research tends to address broader environmental issues without delving deeply into the financial mechanisms required for effective biodiversity conservation. The existing studies on biodiversity, e.g., in Namibia often lack analysis of financial strategies and mechanisms needed to support biodiversity initiatives sustainably. Although Namibia's National Biodiversity Strategy and Action Plan (NBSAP2) outlines strategies for biodiversity conservation, it lacks detailed research on the financial instruments and investment frameworks necessary to implement these strategies effectively.

Information on the South African biotrade sector is more easily accessible than in the Namibian case. South African market capitalisation and size is multiple times larger than that in Namibia, also for the biotrade sector. This means South African financial services to SMEs are somewhat more diversified, offering various financial mechanisms to SMEs. However, the requirements of the biotrade sector may be limiting the scope of financial services.

Table 6. Key challenges faced by SMEs in the biotrade sector as cited by literature and stakeholders

Key challenges	Description
<b>Operational challenges</b>	<ul style="list-style-type: none"> <li>Many SMEs in Namibia struggle with low capacity and lack of upskilling and training, leading to failures and lack of investor confidence. These SMEs often lack governance, financial reporting, and fear losing control of their businesses.</li> <li>Low salaries make it hard to retain talented staff or attract new talent, further hindering their growth.</li> <li>A lack of managerial skills and training is a critical factor contributing to the high failure rate of SMEs.</li> </ul>
<b>Market Challenges</b>	<ul style="list-style-type: none"> <li>Limited visibility to a broader investor base is a major challenge for SMEs in Namibia. Many SMEs lack websites and are not listed in a register, making it difficult for international investors to discover them.</li> <li>SMEs often respond to one-time client demands based on available funding rather than sustaining activities to reach a larger market. Most start-ups and SMEs fail to reach the growth stage, with only a few integrated into global value chains sustaining and expanding their markets.</li> </ul>
<b>Mandatory Compliance Challenges</b>	<ul style="list-style-type: none"> <li>The absence of a government-led SME strategy in Namibia has hindered the development of small and medium enterprises. Factors such as high business registration costs, lengthy registration processes, unfavourable taxation regulations, and corruption have all contributed to the challenges faced by SMEs in the country.</li> <li>The dynamic and often unpredictable nature of regulatory policies in Namibia and South Africa adds to the compliance burden. Frequent changes in regulations necessitate constant updates to business practices, which can be costly and time-consuming for SMEs to implement.</li> <li>The mandatory and market requirements of the destination markets are very dynamic in especially the biotrade market. These can often not be met to the extent required and in a timely manner due to a lack of financial resources and information asymmetry.</li> <li>Although studies suggest that commercial banks in Namibia and South Africa are interested in serving SMEs, various obstacles hinder their involvement. Regulations such as the Financial Intelligence Compliance Act (FICA) and the National Credit Act (NCA) are significant hindrances to financing SMEs. However, factors such as lending technology and collateral have a positive and significant impact on the supply of credit to SMEs. Aligning lending techniques with technological developments is crucial to reaching more SMEs, even in remote areas.</li> </ul>
<b>Financial constraints</b>	<ul style="list-style-type: none"> <li>Namibia's capital markets are inefficient for SMEs, lacking financing options and liquidity.</li> <li>Accessing microfinance support for SMEs is not easy, or not available. Also, microfinance institutions themselves are not sufficiently established to cater for business relevant lending.</li> <li>SMEs lack collateral to secure appropriate funding and paired with lack of credit history and financial reports, obtain negative credit ratings or no credit assessment at all.</li> <li>The application process for financial support is lengthy, which hinders business growth.</li> <li>SMEs can only access support once a year, and the maximum amount they can borrow may not be sufficient for medium enterprises.</li> <li>Start-ups and SMEs lack equity, working capital, and long-term funding for investments. This leads to operational challenges and distribution issues, resulting in many entrepreneurs worrying about business survival or having to close.</li> <li>Donor funding plays a vital role in biodiversity finance in Namibia, it is often limited in scale and subject to donor priorities. This funding is essential for activities that may not attract private sector investment, but it is not a sustainable or scalable long-term solution.</li> <li>Alternative financing options, such as venture capital and government grants, are available but not always accessible or well-known to all entrepreneurs.</li> </ul>

Key challenges	Description
	<ul style="list-style-type: none"> <li data-bbox="504 252 2004 335">• The informality of many SMEs and the rapid growth of the digital economy present unique challenges. Traditional financial solutions often fail to support the evolving needs of SMEs in the digital age. There is a pressing need for innovative financial products and services tailored to the specific circumstances of SMEs operating in informal sectors and the digital economy.</li> <li data-bbox="504 335 1657 363">• Even when credit is available, high costs associated with loans and financial products can be prohibitive.</li> <li data-bbox="504 363 1713 392">• Lack of financial literacy and fiduciary governance inhibit access to funding or conventional financial products.</li> </ul>
<p>(Sources: Amadhila (2020), BioFIN, Botha, et. al. (2021), Boubekour and Githinji (2023), Brown and Amutenya (2024), FinMark Trust, Msomi and Olarewaju (2021), Nangolo and Hamukoto (2023), National Small Business Chamber (NSBC), Nautwima and Asa (2021), Small Enterprise Development Agency, South Africa, Thrive CFO, South Africa, UNDP)</p>	



## 5.2 Comparison of Findings from Publications and Stakeholder Engagements

SMEs (Small, and Medium Enterprises, including Micro Enterprises and Cooperatives) in the biotrade sector—which includes sustainable use and commercialisation of biodiversity-based products—face unique opportunities and challenges when it comes to accessing finance. The key comparisons and contrasts of the findings by literature and stakeholders in SME finance in the biotrade sector concern the following:

### 5.2.1 Limited Access to Traditional Finance

**High Risk Perception:** Financial institutions often perceive SMEs in biotrade as high-risk due to their reliance on natural resources, market volatility, and environmental regulations.

**Lack of Collateral:** SMEs in the biotrade sector often operate informally (especially in the case of Namibian cooperatives), have limited assets, making it difficult to secure loans from retail banks. Even development banks, like the IDC, AgriBank of Namibia or the Development Bank of Namibia have registered high default and write-off rates for SMEs, particularly in the post-COVID period due to lack of collateral.

**High Interest Rates:** The discussions with local retail banks further confirmed that financial products for SMEs in the biotrade sector do not exist. When loans are available, SMEs often face high interest rates due to the perceived risks and lack of sector-specific financial products.

### 5.2.2 Emergence of Impact Investment and Green Finance

**Impact Investors:** There is a growing number of impact investors who target SMEs in the biotrade sector due to their potential for positive environmental and social outcomes. However, these seem to focus on entrenched biodiversity finance products only to date; for example, for agro-forestry related sectors, like the cacao or shea butter crop production systems. Here quick wins are possible, with a steady production and income stream.

**Blended Finance:** Some financial products combine public and private funding, reducing risk for private investors while providing SMEs with better access to capital. Examples include concessional loans or guarantees provided by development finance institutions (DFIs), which were secured through for example the Global Climate Fund (GCF) or the Global Environment Facility (GEF). It should be noted though, these blended finance options for the biotrade sector are mainly being delivered by GCF or GEF to their accredited financial intermediaries, pushing up the cost of finance to SMEs.

**Green Bonds or Securities:** Some financial institutions are exploring green bonds or sustainability-linked loans specifically for enterprises involved in biotrade and sustainable natural resource use. Bonds and securities were not found to be available for the biotrade sector in Southern Africa.

### 5.2.3 Government and Donor Support

**Development Cooperation:** Governments, particularly in the biodiversity-rich countries as within the BIA II scope, are working with international organisations to support biotrade SMEs through grants, concessional loans, and technical assistance. Agencies like UNCTAD's BioTrade Initiative, GIZ, or SECO provide support for capacity building, access to markets, and finance. The finance is provided as purpose bound funding under public-private partnership (PPP) approach.



**National Development Banks:** In some countries, national development banks provide targeted finance for sectors like biotrade, especially where biodiversity protection is aligned with national economic goals. However, such is generally available for SMEs pursuing conventional means of production; tailor-made financial mechanisms for the biotrade sector were not found.

#### 5.2.4 Microfinance and Cooperative Financing

**Microfinance Institutions (MFIs):** In the absence of formal financial options, SMEs in the biotrade sector often rely on microfinance institutions, particularly for working capital. While the loans are typically small and come with high interest rates, they can be essential for rural or community-based enterprises. MFI solutions in the biotrade sector were not found. However, loans from MFI in the Namibian and South African cases are only provided to individuals (not micro-businesses) and are salary-backed, with MFI having direct access to payroll deductions. This puts the individuals under extreme pressure, and further limits the business possibility to sufficiently scale, while not being able to build up a financial track record for the business.

**Cooperatives and Savings Groups:** Many biotrade SMEs in several African countries participate in cooperatives or savings and credit associations, which pool resources to provide members with low-interest loans. For example, this model is well established in Zambia or Malawi and supported by the Sparkassenstiftung, following the Grameen Bank (Bangladesh) model. However, such models were not found in the Namibian and South African cases.

#### 5.2.5 Value Chain and Trade Financing

**Embedded Financing:** SMEs often access finance indirectly through value chain actors, such as buyers, processors, or distributors, who provide credit for working capital or inputs with repayment based on future sales.

**Contracts with Large Buyers:** SMEs in biotrade may secure financing based on contracts or agreements with larger, established buyers who are able to provide guarantees to financial institutions.

**Embedded financing** options were not found to be available in the Namibian or South African biotrade sector. However, provision of production materials, like packaging materials, equipment or tools are commonly provided by the SMEs or their associates, especially to IPLCs or community-based cooperatives.

Larger supermarket chains or retailers offer **enterprise development programmes** in Namibia and South Africa. Some of these offerings are available even though SMEs have not reached economies of scale. Under these retailer options SMEs can apply to deliver contract manufactured goods under the retailer's branding or optimised payment terms to keep afloat with working capital. Nonetheless, SMEs must already be market ready with their biotrade-based products.

#### 5.2.6 Digital and Alternative Financing Models

**Crowdfunding:** Platforms such as Kiva, Kickstarter, and others have gained traction among biotrade SMEs, offering an alternative way to raise funds from supporters of sustainable and biodiversity-friendly businesses.

**Fintech Solutions:** Digital platforms offering peer-to-peer lending or mobile-based financial services are emerging, particularly in regions where traditional banking infrastructure is weak. Fintech allows SMEs to access loans, manage finances, and build credit history.

Neither of the latter options were found to be available in the Namibian or South African biotrade sector.

### 5.2.7 Capacity Building and Technical Assistance

**Business Skills:** Many SMEs in the biotrade sector struggle with financial literacy and business management skills, which are essential for accessing and managing finance. The capacity-building programmes, in the Namibian and South African biotrade cases are in majority funded by development agencies such as GIZ, USAID or UK DFID. These programmes play a crucial role in helping SMEs become bankable and market ready.

**Certification and Standards:** SMEs involved in certified sustainable practices (e.g., Fair Trade, Organic, GAP, GACP, GMP, etc.) may have better access to finance due to the added credibility that certifications provide. Some financial institutions offer lower rates or better terms for certified enterprises. However, for SMEs to become certified with the mentioned processes poses a challenge itself, and the costs associated with certification, first to become certified and then to maintain certification are relatively high. The reason here is that the product palette is generally not broad and INPs are niche products, delivered in small quantities.

### 5.2.8 Public-Private Partnerships and Ecosystem-Based Financing

**Ecosystem-Based Adaptation Finance:** Financial mechanisms that promote investments in ecosystem-based approaches (such as reforestation, biodiversity conservation, and agroforestry) are gaining traction, allowing SMEs to access funds aligned with their sustainable practices. The financial sector is generally attracted to these types of sustainable practices. However, in the Namibian and South African case one deals with in situ indigenous natural products, for which financial products or financing mechanisms don't exist yet.

**Corporate Social Responsibility (CSR) Investments:** Large corporations, especially in industries like cosmetics, pharmaceuticals, and food & beverages, are investing in SMEs in the biotrade sector to secure sustainable and traceable supply chains, providing finance and technical support in the process. Examples where the large corporation support biotrade related organisations in the Namibian and South Africa exist. However, the support hereto referred to targets IP&LC and cooperatives. SMEs, who in most instances are the production intermediaries, don't generally receive CSR-based investments.

