

Baobab
(*Adansonia digitata*)

AUGUST 2021



Kruger Swart Associates (KSA) were commissioned by the project ABioSA to develop this sector development plan in collaboration with sector partners and participants.

ABioSA has also commissioned a series of knowledge products for key biotrade species. These and other biotrade resources can be found at www.abs-biotrade.info/projects/abiosa/resources

A glossary of biotrade terms can be found at www.abs-biotrade.info/resources

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BAOBAB (ADANSONIA DIGITATA)

Sector Development Plan

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The ABS Capacity Development Initiative (ABS Compliant Biotrade in Southern Africa)

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1. EXECUTIVE SUMMARY

This Sector Development Plan (SDP) was prepared as part of the ABioSA project¹, in close consultation with the Board and members of the African Baobab Alliance. Baobab was chosen as one of a number of biotrade value chains for support under the project.

The planning process began with a situational analysis of the Baobab sector as it currently stands. Because of the ABioSA's geographical focus, this was necessarily confined to southern Africa. However, it was agreed from the outset that the sector extends throughout Sub Saharan Africa, and that the subsequent Sector Development Plan would be implemented at a continent-wide level.

The situational analysis revealed a vibrant and growing sector with significant potential to create new businesses and new jobs, both at the primary production level and downstream value addition. At current levels, the industry in southern Africa has created income opportunities for over 10,000 rural harvesters and at least 1,200 new seasonal jobs, for combined production of approximately 4,000 Metric Tonnes (MT) of Baobab fruit/yr. Within just this region alone, potential growth of over 200% is envisaged, bringing another 20,000 or more rural harvesters into the business and creating a further 2,500 seasonal jobs, while expanding production to over 13,000 MT fruit/yr. When extended to include the rest of Sub-Saharan Africa, these impacts will be further magnified several times over.

However, there are several key constraints to achieving this growth:

- Inadequate capacity and resources within the African Baobab Alliance to drive growth in the sector;
- Unreliable and variable quality of Baobab products, deterring manufacturers from using Baobab as an ingredient;
- Limited consumer knowledge and awareness of Baobab;
- Regulatory hurdles to market access in key markets (e.g. China);
- Insufficient data on the extent and health of the Baobab tree resource across Africa;
- Insufficient scientific data on the health benefits and functionality of Baobab powder and oil as ingredients;
- Inadequate impact monitoring data on the social, economic and environmental benefits of large scale Baobab commercialisation;
- A lack of understanding and awareness amongst actors in the Baobab sector around Access and Benefit Sharing

The main substance of the Sector Development Plan is therefore a detailed workplan and budget intended to systematically address and resolve each of these constraints and enable the Baobab sector to achieve its full potential in terms of economic growth and job creation.

The long term impact goals of the African Baobab Alliance are to grow the Baobab industry to the point where:

¹ ABioSA is a SECO-funded project on ABS Compliant Biotrade in South(ern) Africa, aimed at supporting the creation of a high-growth, jobs-rich biotrade sector that complied with international and domestic ABS regulations

- 1 million rural African women benefit from the sale of Baobab fruit every year;
- 10 million hectares of Baobab woodland are effectively conserved and managed;
- 300 million tonnes of carbon are sequestered every year in actively managed Baobab woodland; and
- The Baobab industry is worth over US\$1 billion/year to Africa.

This Sector Development Plan represents the first steps on the road towards achieving these goals.

2. INTRODUCTION

2.1. AIM OF SDP

The aim of the SDP is to provide a detailed plan or roadmap to guide the development of the Baobab sector. The plan also includes details on how to engage with associated value chains, products, and markets as part of sector development.

The plan details how the sector will engage with the following aspects to ensure sector development: biodiversity/conservation status, traditional use, current economic position, existing value chains, market potential, current and future technologies, stakeholders etc.

The SDP aims to be a succinct document and at minimum includes the strategic objectives of the sector, the actions related to the implementation of the objectives along with responsible persons or organizations, set timelines, cost and a monitoring strategy.

Within the context of the ABioSA project the SDP provides the detailed plan to create an enabling environment for SMEs to operate and grow and for the sector to develop in a sustainable way.

2.2. OVERVIEW OF PROCESS FOR DEVELOPMENT OF SDP

This Sector Development Plan was prepared as part of the ABioSA project. Following initial consultations with key informants in the sector, a desktop analysis of the national, regional (SADC) and global status quo of the Baobab sector was undertaken. The desktop analysis included a document review and key informant interviews. The findings of this research were then shared in a stakeholder engagement workshop with members of the African Baobab Alliance in order to verify the information and identify any gaps.

A key objective of the stakeholder engagement workshop was to prioritize the strategic objectives for the sector, which form the basis of the direction and specific work packages included in this sector development plan. The main priorities identified by the Baobab stakeholder group, included: quality, creating market demand, ABS compliance, safety and

efficacy research, resource assessment and monitoring, and impact measurement. These priorities are unpacked in specific work packages in this sector development plan.

The stakeholder engagement workshop was held on the 2 of February 2021 via Zoom, which enabled a variety of value chain actors (producers, manufacturers, and buyers) to participate in the meeting and contribute to the eventual outcome, and specific priorities identified. Following the stakeholder engagement workshop additional consultations were held with key informants and findings from the status quo analysis reworked. A first draft of the SDP was developed in collaboration with members of ABA that were consulted on the specific actions that need to be undertaken in each of the work packages. A final stakeholder engagement workshop was held with members of the ABA in order to verify the SDP.

