

Buchu  
(*Agathosma betulina* and *A. crenulata*)

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](http://www.abs-biotrade.info/projects/abiosa/resources)

A glossary of biotrade terms can be found at [www.abs-biotrade.info/resources](http://www.abs-biotrade.info/resources)

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# BUCHU (AGATHOSMA BETULINA & A. CRENULATA

## *Sector Development Plan*

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**For:**

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

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## 1. EXECUTIVE SUMMARY

The Buchu sector does not experience any major trade barriers in terms of export documentation, logistics, external quality control, standards and trade promotion. As most of the Buchu is cultivated, the threats to natural resource are limited. On a global level, the food flavours and fragrances (i.e., perfumes) market segment is currently the largest market for both Buchu oil and leaves. Buchu leaves are a much smaller segment but fits well with the continuous health trend and interest in new herbal teas on international markets. Buchu as a raw material currently does not face direct competition from similar products on the market, but Buchu oil does compete with all the other artisanal and niche fragrances as ingredients. Furthermore, Buchu leaves can benefit from more promotion initiatives as a newer product available in the health market.

The majority of the sector is represented by the Buchu Association. The association aims at simplifying the process of attaining ABS permits and the supporting process of the GI application. The focus on ABS specifically aims to address the concerns that some international fragrance buyers have when trading with a natural resource subjected to ABS regulations.

The EU health products market segment currently does not offer any opportunities for Buchu as the plant is not allowed for use in (herbal) medicines. Approval for use in (herbal) medicines will require large investments that do not seem feasible with the current scale of production and trade. South African companies can add value to their essential oils through improving their product specifications based on rigorous quality management including laboratory testing and through the provision of safety and efficacy data.

The Buchu oil used in the food flavours & fragrances (i.e., perfumes) market is well established, therefore the switching of suppliers or substitutes are quite costly, and this can pose as a barrier to new entrants to the market.

The Sector Development Plan (SDP) addresses the various blockages in the Buchu value chain as identified through a process of extensive consultation. The SDP includes specific strategic objectives, namely 1) Setting up secretariat function; 2) Strategic and regulatory engagement; 3) Create market demand; 4) Support research & development; and 5) Conservation and biodiversity.

## 2. INTRODUCTION

### 2.1. AIM OF SDP

The aim of the Buchu SDP is to provide a detailed plan or roadmap to guide the development of the 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 Buchu 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 Buchu SDP provides the detailed plan to create an enabling environment for SMMEs 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. The first step in the ABioSA work for the Buchu sector was to determine stakeholders to be involved and consulted in the process. An original list with 14 possible companies was received from GIZ and verified with the Buchu Association as the sector organization. After this process, 6 companies were excluded from the list, mostly since they were not longer involved in Buchu production. Through the course of the implementation of the project, additional companies were identified in collaboration with the Buchu Association. Please see the final stakeholder list attached as Addendum A.

The list was used as a basis for consultation with key informants in the sector and this was supplemented by desktop research and the development and implementation of a sector wide survey. Consultation focused on the two Buchu specie's specific information, key considerations for market access and success factors for sector development. The findings of the research and consultation were collated and shared in a stakeholder engagement workshop with sector stakeholders on 8 April 2021 to verify information and identify any gaps. Following the stakeholder engagement workshop additional consultations were held with key informants and findings from the status quo analysis reworked.

The status quo analysis and stakeholder consultation identified the following areas as priorities for inclusion in a sector strategy: 1) setting up secretariat function, 2) strategic and regulatory engagement (including ABS permits), 3) create market demand, 4) support research & development, and 5) conservation and biodiversity.

The priority areas were used as the basis for the development of the work packages included in this SDP. These work packages were then reviewed by sector development experts and inputs integrated prior to being shared with sector stakeholders at the annual general meeting (AGM) of the Buchu Association on 10 June 2021. The inputs gained from the AGM were integrated in the work packages and the final verification and approval of the work packages and the SDP will be done by email.

## 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, as it relates to the objectives of the sector, 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

#### 3.1. COMPOSITION OF THE SECTOR

The Buchu sector is dominated by well-established vertically integrated supply chains where quality and quantity aspects are well regulated. The supply chain makes use of predominantly cultivated *Agathosma betulina* and to a lesser extent wild harvested *Agathosma crenulata*. Please see below the composition of the Buchu supply chain.