### 5.2.9 Challenges of Scaling and Export Market Access

**Small Market Size:** SMEs in biotrade often struggle to scale due to the niche nature of biodiversity-based products. While demand for sustainable products is growing, SMEs face difficulties in meeting international market requirements and securing finance for expansion. This aspect is also closely linked to certification and standards. The major difference though, there are mandatory and voluntary market requirements. Generally, INP flow into the food and nutritional, health care (pharmaceuticals, nutraceuticals) and personal care (cosmetics) sectors, where several regulatory import/export requirements, based on tariff and non-tariff barriers must be overcome before such product is market ready. The obligations to meet such requirement lie with SMEs. Often the financial resources to meet these obligations are lacking and are generally not covered by retail revenues. SMEs therefore need to rely heavily on support from development agencies.

**Export Financing:** Export-oriented biotrade SMEs may require specific financing products such as export credit guarantees or trade finance, which can be hard to access without government or institutional support. Such schemes are national government based. In the

South African case, export credit or credit guarantee schemes are available; however, not in the Namibian case.

### **5.3 Analyses of Access to Finance for SMEs in the Biotrade Sector: PESTEL and SWOT Analyses**

SMEs in the biotrade sector in Namibia and South Africa play a vital role in biodiversity conservation, sustainable economic development, and rural livelihoods. However, they face significant challenges in accessing financial instruments due to regulatory, economic, sociocultural, technological, environmental, and legal constraints.

A PESTEL and SWOT analysis of the sector reveals key barriers and opportunities for improving financial access, particularly in the Southern African context. We have prepared a detailed analysis which is available as Annexure 3.

#### **5.3.1 Political and Regulatory Challenges in Namibia and South Africa**

Government policies and trade agreements significantly impact SMEs' ability to access finance. In both Namibia and South Africa, regulatory frameworks for biodiversity-based businesses are complex and often fragmented. While international cooperation and bilateral programmes provide opportunities for funding, local policy implementation remains inconsistent. Furthermore, trade barriers such as non-tariff measures (e.g., Novel Foods regulations in the EU) increase the cost and complexity of market entry for SMEs dealing with indigenous natural products.

##### **Namibian and South African Context:**

- Namibia's regulatory framework for Access and Benefit-Sharing (ABS) is relatively advanced but poses administrative challenges for SMEs engaging in biotrade. Many businesses struggle with compliance, which affects their eligibility for financial support.
- In South Africa, fragmented government support and slow reform of harmful subsidies hinder financial incentives for biodiversity conservation. SMEs also face challenges in securing targeted support to navigate regulatory frameworks effectively.

*Box 9. No more products like new products like Rooibos, Honeybush, Buchu, Devil's Claw, Aloe ferox without a funded strategy addressing market access requirements*

If we want to have new biotrade products successfully developed and launched into regulated markets the sector will need a strategy for addressing these regulations. There will be no more products like Rooibos, Honeybush, Buchu, Devil's Claw and *Aloe ferox* as these products entered EU and USA markets under previous regulatory regimes.

Regulations for foods, beverages, cosmetics, essential oils, and traditional herbal medicines in the EU have since tightened significantly in recent decades. This trend emphasizes consumer safety, scientific substantiation, and transparency, with regulatory frameworks increasingly rigorous to address new ingredients and products. Notably, under the Novel Food Regulation (Regulation (EU) 2015/2283), any food or ingredient that was not consumed to a significant extent within the EU before May 15, 1997, is considered a "novel food." Novel food encompasses ingredients from plants, algae, and animals as well as new production methods or applications. This regulation mandates that products falling under this category undergo rigorous safety assessments and receive formal EU approval prior to market entry. This process ensures that any potential health risks associated with unfamiliar foods are evaluated and managed, but it also imposes significant time and financial investments on businesses looking to bring new ingredients to the European market.

In parallel, traditional herbal medicinal products face stringent regulations under Directive 2004/24/EC, which amends the Medicinal Products Directive. This is the regulation which regulates much of the Devil's Claw access to the EU. For a traditional herbal medicine to qualify for a Traditional Herbal Medicinal Product Registration (THMPR), it must demonstrate evidence of 30 years of traditional use, of which 15 years should be within the EU. This requirement aims to ensure that traditional medicinal products have a proven record of safe use over time, minimising risks associated with untested therapeutic applications. While the THMPR pathway offers a simplified registration for herbal medicines, it mandates that manufacturers prove long-standing, traditional use supported by documentation, which can be challenging to verify for less well-known ingredients or those not traditionally used in Europe.

### **Implication for Access to Finance:**

Regulatory barriers deter financial institutions from investing in SMEs due to the perceived risks associated with compliance and market access. Tailored financial instruments, combined with government-backed guarantee schemes, could improve financial accessibility for SMEs navigating complex trade and regulatory requirements.

### **5.3.2 Economic Barriers and Market Constraints**

Biotrade SMEs in Namibia and South Africa operate in niche markets, producing high-value, low-volume products such as marula oil, devil's claw, buchu, and rooibos. While demand for sustainable products is growing, limited economies of scale, high transaction costs, and a lack of access to formal financial products constrain business growth. Financial institutions perceive SMEs in this sector as high-risk due to market volatility, seasonality of production, and a lack of collateral or credit history.

#### **Namibian and South African Context:**

- In Namibia, many biotrade SMEs are community-based and operate informally, limiting their ability to secure credit from traditional banks. Financial institutions often do not recognize cooperative ownership structures as viable for loan collateral.
- In South Africa, the financial landscape is more developed, but SMEs still struggle with high-interest rates, stringent loan requirements, and difficulties accessing green finance products. The dominance of large-scale agribusiness in export markets also marginalizes smaller biotrade enterprises.

### **Implication for Access to Finance:**

Conventional financial products do not cater to the unique business cycles of biotrade SMEs. Expanding blended finance options, impact investment, and value-chain financing—where large buyers provide financial support to suppliers—can help mitigate these challenges.

Development banks and microfinance institutions should also develop tailored loan products that consider the seasonality and long-term returns of biotrade investments.

### **5.3.3 Sociocultural and Community-Based Finance Considerations**

Many SMEs in Namibia and South Africa are deeply embedded in local communities and rely on traditional knowledge for sustainable harvesting practices. However, social and gender biases in financial institutions, lack of formal business structures, and weak networks limit access to capital.

#### **Namibian and South African Context:**

- In Namibia, financial institutions often do not recognize the business legitimacy of Indigenous Peoples and Local Communities (IPLCs) engaged in biotrade, leading to difficulties in securing loans. Community forest enterprises, for example, face barriers in obtaining working capital.
- In South Africa, women-led SMEs in rural areas face gender biases that restrict their ability to access formal finance. Additionally, many community-based enterprises lack financial literacy and documentation needed to meet banking requirements.

#### **Implication for Access to Finance:**

Community-based financing models, such as cooperative lending, microfinance, and NGO-facilitated financial support, are crucial for addressing these gaps. Strengthening financial literacy programs and ensuring financial institutions adopt inclusive lending practices can help integrate marginalized groups into the financial system.

### **5.3.4 Technological Barriers and Opportunities**

Technological innovation presents significant opportunities for biotrade SMEs, particularly through digital platforms for marketing, traceability, and alternative financing mechanisms such as crowdfunding. However, a lack of investment in research and development (R&D), low digital literacy, and limited access to technological infrastructure hinder adoption.

#### **Namibian and South African Context:**

- Namibia faces infrastructure challenges in rural areas, limiting access to digital financial platforms, mobile banking, and fintech solutions. Many SMEs still rely on cash transactions, which restricts their ability to access digital financial services.
- In South Africa, while fintech solutions are more widely available, the high cost of adopting new technologies and limited SME awareness of alternative financing options remain barriers.

#### **Implication for Access to Finance:**

Investing in fintech solutions, such as mobile banking, blockchain for traceability, and digital lending platforms, can enhance financial accessibility for SMEs. Training programs on digital financial tools and support for e-commerce adoption can further integrate biotrade SMEs into global markets.

### **5.3.5 Environmental Risks and Sustainability-Linked Financing**

Biotrade SMEs contribute to biodiversity conservation but face risks related to climate change, resource depletion, and stringent certification requirements. Access to sustainability-linked financial products, such as biodiversity bonds and green loans, remains limited due to high investment thresholds and a lack of tailored solutions.

#### **Namibian and South African Context:**

- Namibia's extreme climate variability affects the availability of key biotrade resources, such as devil's claw and marula, making financing unpredictable due to fluctuating yields.
- South Africa's biotrade sector is more integrated into global value chains but faces challenges in accessing green finance due to high certification costs and competition from large agribusinesses.

#### **Implication for Access to Finance:**

Developing accessible green finance mechanisms, such as sustainability-linked loans with flexible repayment structures, can incentivize SMEs to maintain biodiversity-friendly practices. Governments and development agencies should also support certification subsidies to help SMEs meet international sustainability standards.

### **5.3.6 Legal Frameworks and Intellectual Property Considerations**

Legal complexities, including intellectual property (IP) protection, Access and Benefit-Sharing (ABS) agreements, and unclear land tenure rights, pose additional barriers to financial access. Many SMEs operate informally, making them ineligible for bank loans or government funding.

#### **Namibian and South African Context:**

- Namibia has a strong ABS framework but lacks support mechanisms for SMEs to navigate compliance, leading to financing challenges.
- South Africa's legal framework is more structured, but complex trade regulations and certification requirements increase compliance costs for SMEs seeking export markets.

#### **Implication for Access to Finance:**

Providing legal support services and streamlined ABS compliance mechanisms can help SMEs formalise operations and improve their creditworthiness. Financial institutions should also develop tailored products that consider the regulatory complexities of the biotrade sector.



---

## 6 Conclusions

### 6.1 Summary

The current range of global biodiversity finance sources, mechanisms, actors and initiatives is diverse and rapidly evolving. It is already comprehensive in its scope and coverage. Considerable progress has been made since the Convention on Biological Diversity (CBD) first entered into force. However, gaps persist. While some topics, issues and instruments are relatively well-served in terms of the level of focus and scale of activities accorded by existing actors and initiatives (even if yet far from being fully addressed or achieved), others remain under-represented or still require significant attention.

SMEs in the biotrade sector face a complex financial landscape. While traditional banking channels often present barriers, there is a growing trend of alternative financing options, including impact investment, value chain financing, and fintech solutions. Government support and international cooperation remain critical in providing SMEs the financial resources and technical capacity needed to thrive in the sustainable use of biodiversity. At this stage, the option for blended finance seems to be the most viable for SMEs in the Namibian and South Africa biotrade sector. The option must first be developed though.

It is also noted that GIZ as a development agency is active in multiple ways to deliver support, both technical and financial, to improve capacities and market access to SMEs. GIZ seems to have the deepest penetration to support biodiversity initiatives, including funding and supporting financing mechanisms. However, the BIA and ABioSA projects remain unique and cooperation or alignment with other/ similar GIZ global and/or bilateral/regional projects is thus possible to a limited extent only. The best matches are possible where BIA II and ABioSA work in close cooperation with supplementary programmes and projects that render technical and financial support to SMEs (e.g. ProBATS, FSD, AfPQ, ABF).

Non-governmental and civil society organisations, like WWF or Africa Nature-Based Solutions (NbS) Programme support SMEs mostly technically. Nevertheless, are themselves dependent on development cooperation funding to deliver their support programmes.

### 6.2 Implications

The literature review, stakeholders' engagements and critical analysis of SMEs in the biotrade sector have opened an in-depth investigation to existing biotrade funding programmes. Some of these funding opportunities should be perused by BIA II to deepen the support to biotrade SMEs.

The assignment was however not able to source any ready-made solution on which partners could directly be approached to extent the support that BIA II or other existing support programmes could tap into. It therefore is imperative that one outcome of BIA II should be the development/ establishment of appropriate biotrade financing mechanisms.