2.3. STRUCTURE OF THE SDP

The SDP is structured in four sections. First, the situational analysis will provide insight into the current composition of the sector, current status, challenges, and opportunities and how the sector is organized in order to take the sector development plan forward. Second, the strategic direction will provide the vision and mission and strategic objectives of the sector, before unpacking the specific work packages in detail. Third the financing and funding strategy for the SDP is considered, and finally the monitoring and the evaluation of the SDP within the sector will be explained.

3. SITUATIONAL ANALYSIS

As preparation for the development of the SDP, a detailed situational analysis of the Baobab sector in the SADC region was undertaken. Key conclusions are summarised below, and the full report is included as an annex to this document.

3.1. COMPOSITION OF THE SECTOR

Baobabs occur in over 30 different Sub-Saharan African countries. Because of the geographical focus of the ABioSA project in the SADC region, only SADC-specific data was compiled in the situational analysis. However, it is fair to assume that the situation in other Baobab-producing countries elsewhere in Sub-Saharan Africa is broadly similar, and that the key lessons derived from this analysis apply to the Baobab sector across the continent.

The situational analysis looked at the Baobab sector on two levels. The first was in South Africa alone, and the second was within the rest of the SADC region. In South Africa, Baobab distribution is limited only to the warmer parts of Limpopo province. Although found and informally traded within almost all the SADC countries (except Lesotho), Baobab is only commercially wild harvested and marketed in SA, Mozambique, Zimbabwe, and Malawi (although it is extensively commercialised in other regions of Africa). For the rest of the SDP, “SADC” will refer specifically to Zimbabwe, Malawi, and Mozambique where Baobab has been commercialised.

It is important to note that most of the figures presented in this document relate to the “formal” Baobab sector, for which reasonably accurate data can be found. There is a vibrant informal

sector trade in Baobab fruit and fruit products in all African countries where Baobab is found, but there is little to no data on the scale of this (which is assumed to be much larger than the formal sector).

Formal sector trade in Baobab products was initiated in southern Africa through the efforts of the regional trade association PhytoTrade Africa. These efforts began in the early 2000s and gained significant momentum in 2008 when Baobab powder was approved for sale in the EU under the EU Novel Foods regulations.

The following is a graphical representation of the Baobab sector currently within the southern African region:

