



BIO INNOVATION AFRICA

African-European partnerships for biodiversity conservation

Connecting European Union markets with South Africa's indigenous treasures



Lessons and experiences from implementing
four EU-SA biotrade value chain partnerships for
a sustainable and equitable bioeconomy

Imprint and acknowledgement

This document is part of a series of knowledge products produced by the BioInnovation Africa (BIA) project in South Africa. Other BIA knowledge products and biotrade resources can be found on the joint website of BIA, ABioSA and the ABS Capacity Development Initiative.

This publication outlines the collaborative impact of EU-SA value chain partnerships. The following organisations are recognised for their contributions:

Buchu Association

Commonland

Dicot

Grounded Ingredients

Grounded Management South Africa

International Fragrance Association

**International Organisation
of Flavour and Fragrance**

Martin Bauer

Parceval

Simon Lévelt

**South African Association
of the Flavour & Fragrance Industry**

South African Rooibos Council

Union for Ethical Biotrade

We extend sincere gratitude

to all the companies and organizations that generously provided operational sites, participated in the workshops, and field visits. Your openness and proactive collaboration were an invaluable contribution that ensured the successful realisation of project objectives and the establishment of sustainable benefits that will continue to serve broader value chain networks in South Africa's biotrade and bio-prospecting economy.

The BIA 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. Although every effort has been made to provide complete and accurate information, GIZ make no representations or warranties, express or implied, as to its accuracy at the time of use.

Adrie El Mohamadi
Component Manager –
South Africa BioInnovation Africa (BIA)

GIZ Center for Cooperation
with the Private Sector (CCPS)
Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH
Adrie.elmohamadi@giz.de
Bioinnovationafrica@giz.de
www.giz.de
www.abs-biotrade.info

Illustration and design:
MediaCompany – Agentur für Kommunikation
GmbH, Bonn (Germany)

© Photo Credits:
Amanda Nyingwa
Brett Eloff
Jonathan Rees
South African Rooibos Council
Avril Harvey
Paul Hartwing (Portrait page 29)
Marthane Swart (Portrait page 30)
Daniel Fourie (Portrait page 31)
Title and back: Amanda Nyingwa