There would be need for matching demand (SMEs funding) and supply side offerings (financing mechanisms). This could e.g. follow the undermentioned rationale:

Table 7. Matching demand and supply side funding and financing mechanisms for biotrade SMEs

<b>Demand side (funding needs)</b>	<b>Supply side (conventional mechanisms, but for which still need to be developed in NAM &amp; ZA)</b>
<b>Operations funding</b>	
Start-up capital	Blended Finance; Fintech Solutions; Impact Investment
Expansion capital	Blended Finance; Fintech Solutions; Impact Investment
Working capital	Blended Finance; Fintech Solutions; Supply Side Finance
Employees and Benefits	Fintech Solutions
Emergency fund	Blended Finance
General business compliance	Fintech Solutions
<b>Asset finance</b>	
Debt repayment	Impact Investments
Cost of Sales	Blended Finance; Fintech Solutions
Marketing and market access	Development Finance; Grants; Blended Finance; Public Procurement Policies; Enabling Policy Environment; Business Development Services
Technology and Equipment	Development Finance; Impact Investments; Business Development Services
Logistics	Impact Investments; Credit Guarantee Schemes; Export Credit Guarantees; Public Procurement Policies
<b>Biotrade specific funding</b>	
Research, Development and Innovation	Development Finance; Impact Investments; Grants; Blended Finance; Value Chain Financing; Blended Finance
Legal / mandatory compliance (e.g. ABS permits)	Development Finance; Grants; Supply Chain Financing; Business Development Services; Technical Assistance Programmes
Market compliance (e.g. GMP, dossiers)	Trade Facilitation Programmes; Grants; Partnerships with Multinational Corporations
Contingency planning	Grants; Blended Finance; Partnerships with Multinational Corporations

## 6.3 Recommendations

To enhance financial access for SMEs in Namibia and South Africa, a multi-pronged approach is required:

1. **Regulatory Reforms & Policy Support:** Governments should streamline trade regulations, improve financial incentives for sustainable businesses, and develop targeted SME financing programs.



2. **Alternative Financing Mechanisms:** Investigate and pilot blended finance options, impact investment, and community-based lending models as they can bridge funding gaps.
3. **Capacity Building & Financial Literacy:** Training programs should focus on financial planning, digital banking, and compliance with sustainability standards.
4. **Technology Integration & Digital Finance:** Encouraging fintech adoption and investing in digital infrastructure can improve financial inclusion.
5. **Green Finance & Sustainability-Linked Investment:** Developing accessible biodiversity-linked financial products can provide long-term support for SMEs engaged in conservation-driven businesses.

By addressing these financial and structural barriers, Namibia and South Africa can unlock the potential of SMEs in biotrade to contribute to biodiversity conservation and sustainable economic growth. However, it will be necessary to form private-public partnerships. Therefore the following is suggested:

- Look for environmental NGOs who have developed or have supported the development of investment funds, e.g.
  - WWF Namibia currently busy setting up SEDF
  - UEBT having been the technical partner of the EcoEnterprises Fund
- Check for large corporate investors or banks with high priority ESG missions
  - RaboBank
  - BNP Paribas
  - Triodos
- Investigate more opportunities with development finance institutions, e.g.
  - FFEM
  - Investors linked to USAID
  - EIB
- Search for new/additional category of investment funds interested in regenerative agriculture or nature-based solutions
- Revisit foundations, or find additional ones and other philanthropic organisations who have aligned themselves with investors and provide convertible loans and grant schemes alongside those investors, e.g.
  - FundsForNGOS publishes such opportunities daily
  - Darwin Initiative
  - Conservation International
- Alongside latter, create and pilot blended finance options
- Search for impact investing companies, funds, and investors with ESG impacts and indicators.

These suggestions overlap with some of BIA II initial ideas and already consulted stakeholders (Annexure 1, 2). Following specific leads led to some relevant additional instruments that were then taken up in the review exercise. Nevertheless, in structuring compatible supply side financing mechanisms, it will be worthwhile to revisit the latter suggestions.

In view of developing an appropriate financial instrument for SMEs in the biotrade sector, both the supply side (financial intermediaries) and demand side (SMEs) product development methodologies and risk profiles, including risk appetite and mitigation strategies must be understood.

#### **6.4 Suggested Implementation Framework for a Blended Finance Instrument to SMEs in the Biotrade Sector**

Developing an appropriate financial instrument for biotrade SMEs in Namibia and South Africa requires a balanced approach that aligns the risk appetite of financial intermediaries with the needs of SMEs. By leveraging blended finance, fintech solutions, and capacity-building initiatives, financial accessibility can be improved. Implementing this framework (suggested to be implemented as a pilot approach) will help create a more inclusive financial ecosystem that supports biodiversity-based businesses while mitigating risks for investors (Table 8).

The roadmap outlines a 12- to 24-month phased approach for developing and implementing financial instruments tailored to biotrade SMEs, as exemplified by a blended finance instrument. It is suggested to be implemented as a public-private partnership (PPP) and pilot approach. The pilot should grow into a financial ecosystem for SMEs in biotrade at the appropriate time.

Table 8. *Implementation Table: Blended Finance Instrument for SMEs in Biotrade*

Key Action Areas	Supply Side (Financial Intermediaries)	Demand Side (SMEs)	Bridging the Gap, facilitated by BIA II	Timeframe	Comments or Status of BIA II Interventions
<b>1. Stakeholder Identification</b>	Map potential lenders and investors interested in biodiversity finance.	Identify and segment SMEs based on business models and financial needs.	Organise roundtables and dialogues between financial institutions and SMEs.	Months 1-3	<p>Work during 2023-2024 to identify relevant stakeholders in both in Namibia and South Africa.</p> <p>The assignment report was presented to stakeholders on 15 Nov. 2024 in Windhoek, Namibia; and 20 Nov. 2024 in Johannesburg, South Africa.</p> <p>Several follow-up tasks were enlisted which will be dealt with during 2025, concerning the set-up of a blended finance instrument.</p>
<b>2. Risk Assessment</b>	Assess financial institutions' risk appetite and constraints in lending to biotrade SMEs.	Identify key risks (e.g., lack of collateral, seasonality) affecting SME finance access.	Develop risk-sharing mechanisms like guarantees and blended finance models.	Months 4-6	<p>Work with GIZ ProBATS-FSD component is on-going. The objectives is to assist both supply and demand side understand each other needs, rights and responsibilities.</p> <p>It is important to understand the credit risk rating matrixes and credit worthiness checks of financial institutions before a public sector partner can provide relevant technical assistance.</p>
<b>3. Product Development</b>	Design financial products suited to SMEs: <ul style="list-style-type: none"> <li>• Blended Finance Instrument</li> <li>• Working capital loans, trade</li> </ul>	Assess SMEs' financial literacy and readiness for investment.	Assist with structuring the Blended Finance Instrument, and provide technical assistance, to both Supply and Demand Side.  Develop training programmes to	Months 7-12	<p>On-going following point 1.</p> <p>Concept note to develop a blended finance instruments is already available with BIA II.</p>

Key Action Areas	Supply Side (Financial Intermediaries)	Demand Side (SMEs)	Bridging the Gap, facilitated by BIA II	Timeframe	Comments or Status of BIA II Interventions
	finance, impact investment, etc.		improve SME investment readiness.		
<b>4. Capacity Building</b>	Provide financial institutions with biodiversity finance training to enhance risk assessment skills.	Offer financial literacy, business planning, and certification training for SMEs.	Establish an advisory platform for SME financing support.	Months 7-12	On-going.  Part of the capacity building will be dealt with under BioInnovation Academy, other parts under AbioSA and awareness campaigns of BIA II.
<b>5. Digital and Alternative Finance</b>	Integrate fintech solutions for SME credit assessment and financing.	Train SMEs on digital financial tools and online funding options.	Develop mobile-based financing solutions and alternative investment mechanisms.	Months 13-18	Namibia: in 2024, a mobile payment platform was launched by Bank of Namibia, in collaboration with a mobile phone company. It would be suitable to investigate how such platform and instrument can also serve SMEs in biotrade, especially IPLCs and women in the supply chain.
<b>6. Implementation and Monitoring; Policy Integration</b>	Roll out financing programmes for SMEs in biotrade (start with blended finance instrument).	Track SMEs' financial performance and repayment trends.	Create a monitoring framework to evaluate the impact of financial instruments.	Months 19-24	Discussions with policy makers are on-going as the aim is to improve the financial ecosystem, first for the biotrade sector, and secondly for SMEs in the sector.

## 7 References

Abreha, K., Cirera, X., Davies, E., Fattal-Jaef, R., Hibert Maemir, H. (2022). Deconstructing the Missing Middle: Informality and Growth of Firms in Sub-Saharan Africa. The World Bank, Washington, DC, USA. Accessed from <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099924211162242314/idu0b070c6340f4d10403d08bd90f758ec6dcf49>.

ABS Initiative. [https://www.abs-biotrade.info/topics/abs-in-value-chains/biotrade-biotrade-and-abs/?utm\\_source=chatgpt.com](https://www.abs-biotrade.info/topics/abs-in-value-chains/biotrade-biotrade-and-abs/?utm_source=chatgpt.com). Accessed on 24 October 2024.

Adeyemi, A. (2014). Changing the face of sustainable development in developing countries: the role of the international finance corporation. *Environmental Law Review*, 16(2), 91-106.  
<https://journals.sagepub.com/doi/abs/10.1350/enlr.2014.16.2.208>

Amadhila, B. (2020). The challenges faced by small and medium enterprises in accessing credit in Namibia.

Aziz, H. M., Sorguli, S., Hamza, P. A., Sabir, B. Y., Qader, K. S., Ismeal, B. A., & Gardi, B. (2021). Factors affecting international finance corporation. *International Journal of Humanities and Education Development (IJHED)*, 3(3), 148-157.  
[https://www.researchgate.net/profile/Bayar-Gardi/publication/356149036\\_Factors\\_affecting\\_International\\_Finance\\_Corporation/links/618d862007be5f31b76e67f6/Factors-affecting-International-Finance-Corporation.pdf](https://www.researchgate.net/profile/Bayar-Gardi/publication/356149036_Factors_affecting_International_Finance_Corporation/links/618d862007be5f31b76e67f6/Factors-affecting-International-Finance-Corporation.pdf)

BioFin; [South African Biodiversity Investment Portal has secured its first investments to promote biodiversity conservation and community well-being | BIOFIN](#)

Bolton, P., Musca, X., & Samama, F. (2020). Global Public-Private Investment Partnerships: A Financing Innovation with Positive Social Impact. *Journal of Applied Corporate Finance*, 32(2), 31-41.  
<https://onlinelibrary.wiley.com/doi/abs/10.1111/jacf.12403>

Botha, A., Smulders, S. A., Combrink, H. A., & Meiring, J. (2021). Challenges, barriers and policy development for South African SMMs—does size matter? *Development Southern Africa*, 38(2), 153-174.

Boubekeur, S., & Githinji, M. P. K. (2023). Sustainability of the SME business ecosystem: The missing links to access finance.

Brander, L. M., de Groot, R., Schägner, J. P., Guisado-Goñi, V., van't Hoff, V., Solomonides, S., ... & Thomas, R. (2024). Economic values for ecosystem services: A global synthesis and way forward. *Ecosystem Services*, 66, 101606.  
<https://doi.org/10.1016/j.ecoser.2024.101606>

Brown, L., & Amutenya, T. (2024). Biodiversity finance in Namibia. ODI country study. London: ODI. (<https://odi.org/en/publications/biodiversity-finance-in-Namibia>).

D'Alisa, G., & Kallis, G. (2020). Degrowth and the State. *Ecological economics*, 169, 106486. <https://www.sciencedirect.com/science/article/pii/S092180091831749X>

Destailleur, M. (2022). *Biodiversity and Business: who will save whom?* (Doctoral dissertation, Massachusetts Institute of Technology). <https://dspace.mit.edu/handle/1721.1/146667>

Emerton, L. (2024). Stocktaking of biodiversity finance trends, actors & initiatives: needs, niches, opportunities and options for GIZ to take forward

Endjala, F. (2024). AUSMEF2024 Communiqué Design Thinking Workshop on Consolidating the Best Practices from Across Africa. Workshop Notes. <https://msmeforum.africa/>

FinMark. [Welcome to FinMark Trust - FinMark Trust, accessible from https://www.finmark.org.za/](https://www.finmark.org.za/)

García-Sánchez, I. M., Gómez-Miranda, M. E., David, F., & Rodríguez-Ariza, L. (2019). Analyst coverage and forecast accuracy when CSR reports improve stakeholder engagement: The Global Reporting Initiative-International Finance Corporation disclosure strategy. *Corporate Social Responsibility and Environmental Management*, 26(6), 1392-1406. <https://doi.org/10.1002/csr.1755>

Hodson, E., Niggli, U., Kaoru, K., Lal, R., & Sadoff, C. (2020). Boost Nature Positive Production at Sufficient Scale. *Action Track*, 3. [http://dipacademy.ru/documents/2378/3-action\\_track\\_3\\_scientific\\_group\\_draft\\_paper\\_26-10-2020.pdf](http://dipacademy.ru/documents/2378/3-action_track_3_scientific_group_draft_paper_26-10-2020.pdf)

Lombard, C. (2024). Financing Biotrade. Support on mapping, analysing and advising on financial instruments in South Africa and Namibia. Interview with Frank Hicks 25 April 2024. GIZ Bio Innovation Africa.