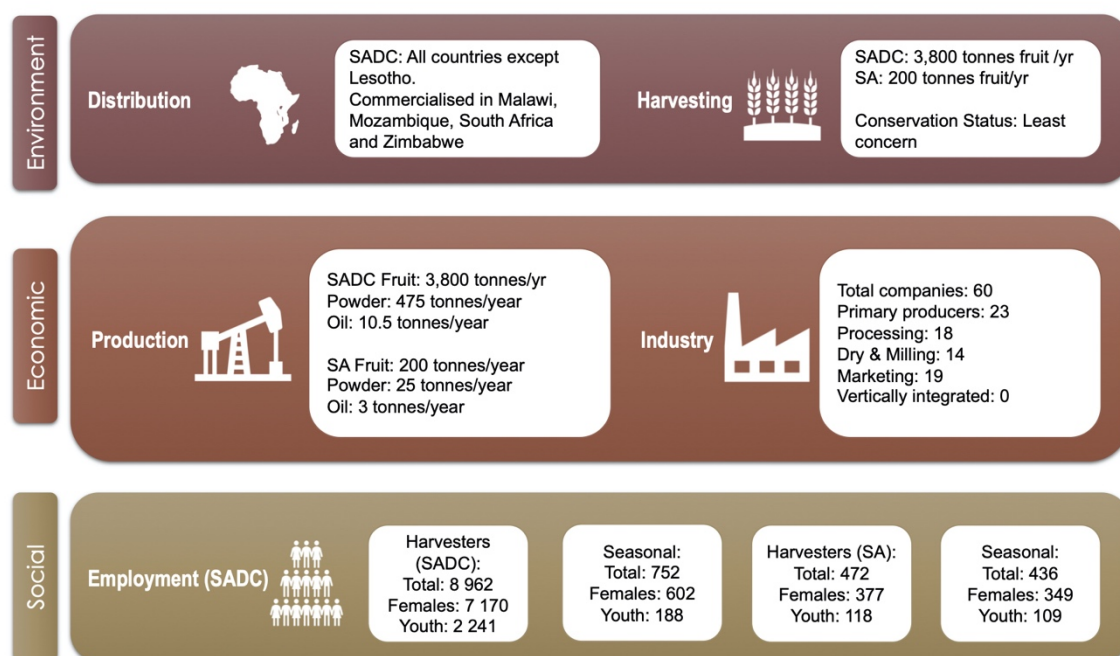


Figure 1: Baobab Context Analysis

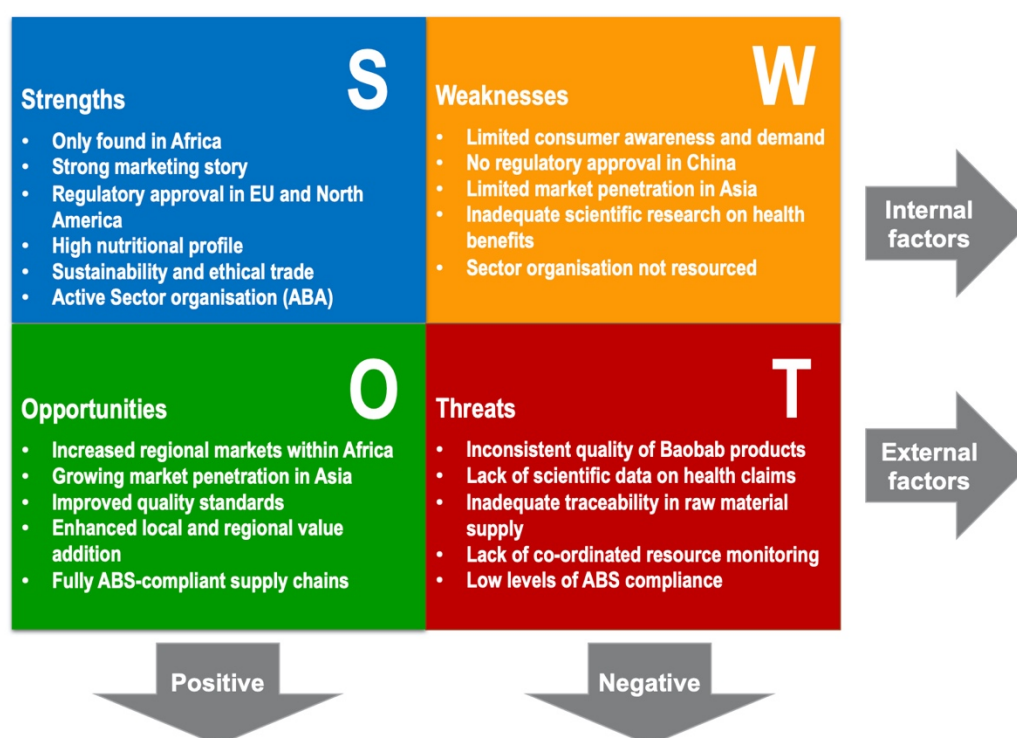
Note that there was no production and no employment within the formal Baobab sector in the region prior to PhytoTrade Africa's concerted efforts to develop the sector. Today some 4,000 Metric Tonnes (MT) of fruit a year are harvested within the formal Baobab sector in the region, yielding over 500 MT powder and nearly 13.5 MT seed oil. The majority of both products feed into the export market. There are at least 60 SMEs operating in the sector, processing fruit from nearly 10,000 rural Baobab harvesters. Close to 1,200 jobs (mostly seasonal) have been created in the sector.

3.2. STATUS OF THE SECTOR

The Baobab sector has moved beyond its infancy and is clearly poised for significant growth, with far-reaching positive impacts and outcomes on both rural people and biodiversity in Africa. The early stages of the sector's growth were substantially driven by the trade association PhytoTrade Africa (from approx. 2004 to 2014). The vacuum that followed resulted in a diminished sense of purpose and direction in the sector for some years until, in 2018, a group of sector players came together to establish the African Baobab Alliance (ABA). Today the

ABA exists as a strong representative body for the sector, but without the resources and wherewithal to drive the needed sector development process.

A SWOT analysis of the current status of the sector, undertaken with members of the ABA, revealed the following:



Key constraints to the growth of the Baobab sector were identified as follows:

- i) Although the African Baobab Alliance exists as a sector organisation, it does not have the capacity and resources available to enable it to implement a sector development strategy. This is viewed as critical to the successful growth of the sector.
- ii) The quality of Baobab products hugely variable over time and space. There are no minimum quality standards for Baobab that can be used to guide producers, and no documented best practices for production and processing. This has resulted in unreliable and unpredictable quality, which is a major deterrent to market growth.
- iii) There is insufficient market demand at present for Baobab products. This is in part due to the fact that Baobab does not have regulatory approval in some key markets (especially China and other Asian countries), and in part due to limited consumer knowledge and awareness of Baobab products and health benefits.
- iv) There is a lack of data on the extent and health of the Baobab resource across Africa. This has fuelled misperceptions around the sustainability of Baobab harvesting with negative outcomes for market growth. Although some resource monitoring activities are underway, there is no harmonised resource assessment methodology to enable comparative assessments.

- v) There is not enough scientific research on the health benefits of Baobab powder and oil to validate potential health claims by manufacturers and to support growing market interest in Baobab products.
- vi) Although there are key triple bottom line benefits (social, economic and environmental) associated with Baobab commercialisation, there is insufficient impact monitoring data to substantiate these benefits.
- vii) There is a lack of understanding and awareness amongst actors in the Baobab sector around Access and Benefit Sharing and the need to comply with the provisions of the Nagoya Protocol. This is a threat to future growth of this sector.

3.3. RESPONSIBILITY FOR IMPLEMENTATION

The initial growth of the Baobab sector and sales into the European market were significantly supported by the efforts of PhytoTrade Africa, which adopted Baobab as one of its focal species in the early 2000s. PhytoTrade's key achievement was the attainment of EU Novel Foods (2008) and US FDA GRAS (2009) approval for Baobab powder, unlocking the European and North American markets for Baobab as a food ingredient. Further growth in the sector requires a co-ordinated approach from stakeholders, and in 2018 the African Baobab Alliance (ABA) was established by a group of Baobab producers from across Africa.

The ABA will act as the implementing agency for the Baobab Sector Development Plan. The ABA has over 40 members drawn from producers and processors in Africa as well as key brands in export markets for whom Baobab is their main (and in some cases only) ingredient or product. These members are governed by a constitution and set of core principles to which all members agree to adhere. The members elect a Board to act as their governing body, and the Board appoints some of its members as office-bearers. The current Board has eight members from seven different countries. The ABA is registered as a Non-Profit Organisation in South Africa.