Contents

South Africa's biodiversity profile – **4**

Megadiverse and investment ready for biotrade – **5**

A partnership for value chain partnerships – **6**

Partnership 1

Rooibos
Value Chain
Partnership

10

Partnership 2

Buchu
Value Chain
Partnership

14

Partnership 3

Honeybush
Value Chain
Partnership

18

Partnership 4

Resource X
Value Chain
Partnership

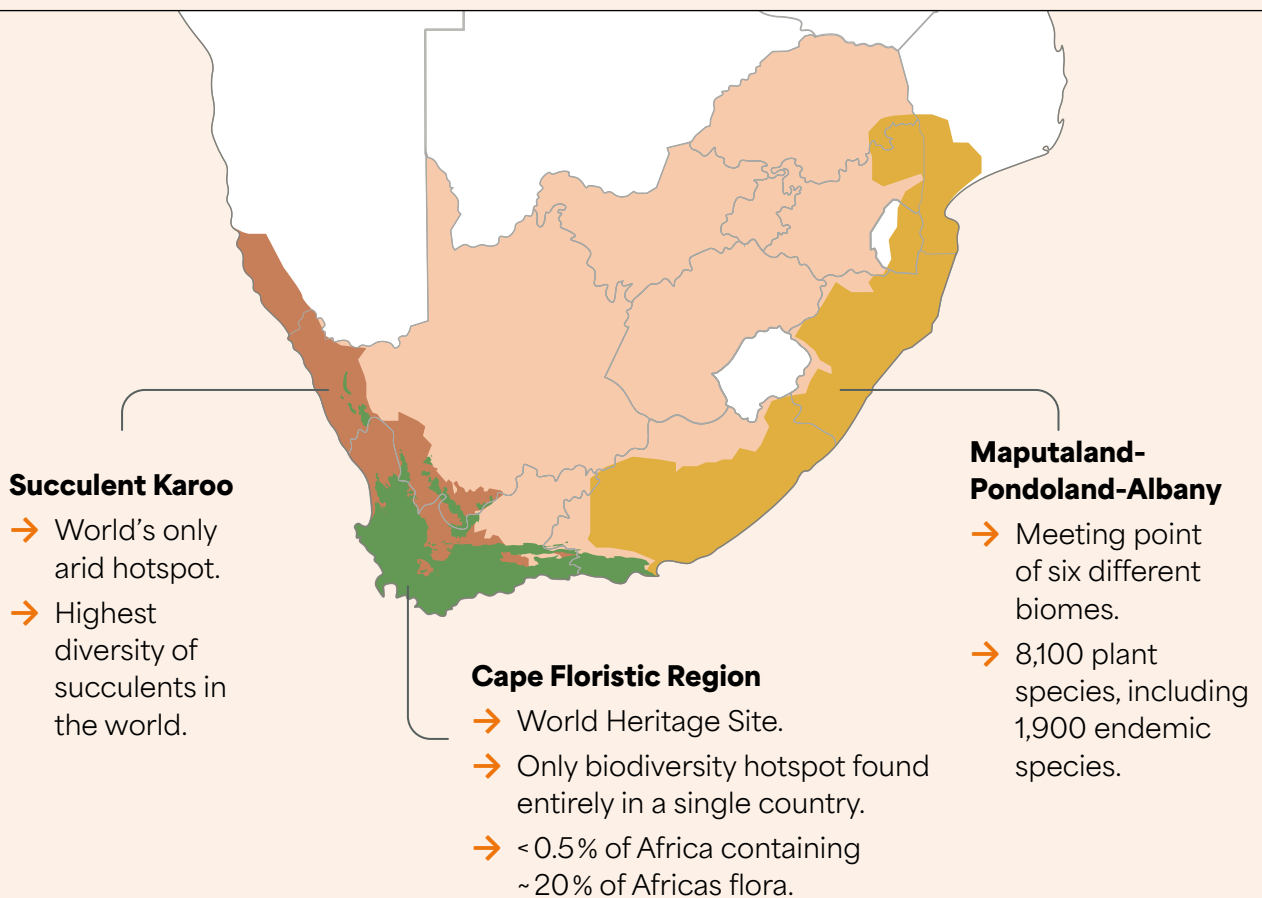
22



South Africa's biodiversity profile

South Africa is a megadiverse country with exceptional species richness and endemism. Our endemic plant species richness (plants found nowhere else on Earth) is among the highest on the planet.

With a landmass of 1.21 million km², South Africa is among the smaller of the world's 17 megadiverse countries, which together contain more than two thirds of the world's biodiversity.



1
of the top 10 nations globally
for **plant species richness**.

of the world's
17 megadiverse nations,

2nd
highest **plant endemism**.

3rd
highest **marine species endemism**.

3 of the **35**
biodiversity hotspots
of the world (regions that
are biologically rich and
highly threatened) occur in
South Africa.

Source: SANBI (2023) International Day for Biological Diversity. LinkedIn Post. https://www.linkedin.com/feed/update/urn:li:activity:7064893035582472192?utm_source=share&utm_medium=member_desktop&rcm=ACoAABDZlgMBVNIC-szTMVWj5sXO8gxMM-LXtqo; Map: Copyright Adobe Stock / Olii

Megadiverse and investment ready for biotrade

South Africa's indigenous plants generate R6.48 billion annually while supporting 15,000 jobs. The country is the world's third most biologically diverse country (plant) and one of 17 megadiverse nations. The estimated richness is approximately 250,000 to 1,000,000 species.

In 2022, the total revenue produced from value-added products sold in the domestic retail market containing bio-resources as an ingredient increased from R1.47 billion to between R5.40 to R6.48 billion. In the same year the sector contributed an estimated 15,000 jobs and exports of bio-products from South Africa increased to R694 million indicating a growth in demand for SA's indigenous biological resources. Some of the key species that are contributing towards the growth of the biotrade and bioprospecting sector and are included as ingredients in value added products include: Bitter Aloe, Rose Scented Geranium and other *Pelargonium spp.*; Baobab; Rooibos; Marula; Kalahari Melon.

Underpinning this expanding biotrade and bioprospecting economy, is a defined legal and institutional framework. This includes the National Environmental Management: Biodiversity Act (Act 10 of 2004) (NEMBA) followed by Bioprospecting, Access and Benefit-Sharing Regulations

(BABS), as well as other supporting laws and strategic planning documents such as the National Biodiversity Strategic Plan and National Biodiversity Economy Strategy. At a sectoral level are also sector development plans. Complementary to the established policy and legislative environment is a well-developed institutional framework. The Department of Forestry, Fisheries and the Environment (DFFE) is the custodian of biological resources provides the policy direction and regulates the use of indigenous and genetic resources. The institutional architecture also consist of national research institutions, universities, several line departments providing financial and product development support, and sector associations.