Lombard, C. (2024). Financing Biotrade. Support on mapping, analysing and advising on financial instruments in South Africa and Namibia. The Darwin Initiative presentation 9 May 2024. GIZ Bio Innovation Africa.

Lombard, C. (2024). Financing Biotrade. Support on mapping, analysing and advising on financial instruments in South Africa and Namibia. Note on Presentation at the 7th UNCTAD BioTrade Initiative Stakeholders Steering Committee meeting for BioTrade by NatureFinance 4 July 2024. GIZ Bio Innovation Africa.

Lombard, C. (2024). Financing Biotrade. Support on mapping, analysing and advising on financial instruments in South Africa and Namibia. The GEF-Blended Finance and Non-Grant instrument Presentation 17 May 2024. GIZ Bio Innovation Africa.

Lombard, C. Honsbein, D & Endjala, F. (2024). Financing Biotrade. Support on mapping, analysing and advising on financial instruments in South Africa and Namibia. Preliminary Findings Presentation 11 July 2014. GIZ Bio Innovation Africa.

Lombard, C. (2024). Financing Biotrade. Support on mapping, analysing and advising on financial instruments in South Africa and Namibia. Based on (i) interview with Frank Hicks on 25th April 2024, (ii) our own list of candidate instruments and (iii)

GIZ: Catalysing Finance and Insurance for NbS 2023. (4 May 2024). GIZ Bio Innovation Africa.

Lombard, C. (2024). Financing Biotrade. Support on mapping, analysing and advising on financial instruments in South Africa and Namibia, *Meeting minutes on a call with Tammy Newmark (CEO) Eco Enterprises Fund 22 May 2024*. GIZ Bio Innovation Africa

Mont'Alverne, T. C. F., & Lima, M. C. G. V. (2023). The European Union as a Norm Shaper on Biodiversity Protection. *Veredas do Direito*, 20, e202569.  
<https://www.scielo.br/j/vd/a/4X4F5m8WgDPwpXJhC4CWvwb/?format=html&lang=en>

Msomi, T. S., & Olarewaju, O. M. (2021). Factors affecting small and medium enterprises' financial sustainability in South Africa. *African Journal of Inter/Multidisciplinary Studies*, 3(1), 103-117.

Nangolo, M., & Hamukoto, H. T. (2020). SME Financing in Namibia: An Introductory Discussion Paper.

Narain, D., Sonter, L. J., Lechner, A. M., Watson, J. E., Simmonds, J. S., & Maron, M. (2023). Global assessment of the biodiversity safeguards of development banks that finance infrastructure. *Conservation Biology*, 37(4), e14095.  
<https://conbio.onlinelibrary.wiley.com/doi/abs/10.1111/cobi.14095>

National Small Business Chamber (NSBC). [Fuelling Small Business Growth: National Small Business Chamber \(NSBC\)](#)

Nautwima, J. P., & Asa, A. R. (2021). The impact of microfinance support on the development of manufacturing SMEs operating in Windhoek-Namibia. *Archives of Business Research*, 9(12), 250-272.

Nyingwa, A, Nketsu, S. & Lombard, C. (2024). Financing Biotrade. Support on mapping, analysing and advising on financial instruments in South Africa and Namibia. *Note on hybrid meeting/ call with AFR100, 7 June 2024*. Bio Innovation Africa.

Paley, M. (2022) Practical steps to reform and repurpose biodiversity harmful subsidies in the post-2020 global biodiversity framework.  
[https://wwfint.awsassets.panda.org/downloads/bhs\\_brief\\_280222.pdf](https://wwfint.awsassets.panda.org/downloads/bhs_brief_280222.pdf)

Park, S. (2005). How transnational environmental advocacy networks socialize international financial institutions: A case study of the International Finance Corporation. *Global Environmental Politics*, 5(4), 95-119.  
<https://direct.mit.edu/glep/article-abstract/5/4/95/14322>

Pettinotti, L., & Quevedo, A. (2023). *Mapping finance sources for nature-based solutions in Africa*. ODI Report. <https://www.econstor.eu/handle/10419/280307>

Redmond, T., & Nasir, M. A. (2020). Role of natural resource abundance, international trade and financial development in the economic development of selected countries. *Resources Policy*, 66, 101591.  
<https://doi.org/10.1016/j.resourpol.2020.101591>

Small Enterprise Development Agency (seda). [Home \(seda.org.za\)](https://seda.org.za)

Thriveco. <https://thriveco.co.za/challenges-faced-by-small-business-corporations-in-south-africa/>

UNDP. [https://www.undp.org/sites/g/files/zskgke326/files/2024-05/policy\\_brief\\_3-2024 -  
unlocking small and medium enterprises smes finance in south africa -  
final.pdf](https://www.undp.org/sites/g/files/zskgke326/files/2024-05/policy_brief_3-2024_-_unlocking_small_and_medium_enterprises_smes_finance_in_south_africa_-_final.pdf)

UNCTAD. (2017). *BioTrade and Access and Benefit Sharing: From concept to practice. A handbook for policymakers and regulators*. [https://unctad.org/en/PublicationsLibrary/ditcted2017d6\\_en.pdf](https://unctad.org/en/PublicationsLibrary/ditcted2017d6_en.pdf).

Wyman, O. (2024). 3 ways banks, insurers and investors can fast-track the transition towards a nature positive economy. World Economic Forum.  
<https://www.weforum.org/agenda/2024/03/3-ways-banks-insurers-and-investors-can-help-reverse-biodiversity-loss/>



## 8 Annexure 1a: Details of Stakeholder Engagements regarding Types of Financial Mechanisms offered for Biotrade/Biodiversity Funding

Information contained in Table 6 is based on URL searches, correspondence and stakeholder engagements. Where spaces were left open, the search for information was not rendering any results. The subsection numbering in each column corresponds to each institution's relevant details.

Exchange rate: 1€= 20.1501ZAR in June 2024, as per EU Commission database.

Table 9. Thematic categories on SME biotrade financing support mechanisms relevant to the BIA II context

Thematic category	SUBCATEGORY	description	Source of Support, pertinent examples	Current Programmes/ Projects or call for Proposals	Minimum Funding Size
<b>TAILORED FINANCIAL PRODUCTS</b>	Development Finance Institutions and Impact Investors	Development banks or finance institutions and impact investors can design financial products tailored to the needs of biotrade SMEs. These could include longer-term loans, lower interest rates, and flexible repayment terms.	i. International Finance Corporation (IFC) ii. Development Bank of Namibia (DBN) iii. Agricultural Bank of Namibia iv. Environmental Investment Fund of Namibia (EIF)	i. Private sector loan programmes ii. SME financing programmes, incl. overcoming Covid 19 aftermath; not biotrade specific iii. Women and Youth Credit Line; AgriAdvisory Services iv. Delivers community funding programmes as intermediary of e.g., the Namibian Government, GEF, GCF, AfD and other DFIs	i. 1 million EUR ii. 2.5 thousand EUR iii. 5 thousand EUR iv. 25 thousand EUR
	Blended Finance	Combining public and private funding can lower risks for investors and provide SMEs with the necessary capital. Blended finance structures can attract private sector investment by using public	i. Kreditanstalt für Wiederaufbau (KfW) ii. Fonds Français pour l'Environnement Mondial (FFEM) iii. EEP Africa (partnership of Nordic Development, Swiss, Finnish, Norwegian & Austrian government funds)	i. EcoBusiness Fund, managed by Finance in Motion; Africa Grow Fund; targeting agro-forestry ii. Annual calls for proposals for grants, repayable grants and concessional loans for sustainability projects (direct private sector support, only commercial projects)	i. from 1 million EUR ii. Grants=500 thousand EUR; repayable grants >500 thousand EUR, <1 million EUR; iii. concessional

Thematic category	SUBCATEGORY	description	Source of Support, pertinent examples	Current Programmes/ Projects or call for Proposals	Minimum Funding Size
		or philanthropic capital to absorb initial risks.	iv. GEF v. USAID	iv. Regular calls for proposals; to GEF accredited institutions and financial intermediaries; 2024 proposal closed on 20 March; e.g., previously funded EcoEnterprises Fund I & II; EIF Namibia, FAO DSL IP (currently ongoing), Africa NBS Programme v. Prosper Africa Fund	loans >1 million EUR; implementation must be complete within 18 months iv. From 1 million USD, with limit of 10% for technical assistance v. Up to 60% of the investment sum required in USD
	Grants and/or repayable grants and/or concessional lending and/or results-based funding	These programmes aim to provide a combination of financial assistance, technical support, and market access to help SMEs, start-ups grow sustainably. The funding is tight to strict timelines and outcomes	i. UNCTAD Biotrade Initiative ii. Global Environment Facility (GEF) iii. EU Biodiversity for Life (B4Life) initiative iv. ProNatura Foundation (Switzerland) v. KfW vi. International Climate Initiative (IKI) vii. Darwin Initiative viii. Nedbank NNF GoGreenFund ix. WWF (Namibia) Social & Environmental Development Fund (SEDF)	i. Delivered through an intermediary ii. Through accredited EU institutions only iii. Community Conservation Fund of Namibia (CCFN) iv. Risk hedging through innovative financial instruments v. Annual calls for proposals, but focused on sustainability and capacity building, not supply and value chain finance vi. Annual calls for proposal to individuals/organisation for national project working towards sustainability vii. SEDF is under development, targeting communities; to be launched by Nov/Dec2024	i. Variable ii. iii. iv. Max. up to 50 thousand EUR v. Max. up to 200 thousand EUR vi. Max. up to 3 million EUR vii. Max. up to 5 thousand EUR viii. Still to be defined ix.

Thematic category	SUBCATEGORY	description	Source of Support, pertinent examples	Current Programmes/ Projects or call for Proposals	Minimum Funding Size
	Equity and/or Venture Capital		i.	i.	i.
<b>Guarantee schemes</b>	Credit Guarantee Funds	Establishing credit guarantee funds can reduce the risk for lenders, encouraging them to extend credit to SMEs. These funds can guarantee a portion of the loan, thus reducing the lender's exposure to default risk.	ii. Swiss Import Promotion Programme (SIPPO)	ii. E.g., delivered through support to the DTIC (ZA)	ii.
	Export Credit Guarantees	For biotrade businesses involved in international trade, export credit guarantees can provide protection against non-payment by foreign buyers.			
<b>Digital and other Financial Services</b>	Fintech Solutions	Leveraging fintech innovations can provide SMEs with easier access to credit, payment systems, and financial management tools. Peer-to-peer lending platforms, mobile banking, and blockchain technology can revolutionise financial access for SMEs.	i. GIZ	i. ABF Programme, includes learning contents for agro-based biodiversity SMEs	i.