4. STRATEGIC DIRECTION

4.1. VISION & MISSION

The African Baobab Alliance (ABA) exists as an alliance of Baobab producers, traders and brands, united in a common desire to support the development of the nascent Baobab industry.

The objectives of the Alliance are:

- 1) To promote the growth of the Baobab industry for the benefit of Baobab harvesters across Africa;

- 2) To promote the adoption of common quality practices and standards across the Baobab industry;
- 3) To grow the demand for Baobab in local and international food and cosmetic markets; and
- 4) To improve the competitiveness and sustainability of the Baobab industry.

Membership of the Alliance is open to all Baobab producers meeting common standards around ethical and environmentally sustainable trading practices, as well as adherence to global food safety and quality standards.

Within just this region alone, potential growth of over 200% is envisaged, bringing another 20,000 or more rural harvesters into the business and creating a further 2,500 seasonal jobs, while expanding production to over 13,000 MT fruit/yr. This would also mean 3 million hectares conserved and 90 million tonnes of carbon sequestered. When extended to include the rest of Sub-Saharan Africa, these impacts will be further magnified several times over.

The long term impact goals of the African Baobab Alliance are to grow the Baobab industry to the point where:

- 1 million rural African women benefit from the sale of Baobab fruit every year;
- 10 million hectares of Baobab woodland are effectively conserved and managed;
- 300 million tonnes of carbon are sequestered every year in actively managed Baobab woodland; and
- The Baobab industry is worth over US\$1 billion/year to Africa.

4.2. KEY STRATEGIC OBJECTIVES

The key objectives for the African Baobab Alliance correspond to the targets above and work-packages that have been identified in the Sector Development Plan process. These objectives and work-packages are included in the tables below:

Strategic Objective		Work Package	
1)	Promote the growth of the industry	WP1	ABA Capacity Building
2)	Promote adoption of common quality practices and standards	WP2	Quality standards for Baobab produce
3)	Grow demand for Baobab	WP3	Creating market demand
		WP4	Baobab health claims and functionality research
4)	Improve competitiveness and sustainability of Baobab industry	WP5	Resource assessment and monitoring
		WP6	Measuring impact of industry
		WP7	Access and Benefit Sharing

4.3. IMPLEMENTATION ACTIONS

<i>Work Package 1</i>		ABA Capacity-Building				
<i>Action</i>	<i>Priority</i>	<i>Timeframe</i>	<i>Responsible</i>	<i>Resources required</i>	<i>Collaborations and alignments</i>	<i>Outcomes</i>
Develop ToR for secretariat of ABA	critical	July 2021 – September 2021	ABA Board	ABA members working group	ABA members	ToR for ABA secretariat
Advertise a 50% position and appoint a person/company/organization as the ABA CEO/secretariat	critical	Sept 2021 – Dec 2021	ABA Board	ABA members working group	ABA members	ABA Secretariat is appointed
Development of work plan inclusive of implementation and finance management	critical	Sept 2021- Dec 2021	ABA Board	ABA members working group	ABA members	
Development and adoption of Standard Operating Procedures (SOPs) for ABA	Short term	Jan 2022 – June 2022	ABA Secretariat	ABA members	ABA members	SOPs adopted at Annual General Meeting (AGM)
Organisation of annual AGM and congress for ABA members and Baobab stakeholders	Short term	Jan 2022 – June 2022	ABA Secretariat	ABA members	ABA members, Baobab stakeholders	AGM and congress held
Communication strategy for ABA and benefits of ABA membership	Short term	Jan 2022 – June 2022	ABA Secretariat	ABA members	ABA members	Presentation on ABA and ABA benefits

Support and Certification of ABA members according to 3 rd party standards and certification (Fairwild, Fair for Life, etc)	Medium term (2–3 years)	2022 - 2024	ABA Secretariat	ABA members	ABA members, Key certification partners	Increase in number of ABA members that are certified by 3 rd party certification schemes
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<i>Work Package 2</i>		Develop Quality Standards for Baobab Products				
<i>Action</i>	<i>Priority</i>	<i>Timeframe</i>	<i>Responsible</i>	<i>Resources required</i>	<i>Collaborations and alignments</i>	<i>Outcomes</i>
Finalize pan-African Baobab oil quality standard	short term (1-2 years)	2020 – 2021	ABA standards committee	Existing project under the GQSP	GQSP SABS	Standard for Baobab oil adopted as legal standard by SABS in SA Baobab oil quality standard formalized and adopted by ABA members
Develop best practice and guideline for production of Baobab powder	short term (1-2 years)	Jan 2022 – July 2022	Baoquality Project, ABA Standards Committee	External funding	ABA Members Baoquality Project (end 2022)	Best practice and guideline for production of Baobab powder Adopted by ABA members
Develop minimum food-grade standards	short term (1-2 years)	Jan 2022 – Dec 2022	Baoquality Project, ABA Standards Committee	External funding	ABA Members Baoquality Project (end 2022)	A minimum food-grade standard Adopted by ABA members
Develop adulteration test	Short term	Jan 2022 – July 2022	Baoquality Project, ABA Standards Committee	External funding	ABA Members Baoquality Project (end 2022)	Adulteration test guideline
Develop nutrient profile	Medium term (2-3 years)	Jan 2023 – Dec 2023	Baoquality Project, ABA Standards Committee	External funding	ABA Members Baoquality Project (end 2022)	Baobab powder nutrient profile adopted by ABA
Understanding industry requirements	Short term to medium term	Jan 2022 – Dec 2023	ABA Secretariat	External funding	ABA secretariat	Validation of ABA standards and guidelines
Quality communication strategy	Medium term (2-3 years)	2022-2024	ABA Secretariat	Internal	ABA members Baoquality	Quality communicated to new and current producers