Although the country has an established and growing biotrade and bioprospecting economy is not without challenges. For starters the effects of climate change pose a risk to the survival of biological species. Additionally, rapid development, habitat loss, and constraints in resources to comprehensively support a growing biotrade sector makes for a complex and dichotomous landscape characterised by both challenges and opportunities. Uniquely, this also provides fertile ground to pursue socio-economic development in sustainable manner.

A partnership for value chain partnerships

Against the backdrop of South Africa's growth and development prospects in the biotrade and bioprospecting economy, in 2020 the DFFE and GIZ implemented project BioInnovation Africa (BIA) collaborated to promote EU-SA business partnerships for biodiversity conservation and local development.

This partnership paved way for the implementation of 8 EU-SA value chain partnerships during 2020 - 2022 across diverse species as seen in table 1. The partnerships focused on diverse intervention areas Innovation, R&D and market access; Sustainable farming & collecting; local development; sector dialogues; ABS compliance and strengthening local business.

Table 1: 8 EU-SA partnerships established under BIA Phase I



Marula
2 partnerships



Honeybush
2 partnerships



Buchu
1 partnership



Rooibos
1 partnership



Essential Oil
1 partnership



Resource X
1 partnership

© Photos: Adobe-Stock / Kaesler Media (Marula), Jonathon Rees (Honeybush, Buchu, Essential Oil), Adobe-Stock / Alex (Rooibos)



© Photo: Adobe-Stock / Alex

Building on the successes of Phase I, DFFE and BIA continued their partnership in 2022 with four EU-SA value chain partnerships across the following species; Rooibos, Honeybush, Buchu and Resource X. Leaner than Phase I partnerships, this facilitated targeted approaches and deep scaling in each value chain for enriched outcomes which

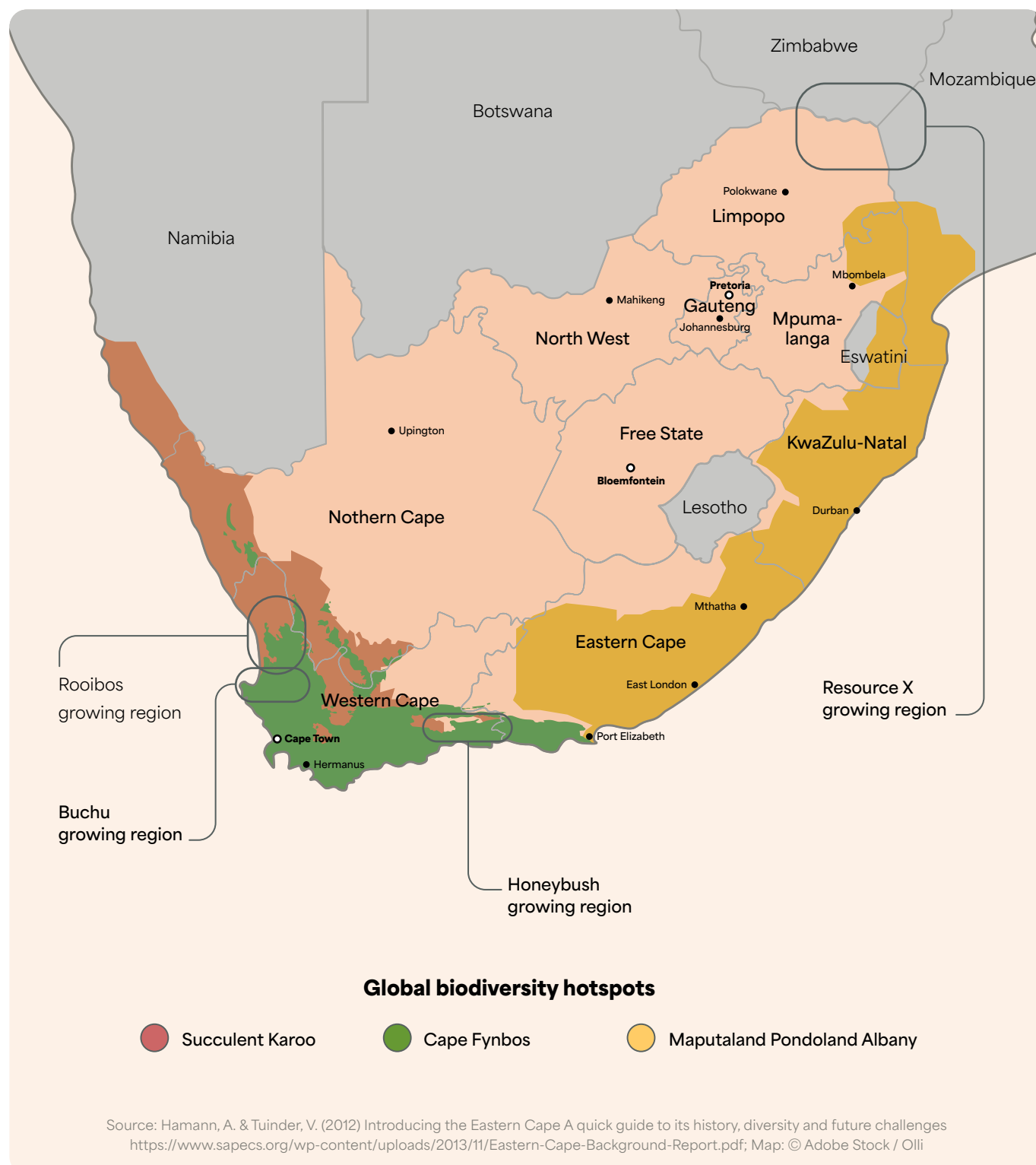
support lesson learning and transfer of knowledge including the upscaling of approaches to other value chains. This report focuses on the implementation, lessons learnt and experiences from the 4 value chain partnerships established during BIA Phase II.