Thematic category	SUBCATEGORY	description	Source of Support, pertinent examples	Current Programmes/ Projects or call for Proposals	Minimum Funding Size
	Value and Supply Chain Financing	<p>E.g., Digital platforms can facilitate supply chain and offtake financing where SMEs can obtain financing based on their receivables or inventory, and sales. This reduces the dependency on traditional banking systems.</p> <p>This would include listing of SMEs on e.g. the stock exchange.</p>			
<b>Market Access and Trade Facilitation</b>	Trade Facilitation Programmes	<p>Programmes that simplify export procedures and reduce trade barriers can help SMEs access international markets. These could include assistance with compliance to international standards and certifications.</p>	<p>i. GIZ ii. USAID iii. Sparkassenstiftung</p>	<p>i. Various sectoral programmes, e.g. BIA II, ABioSA, ProBATS ii. Prosper Africa; SATI Hub iii. Strengthening small-scale entrepreneurship for a social &amp; ecological transformation and economic development in Southern Africa (regional project); project runs 01.08.2020 - 31.7.2026</p>	<p>i. ii. Up to 60% of cost iii.</p>
	Partnerships with Multinational Corporations	<p>Facilitating partnerships between SMEs and larger corporations can help integrate SMEs into global value chains, providing them with market access and stability.</p>			

Thematic category	SUBCATEGORY	description	Source of Support, pertinent examples	Current Programmes/ Projects or call for Proposals	Minimum Funding Size
<b>Capacity Building and Technical Assistance</b>	Business Development Services	Providing training and advisory services to enhance the managerial and operational capacities of SMEs can make them more attractive to investors.	i. GIZ ii. USAID	i. Various sectoral programmes, e.g. BIA II, ABioSA, ProBATS ii. Prosper Africa; SATI Hub	
	Technical Assistance Programmes	These programmes can support SMEs in improving their production processes, meeting international standards, and developing sustainable practices.	i. BIOFIN (Biodiversity Finance Initiative) ii. The DTIC (ZA) iii. Technology Innovation Agency (TIA; ZA) iv. DSI (ZA) v. GIZ	i. Various instruments and incentives ii. Technical Assistance iii. Technical Assistance iv. Technical Assistance, e.g. BIA II, ABioSA, ProBATS, AfPQ, etc. v.	
<b>Policy and Regulatory Support</b>	Enabling Policy Environment	Governments can create an enabling policy environment by simplifying business registration processes, offering tax incentives, subsidies or biodiversity/ carbon credits and ensuring that regulations support SME growth.	i. BIOFIN (Biodiversity Finance Initiative) ii. The DTIC instruments and incentives (ZA) iii. Technology Innovation Agency (TIA; ZA) iv. DSI (ZA) v. DFFE	i. Seed Fund, Technology Development Fund, Pre-Commercialisation Fund ii. Supports TIA, IDC, etc.; provides R&D incentives iii. Biodiversity Investment Portal iv. v.	i.
	Public Procurement Policies	Implementing policies that reserve a certain percentage of public	i. International Finance Corporation (IFC)	i. Global Reporting Initiative (GRI) guidelines and International Finance	Not applicable

Thematic category	SUBCATEGORY	description	Source of Support, pertinent examples	Current Programmes/ Projects or call for Proposals	Minimum Funding Size
		procurement for SMEs can provide them with steady business and enhance their credibility.		Corporation (IFC) Performance Standards for investments into environmental and social governance as part of financial reporting under IFRS	

## 9 Annexure 1b: Stakeholder Engagement List

Apart for the stakeholders already enlisted in the reference, the following persons were engaged to provide information regarding this biotrade financing mechanisms study.

Table 10. Stakeholder Engagement List

Surname	Name	Title / Position	Institution	URL	Date of First Engagement
Angula	Melvin	CEO	Letshego Micro Financial Services Namibia	<a href="http://www.letshego.com">www.letshego.com</a>	21 August 2024
Diakhite	Mamadou	Principle Programme Officer	AFR100	<a href="http://www.afr100.org">www.afr100.org</a>	16 June 2024
Havemann	Tanja	Director, co-founder	Clarmondial	<a href="http://www.clarmondial.com">www.clarmondial.com</a>	7 June 2024
Hicks	Frank	Director	Nature for Justice	<a href="https://www.nature4justice.earth/">https://www.nature4justice.earth/</a>	25 April 2024
Hangula	Patricia	CEO	Global Standards One (GS1) Namibia	<a href="http://www.gs1namibia.org">www.gs1namibia.org</a>	17 September 2024
Jagla	Christian	Component Lead for Financial Systems Development	GIZ ProBATS Namibia	<a href="http://www.giz.de/">www.giz.de/</a>	22 May 2024
Kutsch Lojenga	Rik	CEO	UEBT	<a href="http://www.uebt.org">www.uebt.org</a>	27 May 2024
Naanda	Martha		WWF Namibia	<a href="http://www.wwfnamibia.org/">www.wwfnamibia.org/</a>	07 May 2024
Liefienfield-Aragao	Deborah				
Nel	Stephen	Senior LED Specialist	Industrial Development Corporation	<a href="http://www.idc.co.za">www.idc.co.za</a>	19 June 2024
Newmark	Tammy	CEO	EcoEnterprises Fund	<a href="http://www.ecoenterprisesfund.com">www.ecoenterprisesfund.com</a>	22 May 2024
Mutorwa	Ongame	Communications Manager	Letshego Namibia	<a href="http://www.letshego.com/namibia">www.letshego.com/namibia</a>	20 August 2024
Rossin	Nicolas	Biodiversity Projects Manager	FFEM	<a href="https://www.ffem.fr/en">https://www.ffem.fr/en</a>	April 2024
Saal	Johan	SME Banking	Nedbank	<a href="http://www.nedbank.com.na/">www.nedbank.com.na/</a>	29 August 2024
Shinyembah,	Veranus	FNB Regional Manager, Central North	FNB Namibia	<a href="http://www.fnbnamibia.com.na/">www.fnbnamibia.com.na/</a>	27 August 2024
Von Krosigk	Lydia	Sector Economist	KfW	<a href="http://www.kfw.de">www.kfw.de</a>	5 June 2024



## 10 Annexure 2: Literature Review Sheet

Table 11. BIA 2 – Summary of the Raison d'être of this assignment

Component 2: Addressing market barriers (incl. ABS) & <u>institutionalisation</u>	Output 2: “Strengthening national capacities to promote biodiversity-based value chains and to reduce market barriers including ABS are strengthened at national level in South Africa”	Output indicator 2.1: 1 – 2 barriers to the commercialisation of biodiversity-based products identified in multi-stakeholder exchange formats are addressed by the responsible actors at national level.  Output indicator 2.2: 10 employees of service providers have successfully been trained with the help of training modules on gender-equitable benefit sharing and sustainability in biodiversity-based value chains.
--	--	--

Table 12. Article reference

Matter at Hand	For Completion by Reviewer
Author(s) - Surname, First Name(s)	
Year of Publication	
Full title	
Publication Name	
Publication Volume, if a journal, series, etc.	
Type of Publication, e.g. book, journal, article, newsletter, PPT, etc.	
ISBN/ISSN	
Publisher	
URL	
Email of corresponding author	

When summarising information, please ensure that you use key concepts and bullet points only. Do not copy/paste full text.

Table 13. *Summary of Literature Cited*

Early observations/insights	Summary (to be completed by reviewer)	Comments/ Key Learnings (to be completed by reviewer)
Executive Summary		
Main Discussions of the Literature		
Results		
What matter of interest is presented for our assignment?		
Recommendations		
Which Financial Instrument(S) is/are presented regarding biotrade/ nature-based biodiversity finance solutions and related topics? E.g.,		
<ul style="list-style-type: none"> <li>a. Income Instruments <ul style="list-style-type: none"> <li>- User Fees, e.g. entrance fees</li> <li>- Business Improvement Districts</li> <li>- Betterment Levies</li> <li>- Development Rights and Leases</li> <li>- Sale of Market Goods</li> <li>- Other Revenue Raising Measures</li> </ul> </li> <li>b. Contracting Approach (cost reduction/restructure) <ul style="list-style-type: none"> <li>- Community Asset Transfer</li> <li>- Public-Private Partnership</li> </ul> </li> <li>c. Contracting Approach (cost reduction/restructure) <ul style="list-style-type: none"> <li>- Philanthropic Contributions (e.g., CSR/CSI)</li> <li>- Voluntary Beneficiary Contributions</li> <li>- Crowdfunding or Donations</li> </ul> </li> <li>d. Tradeable Rights/Permits and Payment for Ecosystem Services <ul style="list-style-type: none"> <li>- Payment For Ecosystem Services (PES)</li> <li>- Transfer-Based Instruments: Voluntary Carbon Markets</li> <li>- Transfer-Based Instruments: Biodiversity Offsets and Habitat Banking</li> <li>- Transfer-Based Instruments: Water / Product Quality Trading Systems</li> </ul> </li> <li>e. Subsidies <ul style="list-style-type: none"> <li>- Environmental or related Subsidies</li> <li>- Tax Concessions</li> </ul> </li> <li>f. Grants</li> </ul>		

Early observations/insights	Summary (to be completed by reviewer)	Comments/ Key Learnings (to be completed by reviewer)
<ul style="list-style-type: none"> <li>- Public and/or private Grants</li> <li><b>g.</b> Debt Instruments <ul style="list-style-type: none"> <li>- Loans/Green Loans</li> <li>- Bonds/Green Bonds</li> <li>- Concessional / Soft Loans</li> </ul> </li> <li><b>h.</b> Equity Finance <ul style="list-style-type: none"> <li>- Impact Investing/ Results Based Financing</li> <li>- Commercial Investing and Private Equity</li> </ul> </li> <li><b>i.</b> Financial Reporting, Risk Management &amp; Compliance <ul style="list-style-type: none"> <li>- Financial reporting (IFRS based)</li> <li>- Financial reporting (IFC based)</li> <li>- National/ International Governance, Compliance and disclosure</li> <li>- Insurance for normal business operations</li> <li>- Insurance against force-majeur</li> <li>- Risk Management</li> </ul> </li> <li><b>j.</b> Other, pls describe</li> </ul> <p>Whom does the financial instrument target? E.g.,</p> <ul style="list-style-type: none"> <li><b>a.</b> SMEs</li> <li><b>b.</b> Donors</li> <li><b>c.</b> Business Support Organisations (BSOs) <ul style="list-style-type: none"> <li>- Associations</li> <li>- Foundations</li> <li>- Chambers of Commerce</li> <li>- Etc.</li> </ul> </li> <li><b>d.</b> Community Based or Support Organisation</li> <li><b>e.</b> (CBOs / CSOs) <ul style="list-style-type: none"> <li>- cooperatives</li> <li>- indigenous peoples' organisations</li> <li>- local communities' organisations</li> <li>- conservancies or community forests</li> <li>- etc.</li> </ul> </li> <li><b>f.</b> Non-Governmental Organisations (NGOs)</li> <li><b>g.</b> Governments</li> <li><b>h.</b> Financial Intermediaries <ul style="list-style-type: none"> <li>- Banks, incl. development banks</li> <li>- Insurers</li> <li>- Financial services regulators</li> </ul> </li> </ul>		

**Early observations/insights****Summary  
(to be completed by reviewer)****Comments/ Key Learnings  
(to be completed by reviewer)**

- etc.

i. Large corporates, Listed Companies

j. International Organisations

- **UN, FAO, IFC, EU, etc.**

Who is the main funder of the research?

Other matters

Links to other organisations/ literature/ etc.

## 11 Annexure 3: PESTEL and SWOT Analyses on Financial Mechanisms for SMEs in the Biotrade sector

SMEs in the biotrade sector in Namibia and South Africa play a vital role in biodiversity conservation, sustainable economic development, and rural livelihoods. However, they face significant challenges in accessing financial instruments due to regulatory, economic, sociocultural, technological, environmental, and legal constraints.

A PESTEL and SWOT analysis of the sector reveals key barriers and opportunities for improving financial access, particularly in the Southern African context. We have prepared a detailed analysis which is explained hereafter.

### 11.1 The role of SMEs in being part of the solution of the biodiversity crisis?

SMEs and cooperatives have widespread impact, significant presence, influence, and potential to implement sustainable practices at a local and global scale:

#### **Scale and number:**

±90% of economic activity with >70% of employment

#### **Local presence:**

Directly engaged with natural resources management, sustainable management practices and biodiversity conservation / improvements, including ecosystems services.