## COMPOSITION OF THE BUCHU SUPPLY CHAIN

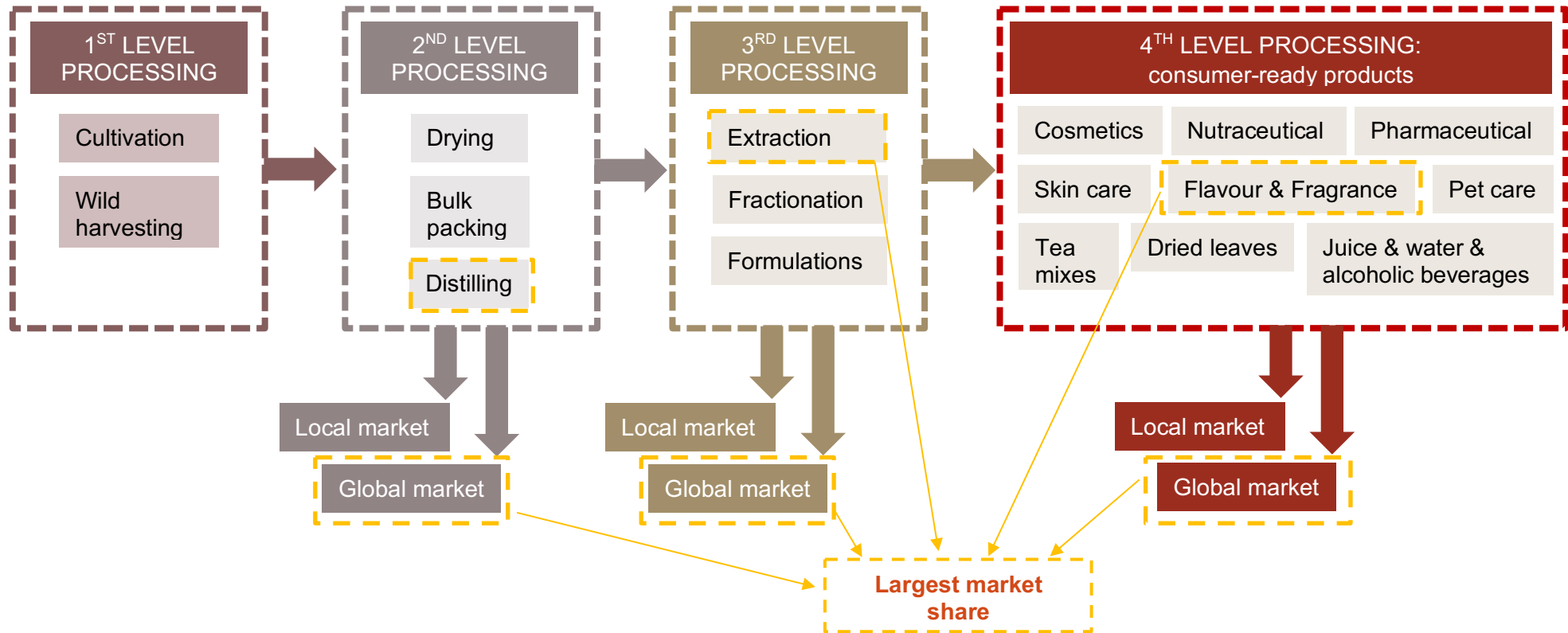


Figure 1: Composition of the Buchu supply chain



## 3.2. STATUS OF THE SECTOR

### 3.2.1. NATIONAL ANALYSIS

*Agathosma betulina* and *A. crenulata* occur only in South Africa and predominantly in the Cederberg to Groot Winterhoek Mountains including the Piketberg. Buchu maintains a Least Concern status on the South African National Biodiversity Institute (SANBI) Red List of threatened species and does not have any detrimental findings. The main threats to the natural resource include poaching, illegal harvesting and deforestation for farmland and residential development. The Biodiversity Management Plan (BMP) for Buchu is still under development by the Buchu Working Group and the Buchu Association in collaboration with the DFFE. The Resource Assessment done in 2016 indicates that both *Agathosma betulina* and *Agathosma crenulata* are of Least Concern. Currently, it seems that the threats to natural resource are limited, as most of the Buchu used is cultivated. This situation might change should market demand increase in future.

Buchu as a raw material currently does not face direct competition from similar products on the market, but Buchu oil does compete with all the other artisanal and niche fragrances as ingredients. Also, Buchu cosmetics and water products compete with the other biologically based products available on the market. The Buchu Association is involved in a process supported by GIZ aimed at the streamlining of ABS in the sector and of attaining ABS permits. Added to this, they are also involved in a process exploring the support of the GI application. The focus on ABS specifically aims to address the concerns that some international fragrance buyers have when trading with a natural resource subjected to ABS regulations. These buyers fear that their products can be confiscated due to not being compliant in terms of biotrade permits.

### 3.2.2. GLOBAL ANALYSIS

The food market segment currently is the largest market for Buchu, both for the oil and for Buchu leaves. Buchu leaves are a much smaller segment but fits well with the continuous health trend and interest in new herbal teas on international markets. One of the main considerations is that food flavours and fragrances (i.e. perfumes) market growth is limited by available supplies of Buchu (oil) that meets buyer and legal requirements. The improvement of product documentation to assist with promoting Buchu oil on the market and to allow suppliers to scale up production and trade was identified during the desktop research, but not identified as a current focus area by the sector members. As Buchu leaves are a newer product on the market, more promotion would be needed to gain market acceptance and take advantage of opportunities that market trends offer.

There are similar conclusions for both the food and cosmetics market segment, although the total size for the cosmetics market segment is smaller. There is a growing interest in organic cosmetics. Many international cosmetic buyers are interested in unique essential oils such as Buchu oil but are hesitant to buy if product documentation does not meet requirements. Improvement of product documentation can take away some of the concerns of large international buyers. Such documentation is useful to promote the product on the market, increase demand and allow suppliers to scale up production and trade, which will then further open up the market, as mainstream buyers gain interest. The development of such documentation is not currently a focus point for the sector members, and might be revisited at a later stage.