Table 2: 4 EU-SA partnerships established in BIA Phase II



© Photos: Adobe-Stock / Alex (Rooibos), Jonathon Rees (Honeybush, Buchu)

Figure 1: Locality map of resource growing regions and biodiversity hotspots in South Africa



The contributive value of the four value chain partnerships between 2022 - 2025:

More than 1,1 million Euros
(> R 22 mio.)



Mobilised financial and
in-kind contributions from
private sector partners

More than 6,800 Hectares under



Sustainable production
and biodiversity conservation

5 industrial customers/
buyers confirmed



Fulfilment of market requirements
for biodiversity-based products

9 companies
(2 co-operatives) confirmed



Improvements in capacities for export
(export readiness).



© Photo: Amanda Nyingwa

Rooibos Value Chain Partnership

**Integrating voluntary sustainability standards
for market access and credible value chain**

Rooibos represents one of South Africa's oldest and most successful indigenous biological resources. Yields in the Rooibos industry varies since it is a dryland, medium term crop and can be anywhere between 13 000–20 000 tons per annum. The industry employs an estimated 8 000 people in its primary production and related supply chain. Based on the unique area where Rooibos is cultivated, the industry members have a deep understanding of and commitment to the importance of both environmental



and social sustainability. This is reflected in the participation of industry members in a wide range of initiatives including the participation of some Rooibos producers in voluntary sustainability standards, such as the UEBT and Rainforest Alliance Standards. Ethically sourced Rooibos offers an opportunity to effectively contribute to the conservation and sustainable use of South Africa's rich biodiversity, support sustainability of local farmers and farmer communities and secure market access.

Understanding the Why:

The partnership aims to support the Rooibos industry to develop against prioritized areas of the UEBT/Rainforest Alliance Herbs and Spices Program for improved:



Sustainability



Market Access



Ability to respond to due diligence requirements from the EU market

What was undertaken: A 4-pronged approach:

- Support Rooibos sector to engage with the UEBT/Rainforest Alliance herbs and spices programme to tailor it to needs of the sector
- Exchange on Biodiversity Action Plans for Rooibos and regenerative agriculture
- Continued policy and regulatory engagement on land conversion
- Development towards living wages in the Rooibos sector

The collaborators:

European Union

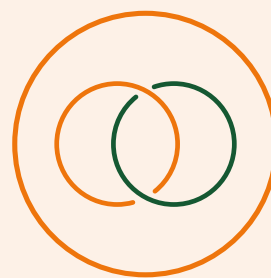


MartinBauer
LEADING THE BOTANICAL WAY.