#### **Agility:**

Flexibility to quickly implement new practices or adapt

#### **Innovation:**

At the forefront of innovation, experimenting with new business models, products, and services that can contribute to biodiversity conservation

#### **Connection to communities:**

Rooted in local communities which can influence positive behaviour

#### **Utilisation of traditional / indigenous knowledge and products:**

Inherently practicing biodiversity-friendly, sustainable behaviour

#### **Sustainable markets:**

Responsive to growing demand for sustainable products and services

#### **Options for “green” finance linked to accredited reporting standards and mechanisms:**

Financial sector targets compliant SMEs can boost their own compliance indicators

Financial sector players can boost their reporting by providing relevant financial services to compliant SMEs as well as through social business or CSR type of businesses

#### **Regulatory compliance:**

SMEs can be much more agile in adopting sustainable practices, thereby reducing macro-economic and reputational risks

SMEs can, even with some degree of difficulty, still make it through instable times, mainly because they can cope with supply variability and serve niche markets

**Resilience:**

SMEs responsiveness and overall resilience towards macro-shocks is high

## 11.2 Why focus on SMEs?

***SMEs are businesses focused on value-addition and niche markets:***

SMEs are generally interested in creating high-value products from biological resources, targeting niche markets that demand specialised, high-quality goods. For this reason, they don't supply a broad spectrum of ingredients or products, and don't supply markets at global scale. Typically, SMEs in the biotrade sector focus on e.g., natural cosmetics, traditional medicines or natural ingredients for medicinal products, organic spices, or specialty health foods.

***Other considerations are:******Large Collective Impact***

Even small changes can be implemented quickly, leading to significant positive impacts on biodiversity.

Collective effects lead to sustainable biodiversity.

***Catalysts for Change***

Upstream and downstream influence

Larger corporations, suppliers, and customers, depend on SMEs creating a ripple effect that promotes biodiversity conservation.

***Targeted Support and Scalability***

Governments, NGOs, and international organisations can provide targeted support (e.g., training, financial incentives, certification programs)

Support is easily scalable and replicable across the board.

***Job Creation and Sustainable Development***

Targeted support to SMEs in biodiversity-friendly sectors can drive job creation, rural development, and poverty alleviation.

Efforts can easily be aligned to SDGs & GBP

## 11.3 Typology and Business Models of SMEs in Biotrade in the Southern African Region

***Primary Producers:***

Directly involved in the extraction or harvesting of biological resources.

Examples: Small-scale organic/ certified producers (rooibos, buchu, pelargonium), community-based natural resource management groups (marula, devil's claw, manketti)

***Processors:***

Raw biological resources are transformed into value-added products or basic ingredients

Examples: Herbal supplement manufacturers (pelargonium, devil's claw), essential oil distillers (Commiphora), organic food processors (rooibos tea, baobab fruit pulp)

***Service Providers:***

Providing services related to biotrade, such as wildlife conservation services, and consulting on sustainable practices

Examples: community support organisations (WWF, NNF, Greater Secakuna Cooperative), business support organisations (WESGRO, CECOSA, NANCi, NDCEAT)

### ***Retailers and Distributors:***

Marketing and selling biotrade products, often focusing on niche markets that value sustainability, organic certification, and fair trade.

Examples: locally – devil’s claw exporters, rooibos “board”; European – The Body Shop

### ***Research and Development Enterprises:***

Research, product development, and innovation, including bioprospecting.

Examples: local – CRIAA (resource Y), Parceval (resource X); European Partners - Blue Sky Botantics, Gustav Heess, Aldivia, Givaudan

### ***Community-Based Models:***

Description: These models involve community ownership and participation, ensuring that local people benefit from the sustainable use of biodiversity. They emphasise equitable sharing of profits and community empowerment.

Examples: Cooperative management of marula oil supply by Eudafano.

### ***Fair Trade / Fair for Life Models:***

Description: Focuses on ethical production and trading practices, ensuring fair wages, good working conditions, and equitable profit distribution. These businesses often seek fair trade certification.

Examples: ECOSO Dynamics as part of their supply chain supports the fair trade/ fair for life model

### ***Organic and Certification-Based Models:***

Description: Emphasises compliance with organic, eco-labels, or other sustainability certifications. This model targets consumers willing to pay a premium for certified sustainable products.

Examples: Organic marula oil producers (Namib Desert Jojoba, ECOSO Dynamics devil’s claw; several ZA marula oil producers/ exporters, companies certified by Rainforest Alliance (vanilla & centella from Madagascar), or USDA Organic.

### ***Integrated Supply Chain Models:***

Description: SMEs that manage multiple stages of the supply chain, from production to processing and marketing, to ensure sustainability and traceability throughout the product lifecycle.

Examples: A business that grows, processes, and sells organic herbal teas directly to consumers.

## **11.4 Markets for products from biotrade/ bioprospecting from the Southern African Region**

### ***Typical Products within the BIA Supply and Value Chains:***

- From agriculture or cultivation: rooibos, buchu, scelitium leaves
- Non-timber forest products: marula, manketti fruit pulp, devil’s claw tubers, silver cluster tree leaves
- Natural ingredients for cosmetics and pharmaceuticals: marula kernels (carrier oil), commiphora (essential oil), devil’s claw (medicinal extracts), Resource X (cosmetics)

### ***Markets and Marketing Channels***



- Local and regional markets: supply of marula food oil, local retailers, local consumers for marula co-products like oil cake as source of protein; retail of rooibos, honey bush and buchu teas; veterinary use of devil's claw ground tubers
- International markets:
  - Bulk supply of marula oil as carrier oil to 'The Body Shop' products
  - Bulk supply of devil's claw dried/sliced tubers for pharmaceutical ingredients extraction by Givaudan
  - Bulk supply of Rooibos Tea for large/small scale retail outlets in Europe (mostly certified under Fair Trade, organic (BIO) and/or UEBT)
- Online and direct-to-consumer markets: end-user ready cosmetics sold via Amazon in Europe (SKOON, !Nara, Desert Secrets).
- Niche and speciality markets: e.g., The Body Shop, Annemarie Börlind products contain Namibian and South African ingredients sold from most personal health and hygiene outlets across EU.

## 11.5 PESTEL Analysis on the Sector, and Financial Services generally available for the Sector

Here a high-level overview of the factors influencing the “PESTEL” environment for SMEs in the Biotrade Sector.



## 11.5.1 PESTEL - Political Factors

Political Factors	Namibia	South Africa
Government Support and Policies	In Namibia, government support for SMEs includes equipment and grant funding, though it is not targeted towards biotrade and is uncoordinated among ministries.	Governments, especially in biodiversity-rich regions, are increasingly supporting biotrade SMEs through development cooperation, grants, and concessional loans. However, political support for biotrade SMEs is inconsistent, with traditional finance mechanisms generally not tailored for the sector
International Cooperation and Agreements	Various development cooperation agencies offer market access, trade facilitation, capacity building, and technical assistance to SMEs in Southern Africa. <ol style="list-style-type: none"> <li>1. GIZ – ProBATS, BIA II, CCIU</li> <li>2. AFD – Biomass Power Station</li> <li>3. KfW – support to CCFN</li> </ol>	Various development cooperation agencies offer market access, trade facilitation, capacity building, and technical assistance to SMEs in Southern Africa. <ol style="list-style-type: none"> <li>1. GIZ – BIA II</li> <li>2. SECO – ABioSA</li> <li>3. USAID – SATI Hub</li> <li>4. UK DFID - TFSA</li> </ol>
Trade Agreements and Barriers	Trade facilitation programs exist, but SMEs face barriers such as the cost of certification and non-tariff barriers for export. The cost of development of new biotrade and bioprospecting initiatives are very expensive.	Trade agreements impact biotrade SMEs, especially when exporting biodiversity-based products due to regulatory import/export requirements like tariffs and non-tariff barriers, many SMEs lack the resources to navigate.
Political Stability	Southern African countries generally maintain stable political environments that encourage donor and governmental support for SME development.	

## 11.5.2 PESTEL - Economic Factors

Economic Factors	Namibia	South Africa
Access to Finance	SMEs face difficulty accessing formal financial products due to perceived high risk, lack of collateral, and high-interest rates. Impact investment and blended finance options exist but are limited and not widely accessible for biotrade specifically, while similar may be available for renewables or agro-forestry products.	A major weaknesses for biotrade SMEs is access to finance. Traditional financial institutions view them as high-risk, exacerbated by the lack of collateral and high-interest rates. There's a growing trend towards impact investment and blended finance options, but they're often limited to specific sectors, like cultivation of INPs (e.g. rooibos) where markets are well established.
Market Demand and Growth	Demand for biodiversity-based products is growing, but the niche nature of these products and certification costs create hurdles for SMEs seeking to scale and expand internationally.	Biotrade SMEs face challenges in meeting international market requirements. Small market sizes and difficulties in scaling their operations further constrain growth opportunities.
Economic Stability	Economic instability, particularly post-COVID, has exacerbated difficulties in securing financing for SMEs, increasing the need for alternative financial mechanisms. Certain sectors post COVID are growing (e.g. tourism) which has some positive impact on the biotrade sector where products can be directly linked to traditional knowledge holders.	
Global Supply Chains	SMEs face challenges in meeting global supply chain demands due to high costs of meeting export regulations and certifications. Export regulations are both mandatory (e.g. REACH, HACCP, GMP, product traceability) or market driven ones.	SMEs face challenges in meeting global supply chain demands due to high costs of meeting export regulations and certifications. Export regulations are both mandatory (e.g. REACH, HACCP, GMP, product traceability) or market driven ones.
Trade Competitiveness and Economies of Scale	Biotrade products are offered on a niche basis in international markets. The cost of product placement, marketing and market research limit the possibilities for SMEs.	Biotrade products are offered on a niche basis in international markets. The cost of product placement, marketing and market research limit the possibilities for SMEs.

### 11.5.3 PESTEL - Sociocultural Factors

Sociocultural Factors	Namibia	South Africa
Consumer Preferences	There is growing consumer demand for sustainable, biodiversity-based products, particularly in the foods and beverages sector, with e.g. novel foods like marula or Inara oils used as condiments. Mostly, Namibian natural products find acceptance in European markets.	There is growing consumer demand for sustainable, biodiversity-based products, particularly in the cosmetics, and food sectors, with e.g. baobab being declared as novel food. Mostly, South African natural products find acceptance in European and North American markets.
Local Community Involvement	SMEs often work with indigenous peoples and local communities (IP&LC) and cooperatives, which provide a foundation for sustainable production but a weakness in formalising these community structures as viable business entities for financing. Community-based supply chains are well accepted in the international trade context, e.g. marula and devil's claw.	SMEs often work with indigenous peoples and local communities (IP&LC) and cooperatives, which provide a foundation for sustainable production but a weakness in formalising these community structures as viable business entities for financing. Community-based supply chains are well accepted in the international trade context, e.g. marula and devil's claw. This is a two-edged sword.  Move from wild harvesting to domesticated and farmed production presents challenges to continued involvement of "wild harvesters"
Changing Lifestyles and Health Trends	Increasing interest in health-conscious and eco-friendly products creates opportunities for biotrade SMEs to cater to changing consumer demands. Devil's claw has found acceptance in traditional medicine applications.	The rise in health-conscious consumers and changing lifestyles aligns well with the offerings of the biotrade sector, especially in sectors like organic foods and natural cosmetics. Rooibos, buchu, and honey bush are very good examples.
Population Growth and Urbanisation	The rise in urbanisation and the shift towards modern consumer habits open new market opportunities for SMEs, especially in personal care and nutritional sectors. GenZ is equally a driver of this trend. However, to supply these demands from the rather 'small' perspectives seems to pose challenges.	The rise in urbanisation and the shift towards modern consumer habits open new market opportunities for SMEs, especially in personal care and nutritional sectors. GenZ is equally a driver of this trend. However, to supply these demands from the rather 'small' perspectives seems to pose challenges.