The health products market segment currently does not offer any opportunities for Buchu as the plant is not allowed for use in (herbal) medicines. Approval for use in (herbal) medicines will require large investments that do not seem feasible with the current scale of production and trade. Since Buchu leaves are less established on the international market in comparison to many of its competitors, it's crucial to gain recognition and acceptance for the use in herbal medicine by the market. It may require substantial investments to develop this market and such investments need to be backed up by sufficient volumes of stable supply.

Buchu oil is a small but established market where buyers have high costs to switch suppliers or substitutes. When used as a food flavours and fragrances (i.e. perfumes) ingredient, switching to an alternative, even to another supplier of Buchu oil, is very costly. New suppliers would need to be thoroughly checked, and reformulating products that contain Buchu oil for a substitute product even more so.

There are no major trade barriers in terms of export documentation, logistics, external quality control, standards and trade promotion. Still, LISAM is researching the quality of laboratory services and South African companies indicate that an increase in trade promotion is necessary to gain market share.

South African companies can add value to their essential oils through improving their product specifications based on rigorous quality management including laboratory testing and through the provision of safety and efficacy data. Collaboration between South African companies on research into safety and applications of essential oils may enable such investments. Note that value addition through manufacturing of cosmetic products based on essential oils was not considered for this research. Although the Buchu leaf market is much smaller than that for Buchu oil, some companies in this industry have already developed their products beyond just producing bulk raw materials.

### 3.2.3. SWOT ANALYSIS

Strengths	<ul style="list-style-type: none"> <li>• No direct competition from similar products for both essential oils and dried Buchu leaves, as the oil has a unique food flavours &amp; fragrances (i.e. perfumes) profile</li> <li>• Story of the Buchu plant and uses are unique and indigenous to SA</li> <li>• Suppliers of cultivated Buchu have a variety of third-party certification<sup>1</sup> and adhere to other quality requirements</li> <li>• Leading companies have chemical composition, toxicology &amp; safety data sheets</li> </ul>
Weaknesses	<ul style="list-style-type: none"> <li>• Difficult for new-comers to enter and compete in market with high degree of vertical integration</li> <li>• Not all exporters have advanced food safety or quality management systems in place to guarantee consistent supplies</li> <li>• Global - not allowed in (herbal) medicine</li> <li>• Funding for efficacy research is insufficient and mostly self-funded by companies</li> </ul>
Opportunities	<ul style="list-style-type: none"> <li>• Growing consumer demand in health products and herbal teas (opportunity for Buchu leaves)</li> </ul>

<sup>1</sup> Obtained certification of organic products from CERES, Ecocert, SA National Halaal Authority, Kosher, and Good Agricultural and Collecting Practices (GACP)

	<ul style="list-style-type: none"> <li>• The potential for the promotion of Buchu leaves as a newer product to gain market acceptance</li> </ul>
Threats	<ul style="list-style-type: none"> <li>• Competition - other artisanal and niche fragrances, cosmetics, waters and herbal teas</li> <li>• Some buyers (a minority) are reluctant to purchase Buchu due to the lack of registration in REACH</li> </ul>

### 3.3. RESPONSIBILITY FOR IMPLEMENTATION

The implementation of the Buchu SDP will be conducted by the Buchu Association, supported by Kruger Swart Associates who performs the secretariat function of the Buchu Association.

## 4. STRATEGIC DIRECTION

### 4.1. VISION & MISSION

#### Mission

The Buchu Association is a collective working to promote, protect and support the growth of a sustainable Buchu Industry, inclusive of all its stakeholders.

#### Vision

The creation of a resilient and vibrant Buchu industry able to take advantage of global market opportunities and create value for all involved.

#### Core values

- To support and protect the members of the Buchu Association to enable them to give optimal effect to the envisioned actions and activities of the Association
- To represent the Buchu Industry on regulatory level in a strategic manner and to engage proactively with relevant parties on national and international level to protect and promote the interest of the Industry
- To support and strive for the creation of a stable and sustainable environment where the Buchu Industry can thrive and grow
- To develop and implement strategies to protect and enhance the natural environment and biodiversity crucial for the continued success of the industry and the protection of the Buchu plant as part of the indigenous resources of South Africa

### 4.2. TARGETS

The table below provides an alignment between the different capacities of resilience and the pro-poor targets identified for the broader biotrade environment. The purpose of this alignment is to follow the impacts that the building of the different capacities aims to have on improving the resilience of the biotrade industry against shocks, with specific reference to the Buchu sector. The alignment between the different capacities of resilience and the pro-poor targets also identifies the learning that needs to take place, as well as the accountability of sector associations and other role players to actively support the building of the different capacities of resilience. The evaluation indicators and targets are detailed in the tables on the following page (VALUATION INDICATORS & TARGETS).