South Africa





The notable achievements:

Phase I of the Partnership

- 📍 Collaboration between UEBT and the Rooibos sector to develop guidance for the implementation of the Herbs and Spices program to support continued sustainable development in the sector
- 📍 Creating shared understanding between industry, certification bodies and auditors
- 📍 35 entities consulted and trained: farms, processors, government, environmental agencies & audit bodies
- 📍 10 Biodiversity Action Plans developed and implemented
- 📍 Around 3000 hectares of fynbos vegetation conserved or rehabilitation

Phase II of the Partnership

- 📍 5 additional Biodiversity Action Plans that embed regenerative agricultural practices developed and implemented.
- 📍 Implementation of phase 1 Biodiversity Action Plans monitored
- 📍 Development of a guidance document on regenerative practises to support and guide the Rooibos for increased engagement and adoption.
- 📍 Awareness raising and guidance on living wage for Rooibos industry stakeholders in
- 📍 Around 9000 hectares of fynbos vegetation conserved or rehabilitated

Lessons learnt over the two phases of the partnership



Leveraging existing practices as a steppingstone for new approaches:

To ensure that the regenerative guide developed for the benefit of the industry considered both existing practices and other guidance, the guide was developed based on industry and expert consultation. During this process, it was apparent that although the concept of regenerative agriculture was new, the industry is already undertaking

related activities. This realization provided a familiar bedrock for a new concept and supports efforts for proactive engagement with the newly developed guide. Given the interconnectedness of sustainable production measures and conservation approaches, it is important to start from a place of familiarity with sector stakeholders when introducing new concepts. This enables tangible connections between existing and new practices, increasing likelihood of successful implementation.



It is about the intent of the identified action and not the action itself:

During the implementation of the partnership activities, it was important to reconnect stakeholders with the intent of the activities. For example, the adoption of practices that promote fynbos conservation and regeneration is mutually beneficial for companies and nature. Awareness raising workshops and engagement were critical tools for supporting stakeholder to remain connected and committed to the intent of the action.



Adaptive and strategic outlook:

Both the international and national contexts are dynamic and to reach valuable results flexibility is key towards implementing activities. The connection between local and international role players enabled by the partnership positively contributes to awareness of developments abroad on the side of the Rooibos industry stakeholders and creates an improved understanding of local context with international partners leading to an optimal environment for the implementation of development actions.



Optimising the multiplier effect of international partnership:

International partnerships are very valuable in terms of knowledge, access to network and access to resources. To leverage the multiplier effect, looking and finding connections beyond

the activities of the partnership is key. Only focusing on the partnership activities can make things static, exploring multiplier effects brings dynamism to the partnership.



Structured and representative partnership platform:

The Rooibos partnership included the SA Rooibos Council, representative of industry, a key international buyer and the voluntary sustainability standard body, UEBT. This structure supported improved and direct communication on the big and the small issues. Additionally, the implementation of well-considered work packages and actions enabled:

- Raise awareness of key issues in the sector
- Assist sectors to prepare for future developments in markets
- Favourably position the sector for engagement with markets, funders and develop opportunities



True change takes time:

The Rooibos value chain partnership was implemented over a period of 6 years. During this time change, especially in terms of improved actions for the environment, was evident. It is however important to also sensitize stakeholders that their investment may only show results and impact over time as a results of and building on the foundation created by the partnership.

The journey ahead: future and sustainability of activities

Rooibos is the most traded indigenous biological resource from South Africa, and the EU market continues to be vital trading partner. To this end it is important for the industry to continue to pursue activities that assist it to proactively prepare for and respond to changing market requirements and the growing and more stringent nature of due diligence. The activities implemented as part of this value chain partnership are important levers for creating an informed and coordinated response in order to retain and grow EU market position and ensure continued compliance with

market and due diligence requirements. Going forward the industry stakeholders will continue to:

- Raise awareness on living wages and promote strategies for their adoption
- Promote practical and locally adapted voluntary sustainability standards for ethical and regenerative sourcing practices, contributing to the credibility of the industry
- Continue engagements with the provincial government and stakeholders to promote land rehabilitation – Sandveld Environmental Management Plan.



© Photo: Avril Harvey

Buchu

Value Chain Partnership

Enduring non-monetary benefits to support industry-wide compliance to ABS agreements and advancing environmental protection



Buchu, an indigenous biological resource endemic to the Western Cape, is primarily processed into an essential oil for use in the flavour and fragrance industry, but also into dried leaf for herbal infusions. In September 2023, after three years of facilitated negotiations by the Department of Forestry Fisheries and the Environment (DFFE), a landmark Buchu Benefit Sharing Agreement was signed between the Buchu Association, National Khoi-San

Council (NKC) and the South African San Council (SASC). The industry-wide Access and Benefit Sharing Agreement is aligned to the Nagoya Protocol and in compliance with the regulatory requirements related to the Protocol in the South African context. Additionally, it employs a unique model combining both monetary and non-monetary benefit-sharing for which there is no precedent in the South African context.