						Quality communicated to industry
Pan-African Standards for Baobab oil and powder submitted to AU	Medium term (2-3 years)	2022-2024	ABA Secretariat	External funding	ABA members African Union Regional Standards Organisations	Pan-African Standards for Baobab oil and powder adopted

<i>Work Package 3</i>		Creating Market demand				
<i>Action</i>	<i>Priority</i>	<i>Timeframe</i>	<i>Responsible</i>	<i>Resources required</i>	<i>Collaborations and alignments</i>	<i>Outcomes</i>
Scoping of Asian market requirements for Baobab powder and oil	short term (1-2 years)	Jan 2021 – July 2021	ABA Board	Consultant – funded project	ABioSA SDP	Report on Asian market requirements for Baobab oil and powder
Preparation and submission for New Food ingredient registration in China	Medium term (2-3 years)	2021 - 2023	ABA Board	External funding Internal - ABA members	Chinese regulatory consultant	Baobab powder is registered for sale in China
Develop strategy for increasing consumer awareness in UK and German speaking markets	Short term (1 year)	April 2021 – Nov 2021	ABA Board	Existing project	CBI	Strategy for increasing consumer awareness in UK and German speaking markets
Scoping of intra-African marketing opportunities for Baobab powder and oil	Medium term (2-3 years)	2021 - 2023	Marketing working group	ABA members External funding	African trade support consultant	Strategy for increased market uptake within Africa
Increase consumer awareness of Baobab in local and international markets through marketing collaborations	Short to long term	Jan 2021 – Dec 2025	Marketing working group	ABA members External funding		Marketing collaborations developed by ABA members
Increase consumer awareness of the properties and benefits of Baobab	Short to long term	Jan 2021 – Dec 2025	ABA Secretariat	Marketing working group	Researchers	Research translated into popular articles and material that can be used by ABA members
Increase buyer awareness of Baobab as a sustainable product	Short to long term	July 2021	ABA secretariat	Marketing working group		Presentation that positions Baobab as an ethical, sustainable product of the future

<i>Work Package 4</i>		Baobab Health Claims and Functionality Research				
<i>Action</i>	<i>Priority</i>	<i>Timeframe</i>	<i>Responsible</i>	<i>Resources required</i>	<i>Collaborations and alignments</i>	<i>Outcomes</i>
Identify the Baobab sector's top 5 research priorities to substantiate health claims	Short term	Jan 2022 – Dec 2022	ABA secretariat Research working group	ABA members	Current researchers Potential researchers	Paper identifying the top 5 research priorities for Baobab health claims
Collate summary of existing research and what they prove in relation to Baobab health claims	Short term Continuous	Jan 2022 – Dec 2022	ABA secretariat Research working group	External funding	Current researchers	Library of key research papers that relate to top 5 research priorities Summary paper of existing research
Identify the Baobab sector's top 5 research priorities to substantiate functionality claims	Short term	Jan 2022 – Dec 2022	ABA secretariat Research working group	External funding	Current researchers Potential researchers	Paper identifying the top 5 research priorities for Baobab functionality claims
Collate summary of existing research and what they prove in relation to Baobab functionality claims	Short term Continuous	Jan 2022 – Dec 2022	ABA secretariat Research working group	External funding	Current researchers	Library of key research papers that relate to top 5 research priorities for Baobab functionality claims Summary paper of existing research
Conduct targeted research activities to support and validate health and functionality claims	Medium term (2-3 years)	Jan 2023 – Dec 2024	ABA secretariat	External funding	External researchers	A series of reports providing scientific validation of health and functionality claims

			Research working group			
Investment in clinical trials based on recommendations from the short-term validation studies to support potential EU and FDA health claims	Long term (4-5 years)	Jan 2023 - ongoing	ABA secretariat Research working group	Funded projects	Universities	Clinical trial reports detailing rationale, methodology, results and conclusions.
Develop and publicise information and marketing material based on any positive outcomes from the short-term validation studies.	Medium term (2-3 years)	Jan 2023 – Dec 2024	ABA secretariat Research working group	External funding		Marketing sell sheets, reports and press releases to help publicise research findings

<i>Work Package 5</i>		Resource Assessment and Monitoring				
<i>Action</i>	<i>Priority</i>	<i>Timeframe</i>	<i>Responsible</i>	<i>Resources required</i>	<i>Collaborations and alignments</i>	<i>Outcomes</i>
Set up expert working group to determine methodology for resource assessment	Short term	July 2021 – Dec 2021	ABA Board	ABA working group	ABA members, KSA	ToR for Baobab Resource Assessment
Develop resource assessment methodology and trial in 2 countries	Short term	Jan 2022 – Dec 2022	Expert working group	External funding	SANBI, other resource monitoring stakeholders	Resource assessment methodology trialled and adopted
Conduct baseline Baobab resource assessment for the continent	Long term (4-5 years)	Jan 2023 - 2027	ABA secretariat External research team	External funding	Incorporate lessons from Marula Resource Assessment methodology report commissioned by ABioSA	A baseline report on Africa-wide Baobab resource assessment
Implementation of standardised resource monitoring and reporting in each Baobab-producing country	Long term (4-5 years)	Jan 2023 - 2027	ABA secretariat	ABA members External funding	National resource monitoring stakeholders	Comparable national resource monitoring reports are submitted to the ABA