## VALUATION INDICATORS & TARGETS

BUCHU SECTOR: ABSORPTIVE CAPACITIES					
CURRENT MAJOR STRESS FACTORS	<b>ACTIONS NEEDED:</b> INTENTIONAL PROTECTIVE ACTIONS TO COPE WITH STRESS FACTORS	PRO-POOR TARGETS ALIGNMENT		RELATION TO SDP OUTCOMES	TARGETS
		DIMENSIONS OF POVERTY	FOCUS AREA		
Lack of market demand for Buchu leaves	Develop marketing strategy to introduce Buchu to consumers and retail (domestic and global); investigate type of trade promotion initiatives available	Socio-economic status	<ol style="list-style-type: none"> <li>1. Employment &amp; income generation</li> <li>2. Business assets</li> <li>3. Market intelligence</li> </ol>	<ol style="list-style-type: none"> <li>1. Job creation</li> <li>2. Improved quality of life and ability to create employment</li> <li>3. Access to current market information</li> <li>4. Sector growth</li> </ol>	<p>Biotrade businesses create 10% more employment opportunities by 2025</p> <p>An increase of 10% in employment opportunities for women, youth and other vulnerable individuals</p>
Disconnect between research studies, research priorities and marketing strategy	<p>Map pathways of how current and suggested research studies will support knowledge gaps and the marketing strategy</p> <p>Review research priorities annually and secure funding to support industry</p>		<ol style="list-style-type: none"> <li>1. Scientific research supporting marketing strategy</li> </ol>	<ol style="list-style-type: none"> <li>1. Improve access to markets backed by scientific claims</li> <li>2. Sector Growth</li> </ol>	<p>80% more Biotrade businesses use scientific claims in marketing to increase sales and revenue and increase in job opportunities</p>
Potential unsustainable resource management	Development of BMP and raise funds for implementation and follow-up	Natural resources as a livelihood asset	<ol style="list-style-type: none"> <li>1. BMP</li> </ol>	<ol style="list-style-type: none"> <li>1. Sustainable use of biodiversity</li> </ol>	<p>BMP rolled out to all stakeholders, including biotrade communities annually and report back in annual BMP feedback</p>

Market intelligence related to occurrence of resource and risks insufficient	Identify threats and crises in the industry and create continuous stream of communication to strengthen sector	Socio-economic status	1. Market intelligence	1. Access to current market information	To make market intelligence relating to market preferences and requirements continuously (every 4 months) available
BUCHU SECTOR: ADAPTIVE CAPACITIES					
THREATS	<b>ACTIONS NEEDED:</b> INTENTIONAL ADJUSTMENTS IN ANTICIPATION OF CHANGE	PRO-POOR TARGETS ALIGNMENT		RELATION TO SDP OUTCOMES	INDICATORS OF SUCCESS TO EVALUATE
		DIMENSIONS OF POVERTY	FOCUS AREA		
Majority of the sector experience challenges in obtaining ABS regulations	Develop a collective industry-wide ABS agreement and draft a step-by-step guide on completing the permit process	Natural resources as a livelihood asset	1. Compliance with ABS	1. Supply chain actors have valid ABS permits	80% increase of supply chain actors in compliance annually
Incomplete GI registration	Plot next steps required to complete GI application in terms of process to move from MMA to APS		1. Geographic Indicator status	1. To protect the geographic origin of the natural resource	Buchu obtained protected PDO and/or PGI status by 2025
Poaching of wild species threatened with extinction	Creation of biodiversity cluster through collaboration with Cape Nature & Western Cape department of Agriculture		1. Impacts on & limitations of natural capital	1. Conservation & sustainable use biodiversity	Negative environmental impacts of biotrade activities mitigated annually and report back in BMP
BUCHU SECTOR: TRANSFORMATIVE CAPACITIES					
TRANSFORMATION REQUIRED	<b>ACTIONS NEEDED:</b>	PRO-POOR TARGETS ALIGNMENT	RELATION TO SDP OUTCOMES	TARGETS	

	INTENTIONAL CHANGES TO REDUCE CAUSES OF RISK	DIMENSIONS OF POVERTY	FOCUS AREA		
Buchu Working Group to monitor sustainable use of biodiversity	Creation of Buchu Working Group (BWG) to be actively involved in environmental & biodiversity forums	Representation, inequality & gender	1. Representation & inclusivity	1. BWG has capacity to develop comprehensive & updated BMP  2. Impacts on biodiversity mitigated	Biodiversity Management Plan developed and rolled out in the sector on all levels by end 2022
Cohesion and representation in sector	Obtain funding to sustain transitional period for secretariat until levy collection is sufficient and for strategy development				

Table 1: Evaluation indicators and targets

### 4.3. KEY STRATEGIC OBJECTIVES

- Objective 1: Setting up secretariat function
- Objective 2: Strategic and regulatory engagement
- Objective 3: Create market demand
- Objective 4: Support research & development
- Objective 5: Conservation and biodiversity

#### 4.4. IMPLEMENTATION ACTIONS

OBJECTIVE 1: SETTING UP SECRETARIAT FUNCTION						
Work Package 1.1.		ADMINISTRATION & MAINTENANCE OF RECORDS & RELEVANT DOCUMENTATION				
Action	Priority	Timeframe	Responsible	Resources required	Collaborations and alignments	Outcomes
Obtain funding for secretariat functions	Short term (6 months - 1 year)	May 2021 – May 2022	KSA <sup>2</sup>	External start-up funding	BioPANZA <sup>3</sup> ; DFFE <sup>4</sup> ; DTIC; DSI	Funding to sustain transitional period until levy collection is sufficient
Strategy development	Medium term	June 2021– June 2022	KSA	External funding or industry levies to fund the activities of the Secretariat	BioPANZA; DFFE; DTIC <sup>5</sup> ; DSI <sup>6</sup>	Achievement of sustained and consistent growth of the Buchu industry
Develop and upkeep of Buchu Association (BA) members and association records	Ongoing	Jan 2020 – Dec 2022	KSA		DFFE	Administrative functions are supportive of the Buchu Association's Memorandum of Incorporation (MOI)
Supplier contracting and management	Medium term (1 – 2 years)	Jan 2022 – Dec 2023	KSA			