Understanding the Why:

The primary aim of the partnership is to implement a model for non-monetary benefit sharing in collaboration with traditional knowledge holders. In particular the partnership endeavours to:



Support industry-wide compliance for ABS



Develop and implement a short course to introduce Khoikhoi and San youth to the Buchu industry and its supply chain



Improving capacity for ethical sourcing and compliance in the industry

Implementing the cooperation – actions and activities

- Facilitate industry wide ABS compliance
- Develop a short course for operationalisation of non-monetary benefit sharing aspects in industry-wide agreement
- Pilot and implement fully developed short course
- Develop a generalised Biodiversity Action Plan to serve as a blueprint for the industry.

The cooperating partners

European Union



South Africa





Notable results and achievements

- 📍 A Standard Operating Procedure to guide the application process of ABS permits developed and piloted with processors.
- 📍 9 processors supported and received their permits under the industry wide agreement
- 📍 An Introductory Short Course to The Buchu Industry developed which combines theoretical and practical learning aspects to support knowledge and skills transfer.
- 📍 6 representatives from National Khoikhoi Council (NKC) and the National San Council (NSC) received training on the Introductory Short Course to The Buchu Industry.
- 📍 A generalized biodiversity action plan developed to function as a blueprint for buchu industry

Lessons learnt over the two phases of the partnership



Traditional knowledge holder-led participant selection process

The Buchu Association engaged and agreed with the NKC and NSC to select representatives for the Introductory Short Course on Buchu. As this was the first and pilot it was essential for the selection process to be informed by the traditional knowledge holders. While primarily targeting youth, administrative members also participated. This enabled for the TK holders to be reconnected with the resource and strengthened inter-organizational relationships.



Flexibility and adaptive planning:

To proceed with the activities of the partnership, the BA needed to wait for the DFFE Minister to sign benefit sharing agreement. Although this resulted in a delay, however while awaiting the signature the BA decided to proceed with raising awareness and supporting processors to attain their permit while remaining committed to conduct the Buchu Short Course training. This was testament that planned actions are sometimes dependent on outside parties and need to keep focusing on the goal and just plot a different route to get there.



ABS support for industry is crucial:

ABS compliance remains a complex endeavor, as a result support to industry in the initial phases of benefit sharing processes is very valuable. Industry wide compliance to ABS not only levels the playing field but also contributes to the reputation of the industry.



Cross-wide partnerships for mutual success:

Collaborative partnerships with government and in this case the DFFE is beneficial. Collaboration within the supply chain and dedicated international partners to raise awareness beneficial to the industry.



Transparency and structured process:

It is important to be transparent and regularly communicate to all industry members to bring them along in the process. This was especially significant while the BA was awaiting the signing of the benefit sharing agreement document by the Minister. Linked to transparency is the development of clear processes and templates key to smooth administration.

Forward looking, the future and sustainability

The lessons learned from this partnership reveal a clear path toward building more resilient, inclusive value chains—ones that honour traditional knowledge while demonstrating commitment to capacity building and sustainable development. This has opened up future possibilities on:

- Institutionalised format for the facilitation of work integrated learning programme
- Development of a selection criteria to be used for when the course is delivered again. Additionally, the selection criteria could be used for other industries.
- Supporting the uptake of conservation and sustainable farming and sourcing, in view of the generalised BAP for industry.

A **Biodiversity Action Plan (BAP)** provides guidance in designing and implementing concrete practices on sustainable use and conservation of biodiversity when growing and sourcing natural raw materials. Therefore, BAPs contribute to compliance with the UEBT standard in supply chains and set the path to continuous improvement in production and sourcing practices.



© Photo: Amanda Nyingwa

Honeybush Value Chain Partnership

**Promoting sustainable sourcing and harvesting practices for market readiness
in the rooibos and honeybush value chains**



The rooibos and honeybush farming sectors present an abundance of social and economic benefits. Yet the significant challenges faced by the dried herb and honeybush farming sectors hinder marketability, equitable benefit sharing, and limit access to international markets due to certification requirements.

To improve conditions within the Rooibos and Honeybush sectors it is paramount to explore opportunities which foster equitable trade and enhance export readiness while ensuring sustainable use and conservation of biodiversity resources

The common objectives:

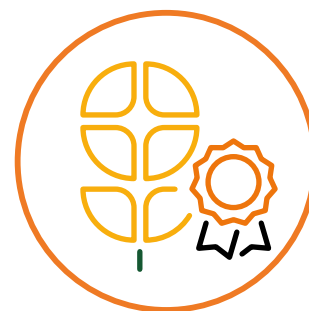
The primary aim of the partnership is to implement a model for non-monetary benefit sharing in collaboration with traditional knowledge holders. In particular the partnership endeavours to:



Support improved sourcing and deployment of regenerative agricultural support practices



Promote sustainable harvesting practices for farmers and harvesters to effectively manage biodiversity and enhance sustainable use around the Honeybush resource



Assist farmers in certifying the Honeybush as Organic and UEBT RA to improve the revenue and management of their product.