<i>Work Package 6</i>		Measuring impact of the industry				
<i>Action</i>	<i>Priority</i>	<i>Timeframe</i>	<i>Responsible</i>	<i>Resources required</i>	<i>Collaborations and alignments</i>	<i>Outcomes</i>
Establish working group to develop key indicators and methodology	Short term	July 2021 – Dec 2021	ABA Board ABA members working group	Internal		Annual report template, infographic Key impact indicators and methodology on how to collect Guidance on impact data collection methodologies
Survey of members to determine data collected and willingness to contribute data	Short term	July 2021 – Dec 2021	ABA Board ABA members working group	Internal		List of data currently collected by ABA members List of ABA members willing to contribute data
Develop Annual Report including key impact indicators to be updated and released annually	short term (1-2 years)	2022-2025	ABA secretariat	members to submit their information external funding		ABA annual report including key impact indicators is available for members to share with their partners or buyers
Circulation and distribution of annual report	medium term (3-5 years)	ongoing	ABA secretariat	ABA members		Basic facts and figures on the website Tailored impact information

<i>Work Package 7</i>		Access and Benefit Sharing				
<i>Action</i>	<i>Priority</i>	<i>Timeframe</i>	<i>Responsible</i>	<i>Resources required</i>	<i>Collaborations and alignments</i>	<i>Outcomes</i>
Conduct comparative review of Biotrade and ABS regulation in Africa	<ul style="list-style-type: none"> short term (1-2 years) 	2022-2023	ABA secretariat	External funds	Marula sector has similar need, and this can be done jointly	Report on the comparison of Biotrade and ABS regulation in Africa
Market perspective study	<ul style="list-style-type: none"> short term (1-2 years) 	2022 – 2023	ABA secretariat	External funds	Marula sector has similar need, and this can be done jointly	Study on the impact of regulatory difference on the market dynamics of Baobab
Workshop to share and best practice across different products within the region	<ul style="list-style-type: none"> short term (1-2 years) 	2023	ABA secretariat	External funds	Marula sector has similar need, and this can be done jointly	Workshop report on lessons learnt and best practice in the region

5. FINANCE STRATEGY

5.1. COST ESTIMATIONS

The following table represents a summary of estimated costs for the implementation of the Sector Development Plan. A detailed budget is presented as an Annex.

Cost category	Year				
	1	2	3	4	5
Work package 1 (ABA Capacity-Building)	US\$117,600	US\$166,500	US\$207,900	US\$250,200	US\$262,500
Work package 2 (Quality Standards)	US\$28,000	US\$38,000	US\$29,000	-	-
Work package 3 (Creating market demand)	US\$24,900	US\$88,500	US\$21,500	US\$12,500	US\$12,500
Work package 4 (Health claims/functionality research)	US\$16,000	US\$115,000	US\$157,500	US\$157,500	US\$157,500
Work package 5 (Resource assessment and monitoring)	US\$40,000	US\$56,000	US\$90,000	US\$105,000	US\$160,000
Work package 6 (Impact measuring)	US\$18,000	US\$18,000	US\$18,000	US\$18,000	US\$18,000
Work package 7 (Access and Benefit Sharing)	US\$8,000	US\$28,000	-	-	-
Administration costs (5%)	US\$12,625	US\$25,500	US\$26,195	US\$27,160	US\$30,525
Total	US\$265,125	US\$535,500	US\$550,095	US\$570,360	US\$641,025

5.2. FUNDRAISING / FUNDING

The ABA has been self-financed since its launch in 2018, and there is no doubting the commitment and drive of its founding members, who have taken the organisation from its conception through to its current position. Going forward, potential revenue streams for the ABA include:

- Scaled membership fees, reflecting the difference financial capabilities of members at different stages along the baobab value chain;
- The provision of targeted consulting services to members;
- Match-making services linking buyers and sellers;
- The provision of high quality marketing materials (videos, still imagery, harvester interviews etc) to baobab buyers.

However, it is also clear that this Sector Development Plan will benefit from external funding for quick and efficient roll-out, for which financial support is currently being sought.

6. MONITORING AND REVIEW

6.1. ASSESSING IMPACT

Success Indicators are defined for each the actions in section 4.3 as below:

Action	Success Indicators
WP 1: ABA Capacity Building	
Develop ToR for secretariat of ABA	TOR approved by Board
Advertise a 50% position and appoint a person/company/organization as the ABA secretariat	ABA CEO/Secretariat appointed
Development of work plan inclusive of implementation and finance management	Work plan approved by Board
Development and adoption of Standard Operating Procedures (SOPs) for ABA	SOPs adopted at Annual General Meeting (AGM)
Organisation of annual AGM and congress for ABA members and Baobab stakeholders	AGM and congress held
Communication strategy for ABA and benefits of ABA membership	Strategy developed and implementation on track
Support and Certification of ABA members according to 3 rd party standards and certification (Fairwild, Fair for Life, etc)	100% ABA producer members certified organic and Fair Trade
WP 2: Quality Standards for Baobab Products	
Finalize pan-African Baobab oil quality standard	SABS Standard for Baobab oil ABA Baobab oil Standard
Develop best practice and guideline for production of Baobab powder	ABA-endorsed guidelines
Develop minimum food-grade standards	ABA Minimum standard
Develop adulteration test	Adulteration test protocol
Develop nutrient profile	ABA-endorsed nutrient profile
Understanding industry requirements	ABA standards accepted at industry level
Quality communication strategy	Strategy developed and implementation on track
Pan-African Standards for Baobab oil and powder submitted to AU	AU Standards for Baobab oil/powder