<sup>2</sup> Kruger Swart Associates - the secretariat of the Buchu Association

<sup>3</sup> BioProducts Advancement Network South Africa

<sup>4</sup> Department of Forestry, Fisheries & Environment

<sup>5</sup> Department of Trade, Industry & Competition

<sup>6</sup> Department of Science & Innovation

Collation of Industry data	Medium term (1 – 2 years)	Jan 2022 – Dec 2023	KSA			
Internal documentation development	Medium term (1 – 2 years)	Jan 2022 – Dec 2023	KSA			
<b>Work Package 1.2.</b>		<b>CAPTURE FINANCIAL DATA</b>				
<i>Action</i>	<i>Priority</i>	<i>Timeframe</i>	<i>Responsible</i>	<i>Resources required</i>	<i>Collaborations and alignments</i>	<i>Outcomes</i>
Capturing of financial data and upkeep of financial files	Ongoing	Jan 2020 – Dec 2022	KSA	External funding or industry levies to fund the activities of the Secretariat		Administrative functions supportive of MOI
Liaise with members re levy collection	Ongoing	Jan 2020 – Dec 2022	KSA	<ul style="list-style-type: none"> <li>• Secretariat funding</li> <li>• Joining fee &amp; annual membership fee</li> </ul>		Levies considered once BA has grown & implemented specific actions
Logistical organization; Meeting preparation	Ongoing	Jan 2020 – Dec 2022	KSA	External funding or industry levies to fund the activities of the Secretariat		Administrative functions supportive of MOI
<b>Work Package 1.3.</b>		<b>MEMBER SUPPORT</b>				
<i>Action</i>	<i>Priority</i>	<i>Timeframe</i>	<i>Responsible</i>	<i>Resources required</i>	<i>Collaborations and alignments</i>	<i>Outcomes</i>
Association member liaison and support	Ongoing	Jan 2020 – Dec 2022	KSA	External funding or industry levies to fund the activities of the Secretariat		Administrative functions are supportive of the Buchu Association's MOI
Management of prospective members	Ongoing	Jan 2020 – Dec 2022	KSA			



Liaison with non- BA members	Ongoing	Jan 2020 – Dec 2022	KSA			
<i>Work Package 1.4.</i>		<b>COMMUNICATION</b>				
<i>Action</i>	<i>Priority</i>	<i>Timeframe</i>	<i>Responsible</i>	<i>Resources required</i>	<i>Collaborations and alignments</i>	<i>Outcomes</i>
Enquiries from government and private sector	Ongoing	Jan 2020 – Dec 2022	KSA	External funding or industry levies to fund the activities of the Secretariat		Valid and accurate information about the industry is communicated when requested; or as part of the marketing strategy
Manage BA email account	Ongoing	Jan 2020 – Dec 2022	KSA			
Identify threats and crises in the industry and facilitate response	Ongoing	Jan 2020 – Dec 2022	KSA			
Develop and disseminate industry communique on relevant issues	Medium term (1 – 2 years)	Jan 2022 – Dec 2023	KSA		BioPANZA; DFFE; DTIC; DSI	

## OBJECTIVE 2: STRATEGIC AND REGULATORY ENGAGEMENT

<i>Work Package 2.1.</i>		<b>COMPLIANCE WITH ACCESS AND BENEFIT SHARING LEGISLATION</b>				
<i>Action</i>	<i>Priority</i>	<i>Timeframe</i>	<i>Responsible</i>	<i>Resources required</i>	<i>Collaborations and alignments</i>	<i>Outcomes</i>
Representation of industry in negotiations	Immediate	June – Dec 2021	Paul, Ben	Sector investment through the	Bio-Innovation Africa	Compliance with legislation is achieved

Liaison between government and Industry	Immediate	June – Dec 2021	Paul, Ben	Buchu Association and Secretariat	UNIDO <sup>7</sup> , BioPanza and Bio-Innovation Africa	through an industry-wide ABS agreement
Attendance of meeting with DFFE and Khoi & San Councils	Immediate	June – Dec 2021	Paul, Ben		UNIDO, BioPanza and Bio-Innovation Africa	
Liaise with Industry members	Short to medium term	June 2021 – Dec 2022	Paul, Ben			
Development of ABS <sup>8</sup> agreement	Medium term	Dec 2021 – Dec 2022	Paul, Ben		UNIDO, BioPANZA and Bio-Innovation Africa <sup>9</sup>	
Administration function to support permit application and compliance	Ongoing	Jan 2020 – Dec 2022	KSA			
<i>Work Package 2.2.</i>		OBTAIN GEOGRAPHIC INDICATOR REGISTRATION				
<i>Action</i>	<i>Priority</i>	<i>Timeframe</i>	<i>Responsible</i>	<i>Resources required</i>	<i>Collaborations and alignments</i>	<i>Outcomes</i>
Establishment of GI <sup>10</sup> for Buchu & experts to	Medium term (1 - 2 years)	June 2021 – Dec 2022	Paul, Ben	Funding from CIRAD <sup>11</sup>	Western Cape Govt: Business Development – Dirk Troskie;	GI registration received; administrative tasks completed;