### 11.5.4 PESTEL - Technological Factors

Technological Factors	Namibia	South Africa
Innovation in Sustainable Production; Competitiveness of technology	Investment in research and development (R&D) for innovative production methods is low, and SMEs struggle with the cost of adopting new technologies. The scaling from "garage / back yard" production systems to organised factory outlets is technology and cost intensive.	Biotrade SMEs have opportunities in advancing sustainable production techniques, but lack of R&D investment hinders innovation. Innovation in this area could improve yields, reduce costs, and enhance competitiveness.
E-commerce and Digital Platforms	Digital platforms and fintech solutions are emerging but are underutilised in the biotrade sector due to limited access in Namibia. Banking supervision restrictions in Namibia furthermore inhibit progress here. E.g., Paypal is not a recognised payment method in Namibia, while utilised in target markets.	Digital platforms and fintech solutions are emerging but are underutilised in the biotrade sector due to small scale of sector.
Traceability and Certification Technology	Certification are critical for SMEs to access international markets, but the costs associated with maintaining certifications are a barrier. E.g. GMP, a requirement for cosmetic products, is verified by self-assessment by most biotrade SMEs. NSI services for certification are too costly.	Certification are critical for SMEs to access international markets, but the costs associated with maintaining certifications are a barrier. E.g. GMP, a requirement for cosmetic products, is verified by self-assessment by most biotrade SMEs. NSI services for certification are too costly.
R&D and Product Development	R&D in biotrade is often limited to larger enterprises, leaving SMEs with fewer opportunities for innovation and new product development. Dossiers which are a usual product of R&D are often owned by the importer and not the SMEs. E.g. Opuwo Processing Facility until 2022.	R&D in biotrade is often limited to larger enterprises, leaving SMEs with less value addition. Poor appreciation of the requirements for, and value of ownership of the regulatory dossiers results in weaker positioning in global value chains.

## 11.5.5 PESTEL - Environmental Factors

Environmental Factors	Namibia	South Africa
Biodiversity Conservation	SMEs in the biotrade sector contribute to biodiversity conservation through sustainable practices but face challenges in accessing finance that rewards these efforts. Through mostly wild harvested INPs, there is in situ benefit sharing, conservation and sustainable use.	SMEs in the biotrade sector contribute to biodiversity conservation through sustainable practices but face challenges in accessing finance that rewards these efforts. Through mostly wild harvested INPs, there is in situ benefit sharing, conservation and sustainable use. Should state something like: Economic benefits from renewable parts of trees and plants is a strong contributor to sustainable practices and conservation outcomes are resource will be protected.
Resource Availability	The biotrade sector relies on natural resources, and SMEs need financial products that align with resource sustainability and conservation efforts. The cost of compliance is problematic throughout the value chain.	Wild harvested species require constant awareness of resource availability. Resource assessments and biodiversity management plans are required. When transitioning to cultivated production care should be taken on loss of opportunities for wild harvesters, and land clearing for agriculture should not damage local biodiversity.
Sustainability and Certification	SMEs often struggle with the costs of obtaining and maintaining certifications, plus the time required for biodiversity and sustainability standards (e.g. organic). Without regulatory compliance, diversification of markets is equally problematic (e.g. GMP).	SMEs often struggle with the costs of obtaining and maintaining certifications, plus the time required for biodiversity and sustainability standards (e.g. organic). Without regulatory compliance, diversification of markets is equally problematic (e.g. GMP).
Climate Change	Climate change presents both a risk and an opportunity as SMEs are incentivised to adopt eco-friendly practices but need more targeted financial support to adapt. SMEs agility and close working relationship with communities assist them to adapt relatively quicker than large corporates.	Climate change presents both a risk and an opportunity as SMEs are incentivised to adopt eco-friendly practices but need more targeted financial support to adapt. SMEs agility and close working relationship with communities assist them to adapt relatively quicker than large corporates. Say something about new crops from indigenous underutilised species can support adaptation and mitigation.

## 11.5.6 PESTEL - Legal Factors

Legal Factors	Namibia	South Africa
Intellectual Property Rights, e.g. for complying dossiers and other necessary information compilations  Note: although GIs for Marula is being considered it is unlikely to be possible, as it is a transboundary resource. More likely is proper branding, trade-marks.  Also relevant IPR are patents, brands, trademarks	SMEs face difficulties protecting their intellectual property, particularly when dealing with biodiversity-based innovations that could be exploited by larger corporations. Even compilation of a dossier is often cumbersome for SMEs (e.g. Opuwo Processing Facility)	SMEs face difficulties protecting their intellectual property, particularly when dealing with biodiversity-based innovations that could be exploited by larger corporations. Even compilation of a dossier is often cumbersome for SMEs. Registering geographic indicators (GIs) is one method but requires concerted sector efforts. There are some examples available, e.g. Karoo Lamb, Rooibos; other to follow, like marula.
Regulatory Compliance such as compliance to provisions of the Nagoya protocol at international and national level (ABS)	Regulatory compliance (obtaining and maintaining it) for export and certification is costly, and SMEs often lack the financial resources to meet these legal requirements.	Regulatory compliance (obtaining and maintaining it) for export and certification is costly, and SMEs often lack the financial resources to meet these legal requirements.
Product Standards and Certifications, mandatory/regulatory ones like HACCP, GMP, GAP, ISO and voluntary ones like various organic and natural	Meeting international product standards is a challenge for SMEs due to the high costs and complexity of certification processes.	Meeting international product standards is a challenge for SMEs due to the high costs and complexity of certification processes.
Environmental Laws such as CITES, TOPS etc.	Compliance with environmental laws requires significant financial outlays, which further burdens SMEs operating in the biotrade sector.	Compliance with environmental laws requires significant financial outlays, which further burdens SMEs operating in the biotrade sector.
Business and Labour Laws, in terms of compliance with minimum wages and related matters (e.g. Is this where we can mention perception of fair and unfair practices and prices, minimum wages and difficulties comparing factory wages with on farm labour rates)	SMEs often operate informally, which limits their ability to access formal financial mechanisms and engage with larger business opportunities.	In Namibia SME incorporation as a "Close Corporation" is still allowed. However, in ZA PTY are a must. The cost of business registration and annual duties is rather high.

## 11.6 SWOT Analysis on Access to Finance for SMEs in the Biotrade Sector

### 11.6.1 SWOT Analysis for POLITICAL Factors

	INTERNAL FACTORS	EXTERNAL FACTORS
POSITIVE	<b>STRENGTHS</b> <ul style="list-style-type: none"> <li>Achieving certification improves product credibility and access to international markets.</li> <li>High quality, niche products satisfying target segments in local and international markets.</li> </ul>	<b>OPPORTUNITIES</b> <ul style="list-style-type: none"> <li>Increased involvement of bilateral/multilateral programs can fill the gaps in financial mechanisms.</li> <li>Strong support from international organisations for capacity building.</li> <li>Growing governmental interest in biodiversity-rich regions presents an opportunity for increased support to biotrade SMEs.</li> <li>International demand for certified sustainable products is growing, presenting opportunities for certified SMEs.</li> </ul>
NEGATIVE	<b>WEAKNESSES</b> <ul style="list-style-type: none"> <li>Fragmented and uncoordinated government support, leading to inefficiencies</li> <li>No focus on solving market access and non-tariff barriers</li> <li>Progress on reforming harmful government subsidies remains slow, hindering efforts to align financial incentives with biodiversity conservation.</li> <li>Support is not targeted towards biotrade and is poorly coordinated among institutions.</li> <li>SMEs are unlikely to become successful without targeted support, financial and technical, from 3<sup>rd</sup> parties.</li> </ul>	<b>THREATS</b> <ul style="list-style-type: none"> <li>Lack of consistent policy frameworks and coordinated efforts across ministries.</li> <li>Local policies and institutional quality remain weak, making it difficult to implement international biodiversity and finance frameworks effectively.</li> <li>Cheaper (imported, synthetic) alternatives out compete biotrade (INP) products.</li> <li>Market access and non-tariff measures tend to become more complex and expensive to address</li> </ul>

### **Impact of POLITICAL challenges for SMEs in biotrade to access relevant finance**

#### **Regulatory and Policy Barriers:**

Unfavourable regulatory environments can limit the availability of finance for SMEs or increase the complexity and cost of obtaining loans.

All novel plant products from Southern African biodiversity require some form of market access addressing non-tariff measures designed to protect consumers in target markets such as the EU, USA, China. These include for example Novel Foods, cosmetic ingredient regulations, and REACH for new chemical entities including essential oils. These costs are high and inhibit private investment and require collective and blended approaches.

#### **Lack of Access to Green and Sustainable Finance:**

Without access to appropriate sustainable finance, SMEs may find it challenging to invest in environmentally friendly technologies, certifications, or practices that support biodiversity conservation and ethical biotrade goals.

## 11.6.2 SWOT Analysis for ECONOMIC Factors

	INTERNAL FACTORS	EXTERNAL FACTORS
POSITIVE	<b>STRENGTHS</b> <ul style="list-style-type: none"> <li>The growing trends toward impact investment and blended finance options, which can provide alternative funding avenues for SMEs in biotrade.</li> <li>The demand for biodiversity-based products is growing, driven by consumer interest in sustainable products.</li> </ul>	<b>OPPORTUNITIES</b> <ul style="list-style-type: none"> <li>Innovations in sustainable production and traceability can differentiate products.</li> <li>Technological innovations, such as nature-positive production in e.g. the rooibos or buchu industry, can optimise resource use</li> <li>Impact investment and blended finance options are emerging, but they are currently limited and can be expanded to cover more sectors beyond agroforestry</li> </ul>
NEGATIVE	<b>WEAKNESSES</b> <ul style="list-style-type: none"> <li>SMEs face limited access to formal financial products and high-interest rates.</li> <li>The sector is relatively new and niche with substantial hurdles requiring significant amounts of grant funding and the public goods offering of the sector needs to be clearly defined and presented</li> </ul>	<b>THREATS</b> <ul style="list-style-type: none"> <li>Small market sizes, difficulties in scaling operations, and certification costs could constrain growth opportunities for biotrade SMEs.</li> <li>Products from biotrade are inherently 'fast moving consumer goods' and must therefore compete with pricing structures and quality standards as found with conventional consumer goods.</li> </ul>

### **Impact of ECONOMIC challenges for SMEs in biotrade to access relevant finance**

#### ***Lack of Collateral and Credit History:***

This lack of collateral and credit history leads to higher perceived risk by lenders, making them hesitant to provide loans or demanding higher interest rates.

#### ***High Transaction Costs:***

Higher transaction costs can lead to increased interest rates or fees for SMEs, further deterring them from seeking formal financing.

#### ***Limited Financial Literacy and Business Skills:***

Without proper financial knowledge, SMEs might not be able to navigate the financing process successfully, leading to rejections or suboptimal financing terms.

#### ***Complex Loan Application Processes:***

Lengthy and complex processes discourage SMEs from applying for loans, especially if they need quick access to capital for business operations or growth opportunities.

#### ***Perceived High Risk by Lenders:***

Lenders might charge higher interest rates, require stricter terms, or simply deny loans to SMEs to mitigate their risk exposure.

#### ***Lack of Tailored Financial Products:***

The lack of tailored products means SMEs may not find appropriate financing options that align with their business cycles, cash flow patterns, or investment needs.

### ***Limited Access to Alternative Financing Sources:***

Without access to diverse financing options, SMEs may struggle to find the capital they need for innovation, expansion, or sustainability initiatives.

### ***Economic Instability and Market Uncertainty:***

Economic and market uncertainties can reduce the willingness of financial institutions to lend, especially to small businesses perceived as vulnerable.

## **11.6.3 SWOT Analysis for SOCIOCULTURAL Factors**

	INTERNAL FACTORS	EXTERNAL FACTORS
POSITIVE	<b>STRENGTHS</b> <ul style="list-style-type: none"><li>• SMEs in biotrade are well-positioned, and agile enough, to cater to health-conscious and eco-friendly products, which align with changing lifestyles and consumer preferences.</li><li>• SMEs often work closely with Indigenous Peoples, Local Communities and cooperatives that serve as foundations for sustainable and ethical production and biotrade.</li></ul>	<b>OPPORTUNITIES</b> <ul style="list-style-type: none"><li>• Rising interest in sustainable, eco-friendly, and health-conscious products presents new opportunities for SMEs to expand into sectors like organic foods, natural cosmetics, and pharmaceuticals</li><li>• Working closely with Indigenous communities can enhance product authenticity and value, appealing to niche markets seeking ethical and culturally significant products.</li><li>• Addressing the needs of GenZ for natural products presents new, diversified market opportunities.</li></ul>
NEGATIVE	<b>WEAKNESSES</b> <ul style="list-style-type: none"><li>• SMEs often lack the capacity to scale and meet international demand, even for retail market segments, even if only delivering to 1 retail store chain.</li><li>• Many SMEs working with indigenous people and local community and cooperatives face challenges in formalising these structures, making it difficult for them to secure financing and operate as viable business entities.</li></ul>	<b>THREATS</b> <ul style="list-style-type: none"><li>• The niche nature of biotrade products limits mass-market appeal, and global reach due strict benefit sharing mechanisms in place to be complied with.</li><li>• SMEs may face significant competition from larger, more established brands that can meet consumer demand for eco-friendly products on a larger scale.</li></ul>

### ***Impact of SOCIOCULTURAL challenges for SMEs in biotrade to access relevant finance***

#### ***Social Norms and Gender Bias:***

Unfortunately, still in many sub-regions of Namibian and South African rural or indigenous communities, a gender bias prevents women or specific community members from being recognised as legitimate business owners. This can affect their ability to secure loans or investments. This is especially prevalent where women are married in community of property and by traditional law.