WP3: Creating Market Demand	
Scoping of Asian market requirements for Baobab powder and oil	Report on Asian market requirements
Preparation and submission for New Food ingredient registration in China	Baobab powder New Food Ingredient registration, China
Develop strategy for increasing consumer awareness in UK and German speaking markets	Board-approved strategy and workplan
Scoping of intra-African marketing opportunities for Baobab powder and oil	Board-approved strategy and workplan
Increase consumer awareness of Baobab in local and international markets through marketing collaborations	2 reports/yr on marketing collaborations
Increase consumer awareness of the properties and benefits of Baobab	1 set of marketing materials/yr prepared and circulated
Increase buyer awareness of Baobab as a sustainable product	1 presentation prepared and circulated
WP 4: Baobab Health Claims and Functionality Research	
Identify the Baobab sector's top 5 research priorities to substantiate health claims	1 report on research priorities for health claims
Collate summary of existing research and what they prove in relation to Baobab health claims	Library of key research papers Summary paper of existing research
Identify the Baobab sector's top 5 research priorities to substantiate functionality claims	1 report on research priorities for functionality claims
Collate summary of existing research and what they prove in relation to Baobab functionality claims	Library of key research papers Summary paper of existing research
Conduct targeted research activities to support and validate health and functionality claims	7 research reports and findings
Investment in clinical trials based on recommendations from the short-term validation studies to support potential EU and FDA health claims	4 Clinical trials completed and published
Develop and publicise information and marketing material based on any positive outcomes from the short-term validation studies.	11 sets of research finding marketing materials developed and publicised
WP 5: Resource Assessment and Monitoring	
Set up expert working group to determine methodology for resource assessment	Board-approved TOR and composition for working group
Develop resource assessment methodology and trial in 2 countries	2 country reports, resource assessment methodology manual
Conduct baseline Baobab resource assessment for the continent	10 country report, 1 consolidated continent-wide report
Implementation of standardised resource monitoring and reporting in each Baobab-producing country	Annual monitoring reports from each of the 12 assessed countries
WP 6: Measuring Impact of Industry	
Establish working group to develop key indicators and methodology	Annual report template with key impact indicators Agreed impact data collection methodology
Survey of members to determine data collected and willingness to contribute data	Survey report
Develop Annual Report including key impact indicators to be updated and released annually	ABA annual report published every year

Circulation and distribution of annual report	Annual report circulated with summary on website
WP 7: Access and Benefit Sharing	
Conduct comparative review of Biotrade and ABS regulation in Africa	Report on Biotrade and ABS regulations in Africa
Market perspective study	Study on market impacts of regulatory differences
Workshop to share and best practice across different products within the region	Workshop report

6.2. MONITORING SCHEDULE

The Secretariat will report to the Board on implementation of the Sector Development Plan on a quarterly basis. Once a year, a high level, independent consultant will be employed to undertake an external review of progress towards attainment of the success indicators outlined above. This annual review will involve:

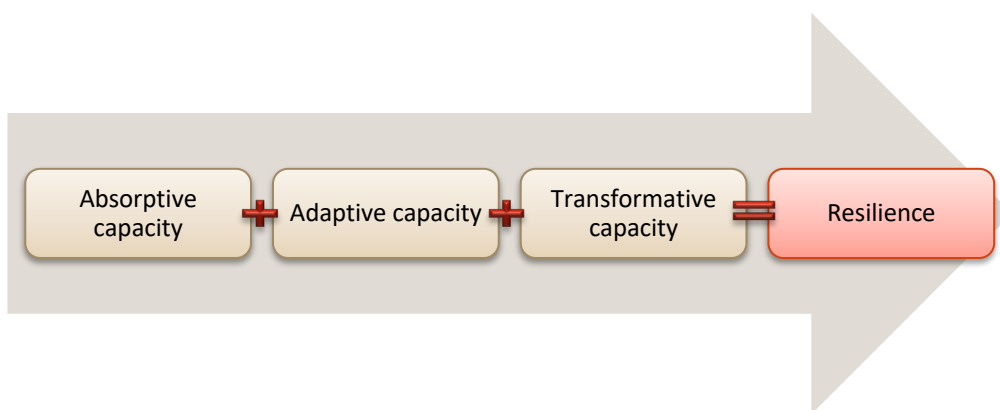
- Data collection and compilation from all members
- Consultations with a representative group of members
- Consultation with key external stakeholders
- Preparation of a draft annual report
- Presentation of draft report to Board for approval
- Presentation of final report to membership at the Annual General Meeting

The final outcome of the annual review process will be an annual report and an updated workplan and budget for the following year, incorporating any corrective actions required to ensure attainment of the overall Sector Development Plan.

6.3. INTRODUCTION TO EVALUATION

One of the key aims of the ABioSA programme is to build resilient sectors able to identify challenges or blockages and develop and implement actions to address these challenges to ensure sector growth and internal resilience against outside shocks created by the fast-changing environment in which the sector operates.