<sup>7</sup> UNIDO is the specialized agency of the United Nations that promotes industrial development for poverty reduction, inclusive globalization and environmental sustainability

<sup>8</sup> Access and Benefit Sharing

<sup>9</sup> <https://bioinnovate-africa.org/>

<sup>10</sup> Geographic Indicator

<sup>11</sup> The French Agricultural Research Centre for International Development

develop supporting documentation					BioPANZA	industry informed
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### OBJECTIVE 3: CREATE MARKET DEMAND

<i>Work Package 3.1.</i>		DEVELOP A GENERIC MARKETING CAMPAIGN TO SUPPORT TRADE PROMOTION				
<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 marketing strategy to introduce Buchu leaves and essential oils (as ingredient) to buyers, consumers & retail (domestic and global)	Short term (6 months - 1 year)	Aug 2021 – May 2022	BA secretariat to appoint a marketing expert	<ul style="list-style-type: none"> <li>External funding or industry levies to fund the activities of the Secretariat</li> <li>DTIC funding vehicles</li> </ul>	UNIDO, BioPANZA, Bio-Innovation Africa, DTIC	Better informed local and global buyers & consumers on the uses of Buchu
Investigate type of trade promotion initiatives available	Short term (6 months - 1 year)	Aug 2021 – May 2022	Buchu Association	<ul style="list-style-type: none"> <li>External funding or industry levies to fund the activities of the Secretariat</li> </ul>	SIPPO <sup>12</sup> , UNIDO, BioPANZA, Bio-Innovation Africa, DTIC	Information on and access to trade fairs & exhibitions available

<sup>12</sup> Trade Promotion Programme of the Swiss State Secretariat for Economic Affairs

				• DTIC funding vehicles		
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**OBJECTIVE 4: SUPPORT RESEARCH & DEVELOPMENT**

<i>Work Package 4.1.</i>						
IDENTIFY RESEARCH PRIORITIES						
<i>Action</i>	<i>Priority</i>	<i>Timeframe</i>	<i>Responsible</i>	<i>Resources required</i>	<i>Collaborations and alignments</i>	<i>Outcomes</i>
List the current research studies and consult with industry stakeholders to draft the research priorities	Medium term (1 - 2 years)	Jan 2022 – Dec 2022	KSA	External funding	Research institutions	Research studies support marketing claims; Buchu body of knowledge as reference developed
<i>Work Package 4.2.</i>						
OBTAIN DIFFERENT FUNDING STREAMS						
<i>Action</i>	<i>Priority</i>	<i>Timeframe</i>	<i>Responsible</i>	<i>Resources required</i>	<i>Collaborations and alignments</i>	<i>Outcomes</i>
Investigate different funding options to support research priorities	Medium term (1 - 2 years)	Jan 2022 – Dec 2022	KSA	External funding	DTIC; DSI	Funding available for different research studies prioritised by industry
<i>Work Package 4.3.</i>						
LINK RESEARCH WITH GENERIC MARKETING STRATEGY						
<i>Action</i>	<i>Priority</i>	<i>Timeframe</i>	<i>Responsible</i>	<i>Resources required</i>	<i>Collaborations and alignments</i>	<i>Outcomes</i>

Map pathways of how current and suggested research studies will support knowledge gaps and the marketing strategy	Long term (1 – 5 years)	Jan 2021 – Dec 2027	KSA	External funding	DTIC; DSI; TFSA <sup>13</sup>	Media releases based on scientific evidence; more informed consumer; more trust in Buchu as a healthy lifestyle option
<b>Work Package 4.4. CURRENT RESEARCH PRIORITIES</b>						
<i>Action</i>	<i>Priority</i>	<i>Timeframe</i>	<i>Responsible</i>	<i>Resources required</i>	<i>Collaborations and alignments</i>	<i>Outcomes</i>
Review research priorities annually	Long term (1 – 5 years)	Jan 2021 – Dec 2027	KSA	External funding	DTIC agro-processing unit; DSI	Research studies and funding support research priorities as required in the sector
<b>CURRENT RESEARCH PRIORITIES</b> <ul style="list-style-type: none"> <li>Analyse and investigate improved production processes to obtain higher oil yield</li> <li>Investigate more sophisticated drying methods</li> <li>Develop a best practice guide on disease &amp; pest control</li> <li>Investigate and identify the best agricultural practices for different geographical areas</li> <li>Develop a best practice guide for harvesting methods</li> <li>Expand research based on the existing body of knowledge of Buchu as a functional or novel food</li> <li>Investigate the return on investment for the development of commercially viable cosmetic, nutritional and pharmaceutical products for both global and domestic markets</li> </ul>						

<sup>13</sup> Trade Forward SA

- Analyse and investigate the possible uses of de-oiled Buchu after distillation, with a specific focus on how the by-product can be optimally utilised