Realising the common objectives: activities and actions

- Develop sourcing reports for Rooibos producers
- Provide technical support on regenerative agricultural practices producers
- Develop Sustainable Harvesting Plans for Honeybush farms
- Facilitate organic certification & RA UEBT Cert readiness for each farm
- Export readiness & sampling feedback
- Import coordination and quality control

The collaborators

European Union



South Africa





From common objectives to notable results and achievements

Rooibos

- 📍 Sourcing reports developed for 3 rooibos producers
- 📍 Field assessments and engagement sessions with each producer regenerative agriculture on regenerative agriculture support. Technical engagements were customized to the conditions of the producer.
- 📍 Positive market feedback from distributed samples
- 📍 Cross partnership collaboration with the Rooibos Value Chain partnership on Regenerative agriculture practices
- 📍 Development of conservation plan for the endangered *Serruria flava* (Wuppertal spiderhead protea) to assist Wuppertal community in conservation efforts.

Honeybush

- 📍 Sustainable Harvesting Plans developed for 21 farms - Wild harvested honeybush.
- 📍 Developed internal SOP for The Honeybush Company to conduct SHP's, manage data and train farmers and harvesters.
- 📍 Evaluated sourcing farms and developed cluster model to optimize sourcing and move away from degraded or high-risk areas.
- 📍 Developed a geolocated resource assessment model for harvest team to undertake a resource assessment while in field (To be completed by end 2025)
- 📍 Developed resource assessment SOP for Honeybush that can be implemented by harvest teams (To be completed by end 2025)
- 📍 UEBT RA pre-audit for certification readiness conducted for 14 Honeybush farms.

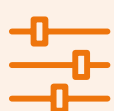
Lessons learnt and experiences from implementing the partnership activities:

Rooibos



Differentiated approaches for diverse producers

Production systems are very different from one producer to another and there is no one size fits all solution that can be applied. Each producer needs individual attention and support to craft their optimal transformation plan. Different producers are at different levels of market readiness and some need more intensive support compared to others.



Building on existing action to lower costs for transforming to new approaches

Regenerative agricultural practices offer significant benefits for Rooibos farmers. During the partnership activities, the three participating producers positively embraced regenerative agricultural practices. However, it became apparent that transitioning to these practices involved considerable costs. As a result, the training sessions focused on identifying existing farmers within the cooperatives who were already implementing practices aligned with regenerative agriculture. These established practitioners could serve as practical examples and building blocks for wider adoption. Seeing regenerative practices in action on neighbouring farms makes the concept more tangible and achievable for other farmers. Therefore, when introducing new practices, it is crucial to identify and leverage where related action is already taking place.



It takes time, allow for time for respective reflection:

The Rooibos that were part of this project were diverse and different stages. As a result the process towards the development of the sourcing guides and providing the regenerative agricultural support had to in concert with the uptake and willingness of each producer. Therefore, it is important to allow time for this as it ensures a bottom-up process. Additionally, this is most significant for cooperative structures where decision making does not rest with one single person.



© Photo: Jonathon Rees

Lessons learnt and experiences from implementing the partnership activities:

Honeybush



Willingness and transparency go hand in hand:

There is a clear willingness from landowners as well as harvesters to work sustainably but clear and transparent communication between them and the processing company is essential to get everyone aligned and prevent unhappiness from misunderstandings.



System adjustments take time:

New processes and systems take a long time to set up and implement and its essential to tests and refine the new systems before wide-scale rollout.



Integrating sustainability plans into business operations:

Embedding sustainability systems within daily operations ensures they are viewed as integral business processes rather than isolated activities. This approach also supports coordinated, planning, tracking and reporting.

Honeybush drying.

© Photo: Amanda Nyingwa





Dried and cut honeybush.

© Photo: Amanda Nyingwa



Packed honeybush for export.

© Photo: Amanda Nyingwa

Moving forward from the partnership – future and sustainability

The partnership has unearthed opportunities for regenerative agriculture adoption, improved sourcing and securing market access, moving forward the partners will be exploring:

- Integration of regenerative agriculture approaches in the farming practices of rooibos farmers
- Utilisation of the sourcing guides as marketing strategy for the supported farms
- Utilisation of the sustainable harvesting guideline to develop a harvesting rotation/ schedule for the company.
- Sharing of lessons and experiences on sustainable harvesting guidelines in appropriate platforms honeybush industry platforms.