For this reason, the monitoring and evaluation framework used for the sector development plans, focus on how sectors can innovate and develop to mitigate shocks and build resilience. For sectors to become resilient over time, they need to develop three types of capacities as summarized in the visual below.



The main focus of each type of capacity is summarized below.

<i>Absorptive capacity</i>	Refers to the ability to recognise the need for new and external information and apply it to improve the bioeconomy. This can be built through establishing knowledge products intentionally to cope with stress factors such as changed market requirements, extreme weather events, economic downturn, lack of access to market intelligence and changes in consumer buying behaviour.
<i>Adaptive capacity</i>	Refers to making intentional adjustments in anticipation of or in response to change in order to create more flexibility in the future. Intentional changes can include adjusting to new legislation and regulations, as well as to find innovative ways to prevent threatened species used in the bioeconomy from becoming extinct.
<i>Transformative capacity</i>	Refers to making intentional changes to stop or reduce the causes of risk, so that risk is not carried by vulnerable communities and businesses involved in the biotrade supply chain. Transformation can include assessing and adjusting supply chains to correct power imbalance.

6.4. EVALUATION FRAMEWORK

The monitoring and evaluation framework includes the following elements as indicated in the tables below:

<i>Sector challenge</i>	This is the stress factor, threat or area that needs transformation
<i>Work Package</i>	This is an indication of the work package where the required change is included
<i>Indicator of success</i>	This is the action that needs to be implemented to address the stress factor, threat or need for transformation
<i>Sources of verification</i>	This is the proof that the action has been implemented, similar to the outcomes listed in the Implementation actions above
<i>Key assumptions or risk</i>	This details assumptions or risks that may be experienced in the implementation of the action to bring about change
<i>Frequency of collection</i>	This is how often progress on the action is checked, i.e., annually, quarterly, monthly, etc.

BAOBAB SECTOR: ABSORPTIVE CAPACITIES					
SECTOR CHALLENGE	WP / PRIORITY AREA	INDICATORS OF SUCCESS	SOURCES OF VERIFICATION OF DATA	KEY ASSUMPTIONS / RISKS	FREQUENCY OF COLLECTION
Insufficient market awareness of baobab	Work package 3	Increase consumer awareness of the properties and benefits of Baobab			
		Create buyer awareness of Baobab as an ethical and sustainable product			
Target market not aware of the health benefits of Baobab	Work package 5	Develop and publicise scientifically-based marketing material based on health benefits and claims of Baobab			
Insufficient socio-economic and environmental impact monitoring data	Work package 1	Seek guidance on impact data collection methodologies			
		Develop key impact indicators and methodology on how to collect			
Lack of funding for scientific research on the health benefits of Baobab powder and oil	Work package 5	Identify research priorities and funding streams to support research on the validation of potential health claims			
Insufficient market intelligence on resource availability and supply	Work package 4	Develop resource assessment methodology and trial in two countries			
		Conduct baseline Baobab resource assessment for the continent			

Insufficient market demand in Europe	Work package 3	Develop generic marketing strategy to increase consumer awareness in UK and EU			
Underdeveloped access to African markets	Work package 3	Increase consumer awareness of Baobab in local and international markets through marketing collaborations and a generic marketing strategy aimed at African markets			
		Scoping of intra-African marketing opportunities for Baobab powder and oil			
Lack of access to Asian markets	Work package 3	Preparation and submission for New Food ingredient registration in China			
Unknown baobab resource numbers	Work package 4	Implement standardised resource monitoring and reporting in each Baobab-producing country			

BAOBAB SECTOR: ADAPTIVE CAPACITIES					
SECTOR CHALLENGE	WP / PRIORITY AREA	INDICATORS OF SUCCESS	SOURCES OF VERIFICATION OF DATA	KEY ASSUMPTIONS / RISKS	FREQUENCY OF COLLECTION
Baobab adulteration	Work package 2	Develop adulteration test and nutrient profile			
		Develop a quality communication strategy to new and current producers including understanding of industry requirements to reduce adulteration of Baobab raw material			

Lack of Pan-African standard		Submit Pan-African Standards for Baobab oil and powder to African Union			
Incomplete oil quality standard		Complete Pan-African Baobab oil quality standard and develop minimum food grade standard			
Lack of baobab powder production protocols	Work package 2	Develop best practice and guideline for production of Baobab powder			
Insufficient producer compliance of ABS	Work package 7	Conduct comparative review of Biotrade and ABS regulation in Africa			
Lack of producer understanding and awareness of ABS	Work package 7	Conduct a workshop to share and best practice across different products within the region			

BAOBAB SECTOR: TRANSFORMATIVE CAPACITIES					
SECTOR CHALLENGE	WP / PRIORITY AREA	INDICATORS OF SUCCESS	SOURCES OF VERIFICATION OF DATA	KEY ASSUMPTIONS / RISKS	FREQUENCY OF COLLECTION
Insufficient capacity within ABA as sector organisation	Work package 1	Appoint a person/company/organization as the African Baobab Alliance (ABA) secretariat			
		Develop terms of reference for ABA secretariat			
		Develop and adopt Standard Operating Procedures (SOPs) for ABA			

Limited funds for running of ABA	Work package 1	Develop work plan inclusive of implementation and finance management			
Lack of communication among ABA members	Work package 6	Develop Annual Report including key impact indicators, as reported by ABA members, to be updated and released annually			
Limited ABA member benefits	Work package 1	Development of communication strategy among ABA members, support, and certification of ABA members according to 3rd party standards and certification (Fairwild, Fair for Life, etc)			