OBJECTIVE 5: CONSERVATION AND BIODIVERSITY						
Work Package 5.1.		SET BASELINE & DEVELOP SUSTAINABILITY GUIDELINES				
Action	Priority	Timeframe	Responsible	Resources required	Collaborations and alignments	Outcomes
Collaboration with Cape Nature & DEA&DP <sup>14</sup>	Short term	2021/22	BIA project team	GIZ Grant <sup>15</sup>	Bio-Innovation Africa Project <sup>16</sup>	Develop Buchu sustainability guidelines
Outcomes of sustainability guidelines to feed into the development of the BMP <sup>17</sup>	Short term	2021/22	BIA project team	GIZ Grant <sup>18</sup>	Bio-Innovation Africa Project <sup>19</sup>	Sustainability guidelines dovetailing the WC <sup>20</sup> Biodiversity Spatial Planning
Work Package 5.2.		FORMATION OF BUCHU WORKING GROUP (BWG)				
Action	Priority	Timeframe	Responsible	Resources required	Collaborations and alignments	Outcomes

<sup>14</sup> Western Cape's Department of Environmental Affairs & Development Planning

<sup>15</sup> Part of the current Bio-Innovation Africa project

<sup>16</sup> Currently funded by GIZ grant

<sup>17</sup> Biodiversity Management Plan

<sup>18</sup> Part of the current Bio-Innovation Africa project

<sup>19</sup> Currently funded by GIZ grant

<sup>20</sup> Western Cape

Draft ToR for Buchu Working Group (BWG)	Mid term	2021/2022	Buchu Association	Sector investment through Buchu Association/ DFFE	DFFE, SANBI <sup>21</sup> , Cape Nature, DEA&DP, Community Based Orgs, Academia, other	Functions and aims of working group defined
Develop a communication strategy for the Buchu Working Group	Long term	Ongoing	Buchu Association & secretariat	Sector investment through Buchu Association		BWG distributes information and communicate to broader sector regularly
Formation of a working group represented by BA & other stakeholders	Mid term	2021/2022	BWG	Sector investment through Buchu Association /DFFE	DFFE, SANBI, Cape Nature, DEA&DP, Community-based Organisations, academia	BA and relevant authorities meet annually
Buchu Working Group to be actively involved in environmental & biodiversity forums	Long term	Ongoing	BWG	Sector investment through Buchu Association		BWG represents sector on relevant environmental and biodiversity forums
<i>Work Package 5.3.</i>		<b>DEVELOPMENT OF BIODIVERSITY MANAGEMENT PLAN (BMP)</b>				
<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 the Biodiversity	Mid term	2021/2022	BWG	Sector investment	SANBI	Working group collaboratively

<sup>21</sup> South African National Biodiversity Institute

Management plan (BMP)				through Buchu Association, DFFE		developed the BMP
Submission of BMP to Minister for review and approval	Long term	2022/23	Buchu Association	Sector investment through Buchu Association, DFFE		Obtain input from Minister on BMP
Circulate BMP to wider sector and relevant role-players	Long term	2022/23	Buchu Association	Sector investment through Buchu Association, DFFE		BMP rolled out to sector
Draft proposals and fund raising for specific BMP implementation projects, incl poaching strategy	Long term	2024	BWG	Sector investment through Buchu Association, DFFE		Buchu Working Group meet annually to monitor & adjust implementation of BMP
Participation in other relevant environmental and biodiversity forums	Long term	Ongoing	BA members	Sector investment through Buchu Association	DFFE, SANBI, Cape Nature, DEAADP, Community Based Orgs, Academia, other	Buchu industry represented at different forums



## 5. FINANCE STRATEGY

### 5.1. COST ESTIMATIONS

Please see the detailed cost estimation attached in Addendum B, inclusive of the timeframe and responsibility for implementation. The cost estimation was developed in an itemised manner to allow the sector flexibility in implementation and the availability of funding.

Herewith below please see the budget per objective and then per year.

OBJECTIVES (incl WORK PACKAGES)	COST ESTIMATION
Objective 1: Setting up secretariat function	R280 000,00
Objective 2: Strategic and regulatory engagement	R232 000,00
Objective 3: Create market demand	R136 000,00
Objective 4: Support research & development	R64 000,00
Objective 5: Conservation and biodiversity	R216 000,00
Total	R928 000,00

	2021	2022	Ongoing: 2021 - 2023
Total per annum	R208 000,00	R480 000,00	R240 000,00

It needs to be noted that the cost estimation was completed in collaboration with informed sector stakeholders, but the estimate will need to be reviewed and detail increased for any formal funding application.

See attached Excel spreadsheet for detailed line items and costs per objective.

### 5.2. FUNDRAISING / FUNDING

The sector will use this SDP as a baseline document to determine interest from external funders to fund the work packages or actions included here. Due to the structure of both the SDP and the cost estimation, funders can engage with those work packages or actions which are aligned to their funding strategies and objectives.