#### ***Lack of Social Networks and Connections:***

Entrepreneurs in remote biotrade sectors commonly do not have the social networks that are critical for accessing financial institutions or investors, leading to limited access to finance. The work of NGOs here is key, however, can alleviate the challenge only partially as the NGO are business facilitators and not decision makers.

#### ***Trust Issues and Stereotypes:***

Financial institutions may view biotrade SMEs with scepticism, particularly if they are from marginalised communities, due to perceived risk and uncertainty. This can be exacerbated by a lack of formal documentation or unfamiliarity with modern financial systems. Even if such 'business communities' are organised in gazetted cooperatives, financial institutions do

not accept their collateral offered when applying for credit products (e.g. AgriBank in Namibia).

### ***Cultural Barriers in Financial Literacy:***

Many SMEs in the biotrade sector may not be fully aware of financial instruments or how to approach financing options due to limited exposure to formal education and banking systems. Training assists, but language barriers exacerbate the challenge (e.g. Eudafano Women's Cooperative).

### **11.6.4 SWOT Analysis for TECHNOLOGICAL Factors**

	INTERNAL FACTORS	EXTERNAL FACTORS
POSITIVE	<b>STRENGTHS</b> <ul style="list-style-type: none"> <li>Biotrade SMEs have the potential to adopt innovative and sustainable production techniques that can improve yields, reduce costs, and boost competitiveness, especially due to their agility in decision taking.</li> <li>Digital platforms and fintech solutions are emerging, presenting potential tools for improving efficiency and expanding market access in the biotrade sector; as well as accessing alternative funding sources, like crowd funding.</li> </ul>	<b>OPPORTUNITIES</b> <ul style="list-style-type: none"> <li>Innovations in sustainable production and traceability can differentiate products.</li> <li>Artisanal production can upgrade to more efficient and competitive technologies + techno/regulatory know-how can improve value addition</li> <li>The use of modern communication technologies can reduce marketing costs during product placement and market expansion.</li> <li>Innovative payment systems can expedite foreign exchange-based payments.</li> </ul>
NEGATIVE	<b>WEAKNESSES</b> <ul style="list-style-type: none"> <li>Lack of R&amp;D investment in SMEs stifles innovation.</li> <li>There is limited investment in research and development, especially for innovative production methods, which hinders the ability of SMEs to innovate and adopt advanced techniques.</li> <li>There is lack of funding for (and often complacency of) SMEs to expand production to better organised set-ups.</li> <li>Lack of technological literacy for many SMEs limits their ability to manage their finance or apply for loans.</li> <li>Lack of technological upgrades in production as well as ICT systems.</li> </ul>	<b>THREATS</b> <ul style="list-style-type: none"> <li>High costs associated with adopting new technologies and maintaining certifications continue to hinder SMEs from accessing international markets and scaling their businesses.</li> <li>Productivity limitations often drive cost of production for SMEs and then make them uncompetitive, especially noticeable with community-based biotrade models.</li> <li>The push for cashless transactions by financial institutions limits SMEs in rural areas.</li> </ul>

### ***Impact of TECHNOLOGICAL challenges for SMEs in biotrade to access relevant finance***

#### ***Limited Access to Digital Financial Platforms:***

Many SMEs, especially in rural areas, do not have access to online banking services or digital financial platforms due to poor internet connectivity or a lack of smartphones and computers.

Without access to these platforms, biotrade SMEs may struggle to apply for loans, manage accounts, or explore alternative finance options like crowdfunding or peer-to-peer lending (e.g. Eudafano Women's Cooperative).

#### ***Lack of Technological Literacy:***

Many biotrade entrepreneurs may not have the skills to use digital tools to manage their finances or apply for loans. This can be a significant barrier, as modern banking systems are increasingly digital.

In regions where financial institutions are pushing towards cashless systems, biotrade SMEs that rely on traditional banking methods may find themselves excluded from accessing certain financial products (e.g. community forests).



### ***Inadequate Infrastructure for E-commerce:***

Biotrade SMEs often face technological barriers in accessing global markets through e-commerce platforms due to a lack of knowledge about digital marketing, online sales, and payment gateways (e.g. Paypal is not an acknowledged payment system in Namibia, making e-commerce more difficult).

This limits their ability to generate sufficient revenue or visibility to attract investors and financiers, further restricting their access to financing.

### ***Difficulty in Accessing Technological Upgrades:***

SMEs in biotrade may need modern technologies to improve efficiency, such as in the processing, packaging, and distribution of products (e.g., machinery for natural product extraction for marula kernel decortication).

However, they often struggle to access financing for such technological upgrades due to a lack of awareness of how to present their business case to financiers or inadequate collateral to secure loans.

## **11.6.5 SWOT Analysis for ENVIRONMENTAL Factors**

	INTERNAL FACTORS	EXTERNAL FACTORS
POSITIVE	<b>STRENGTHS</b> <ul style="list-style-type: none"><li>• SMEs who work closely with indigenous peoples and local community, inherently protect the environment, provide for biodiversity conservation and sustainable use.</li><li>• The conservation of traditional applications of the genetic resources provide incentives to both, communities and SMEs for sustainable use methods.</li></ul>	<b>OPPORTUNITIES</b> <ul style="list-style-type: none"><li>• SMEs in the Biotrade sector contribute to biodiversity conservation through sustainable practices. They help ensure the sustainable use of natural resources, benefiting ecosystems and communities.</li><li>• Potential for development of targeted financial products that encourage conservation efforts and resource sustainability.</li></ul>
NEGATIVE	<b>WEAKNESSES</b> <ul style="list-style-type: none"><li>• SMEs often struggle to access finance that aligns with sustainability goals.</li><li>• SMEs often struggle in writing up a good business case for their sustainable use of biodiversity initiatives and generally don't meet (even lenient) terms and conditions in meeting grant requirements (mostly due to lack of financial literacy).</li><li>• Seasonality of product availability due to plant growth cycles, is both a weakness (if the SME does not have counter measures in place) and threat.</li><li>• Difficulties with scaling operations to account for environmental governance, and other compliance obligations</li></ul>	<b>THREATS</b> <ul style="list-style-type: none"><li>• Resource depletion and ecosystem degradation due to overharvesting or non-compliant activities.</li><li>• Climate change risks affecting the availability and quality of natural resources, increasing operational challenges for SMEs. Without adequate financial support, SMEs may struggle to adapt to changing environmental and regulatory landscapes.</li><li>• The relatively big-ticket sizes for "green finance" make financing mechanism unattainable and costly.</li><li>• Industry and consumers rejection of wild harvesting</li></ul>

### ***Impact of ENVIRONMENTAL challenges for SMEs in biotrade to access relevant finance***

### ***Resource Depletion and Ecosystem Degradation:***

Financial institutions may perceive these businesses as high-risk due to the unpredictability of resource availability, making it harder for SMEs to secure loans. They may also struggle to maintain steady production, leading to fluctuating revenues, which makes them unattractive to investors.

### ***Climate Change and Extreme Weather Events:***

Lenders often avoid providing credit to businesses exposed to such environmental risks due to the likelihood of revenue losses and defaults. Financial institutions may require additional collateral or higher interest rates to mitigate the perceived risk, which can be difficult for SMEs to provide.

### ***Certification and Compliance Costs:***

Without certifications, many biotrade SMEs are unable to penetrate premium markets, reducing their revenue potential and making them less attractive to banks and investors. The upfront costs of certification also strain their financial resources, making it harder to maintain cash flow and repay loans.

### ***Seasonal Nature of Biotrade Products:***

Irregular cash flow makes it difficult for SMEs to meet regular loan repayments, which discourages lenders from offering long-term finance solutions. Without consistent income, it is also challenging for businesses to maintain working capital or fund expansion efforts.

### ***Limited Knowledge of Sustainable Practices:***

Financial institutions are more likely to fund enterprises that demonstrate sustainable and responsible practices. SMEs that do not meet these sustainability standards may face challenges in securing funds from investors who prioritise environmental and social governance (ESG) criteria.

### ***Lack of Infrastructure to Handle Environmental Risks:***

The lack of resilience-building infrastructure makes SMEs more vulnerable to environmental shocks, deterring banks and investors from providing capital due to the increased risk of business failure.

## **11.6.6 SWOT Analysis for LEGAL Factors**

	INTERNAL FACTORS	EXTERNAL FACTORS
POSITIVE	<b>STRENGTHS</b> <ul style="list-style-type: none"><li>SMEs often have unique and locally sourced products derived from biodiversity, which can provide competitive advantages in niche markets through application of IPRs</li><li>The compliance to standards and certifications assures production process conform to quality requirements for products, which provides for strong business cases with good legal standing.</li></ul>	<b>OPPORTUNITIES</b> <ul style="list-style-type: none"><li>Governments and international organisations are increasingly providing grants, financial support, and capacity-building initiatives to promote green and biodiversity-based businesses that need to comply with legal requirements (e.g. moving informal SMEs into the formal sector, etc.).</li><li>IPRs offer opportunities to capture and secure value</li></ul>
NEGATIVE	<b>WEAKNESSES</b> <ul style="list-style-type: none"><li>SMEs often lack the necessary capital and know-how to protect their intellectual property, meet international product standards, and comply with environmental regulations.</li><li>ABS compliance at national level poses challenges to the supply chain actors, e.g. IPLC and their local agents or SMEs who act as intermediaries in the value chain.</li></ul>	<b>THREATS</b> <ul style="list-style-type: none"><li>Complex regulatory requirements hinder SMEs' ability to scale internationally.</li><li>Without strong intellectual property protection, SMEs are at risk of having their innovations copied or exploited by larger, well-funded corporations.</li></ul>

## ***Impact of LEGAL challenges for SMEs in biotrade to access relevant finance***

### ***Complex Regulatory Frameworks for Biotrade and Biodiversity Use:***

Compliance with legal frameworks is costly and time-consuming for SMEs, especially those with limited resources. Failure to comply with legal requirements can lead to penalties, which discourages financial institutions from providing loans due to the perceived risk of non-compliance. Additionally, many financial institutions may avoid lending to biotrade enterprises if they are uncertain about the regulatory environment.

### ***Intellectual Property (IP) and Benefit-Sharing Laws:***

Navigating IP laws and ABS frameworks is legally complex and expensive, particularly for small enterprises that do not have legal expertise. The uncertainties surrounding benefit-sharing agreements can make investors wary of funding biotrade SMEs, as potential legal disputes or unresolved benefit-sharing agreements could jeopardise the business.

### ***Lack of Legal Recognition and Informality:***

Banks and other financial institutions often require formal registration, tax compliance, and legal documentation before granting loans. Informal businesses without legal recognition are seen as high-risk and are typically excluded from formal financial systems. The lack of a formal legal status limits their access to credit and financial services.

### ***Unclear Land Tenure and Resource Ownership Rights:***

Financial institutions are hesitant to lend to businesses that operate on disputed land or where resource access rights are not clearly defined. Without clear legal ownership or lease agreements, SMEs may lack collateral to secure loans, making it difficult to access financing.

### ***High Costs of Legal Compliance:***

Legal compliance costs can strain the financial resources of SMEs, making it difficult for them to maintain cash flow and meet repayment obligations. Lenders may view businesses with high compliance costs as financially unstable and risky to invest.

### ***Trade Barriers and Export Restrictions:***

Trade barriers increase the cost and complexity of doing business internationally, which reduces the profitability of SMEs. Financial institutions may be reluctant to finance export-oriented SMEs that face these legal hurdles, as their market access could be restricted or costly.



African-European partnerships for biodiversity conservation