The funding strategy could consider a combination of the below:

<i>Voluntary levies</i>	Voluntary levies are determined by members of an organisation and usually based on volume produced.
<i>Membership fees</i>	Some organisations charge a set membership fee, usually paid annually. In some cases, the fee is based on categories of membership, depending on the size of the

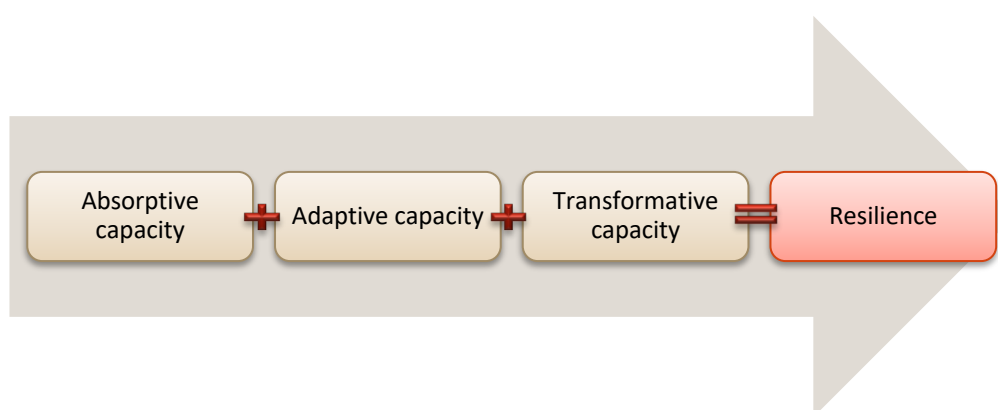
	organisation or their level of participation and benefits. Most sector organisations have a membership fee model combined with levies based on volume.
<i>External funding</i>	This can be through national government initiatives or international funding organisations who support sector development.
<i>Member contributions</i>	Not all sector organisations are able to generate levies, membership fees or external funding during their early stages, and may be dependent on direct voluntary contributions from members (monetary or in kind).

## 6. MONITORING AND EVALUATION

### 6.1. INTRODUCTION

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.

## 6.2. RESPONSIBILITY FOR IMPLEMENTATION

The purpose is to institutionalise the monitoring & evaluation process with the sub-sector's stakeholders as a way to track their progress on sub-sector level; improve learning & innovation opportunities; and uncovering blockages. This process should ideally be driven by the Buchu Association to evaluate the implementation of the Buchu Sector Development Plan in terms of overall growth in production and exports; the number of small producers; gender equality and empowerment; and employment. This phase includes the evaluation of the drivers of innovation and the required policy and market environment to upscale the activities in the six value chains or sub-sectors through learning and innovation.

The sector-specific Monitoring & Evaluation Framework for the Buchu sector is included below.

## 6.3. MONITORING AND 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.

The sector-specific monitoring & evaluation framework for the Buchu sector is included below.

**BUCHU SECTOR: ABSORPTIVE CAPACITIES**

SECTOR CHALLENGE	WP / PRIORITY AREA	INDICATORS OF SUCCESS	SOURCES OF VERIFICATION OF DATA	KEY ASSUMPTIONS / RISKS	FREQUENCY OF COLLECTION
Lack of market demand for Buchu leaves	Work Package 3.1.	Develop marketing strategy to introduce Buchu to consumers and retail (domestic and global); investigate type of trade promotion initiatives available			
Disconnect between research studies, research priorities and marketing strategy	Work Package 4.3.	Map pathways of how current and suggested research studies will support knowledge gaps and the marketing strategy; review research priorities annually and secure funding to support industry			
Potential unsustainable resource management	Work Package 5.3.	Development of BMP and raise funds for implementation and follow-up			
Market intelligence related to occurrence of resource and risks insufficient	Work Package 1.4.	Identify threats and crises in the industry and create continuous stream of communication to strengthen sector			

**BUCHU SECTOR: ADAPTIVE CAPACITIES**

SECTOR CHALLENGE	WP / PRIORITY AREA	INDICATORS OF SUCCESS	SOURCES OF VERIFICATION OF DATA	KEY ASSUMPTIONS / RISKS	FREQUENCY OF COLLECTION
Majority of the sector experience challenges in	Work Package 2.1.	Develop a collective industry-wide ABS agreement and draft a step-by-step guide on completing the permit process			

obtaining ABS regulations					
Incomplete GI registration	Work Package 2.2.	Plot next steps required to complete GI application in terms of process to move from MMA to APS			
Poaching of wild species threatened with extinction	Work Package 5.1.	Creation of biodiversity cluster through collaboration with Cape Nature & Western Cape department of Agriculture			

BUCHU SECTOR: TRANSFORMATIVE CAPACITIES					
SECTOR CHALLENGE	WP / PRIORITY AREA	INDICATORS OF SUCCESS	SOURCES OF VERIFICATION OF DATA	KEY ASSUMPTIONS / RISKS	FREQUENCY OF COLLECTION
Sustainability of biodiversity	Work Packages 5.1., 5.2.	Creation of Buchu Working Group to be actively involved in environmental & biodiversity forums			
Cohesion and representation in sector	Work Package 1.1.	Obtain funding to sustain transitional period for secretariat until levy collection is sufficient and for strategy development			

## 7. LIST OF ADDENDUMS

Addendum A: Stakeholder list

Addendum B: Cost estimation

Addendum E: Sector-specific Context Analysis (Honeybush, *Aloe ferox*, Buchu)