© Photo: Adobe Stock / Vic Josh

Resource X Value Chain Partnership

Embedding communities in the supply chain of Resource X for the sustainability of biodiversity, enhancing ABS and investment viability



Resource X is a raw material used in the development for a proprietary product being developed for the pharmaceutical industry. Resource X contains a compound that can be used as a building block in the synthesizing of the active ingredient. If successful, the end

product will compete in a market with an estimated value of USD 7.5 billion. To this end, a sustainable and bioprospecting-compliant supply chain of Resource X is a focus for this project to secure long-term value creation for all parties involved.

Objective of the cooperation



Establish and invest in a sustainable and bioprospecting-compliant supply chain of Resource X



Empower and embed the communities in the supply chain of Resource X



Explore innovative and novel Access and Benefit Sharing compliance models that are mutually beneficial, viable and investable to secure future investment in Resource X as a raw material

Putting cooperation into practice the activities and action

- Establishing a sustainable supply chain for Resource X (wild harvest – cultivation).
- Developing capacity for primary extraction (contains the molecule of interest – Mol) in South Africa.
- Embedding communities in the supply chain by empowering community rep (seed collection, drying), training citizen scientists in biodiversity conservation and planting & guarding young trees in the wild (augmentation).
- Training community members in alternative ways to earn income out of season

Cooperation partners:

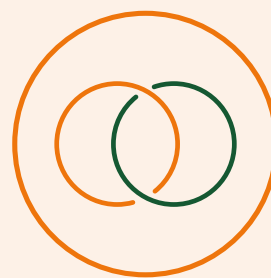
European Union

DICOT
P H A R M A

South Africa



PARCEVAL
PHARMACEUTICALS



Translating cooperation objectives into tangible results and achievements

Results and achievements from Phase I of the cooperation

- 📍 Comprehensive resource assessment
- 📍 Nursery developed in access community; 1500 Resource X trees planted in 2 communities for research purposes
- 📍 Extraction optimisation and scale-up trials
- 📍 Cultivation trial plots established.

Results and achievements from Phase II of the cooperation

- 📍 Community representative trained in computer skills, administration, excel spreadsheets (laptop and printer donated by the partnership) and in sustainable harvesting, hygiene, resource management “train the trainer”.
- 📍 Community nursery established by community representative for growing Resource X seedlings
- 📍 30 of the 50 community members who attended a Sector Education and Training Authority accredited course graduated and received their certificates.
- 📍 4 Citizen scientist trained on resource monitoring of Resources x trees based on developed training manual, and 28 tree guardians identified and supplied with seedlings grown in the community nursery for securing the wild resource populations
- 📍 10 community members (responsible for the negotiations and part of the council) trained on Access and Benefit Sharing
- 📍 Small-scale plantation trials concluded, and several largescale extractions have been conducted as part of exploring security of supply for resource prior commercialisation
- 📍 Successful harvesting and seed collection for 2024 and 2025 under the administration of the community representative.

Learning and insights and from implementation



Embedding the communities into the supply chain:

Seeking ways to embed members of the community into the supply chain has led to upliftment on several levels: additional equipment, skills training, ambitious projects generated by the community, training in ABS, supply of seedlings to the project, conduct germination trials etc. This has made the communities an integral part of the bigger project.



Understanding the Resource X better:

The resource assessment within the program has shed light on the strength as well as the limitations of supply for a product potentially destined to worldwide markets. Sustainable access and harvesting during the ongoing clinical phase was developed in collaboration with the program and local communities.



Extract development:

Methods to optimize the extraction process and thus the yield of the Mol were developed.



Multiple probes and significant investment needed:

To better understand the Mol occurrences in the plant as well as during the cultivation cycle, several propagation and cultivation as well as extraction trials were undertaken. These required significant investments which are borne by the initiating entities given that this is still the research and discovery phase.



It takes time and patience to go from research to production:

The commercialization pathway from initial research to full-scale production involves navigating complex regulatory frameworks spanning environmental access and benefit-sharing (ABS), health and pharmaceutical standards, manufacturing protocols, and logistics coordination. Additionally, there are multi-phase clinical trials that can extend over several years which require substantial financial investment. Regular exchanges between the user company and the regulator explored and explained the prolonged and complex development process. Mechanisms to accommodate such long development time lines to create regulatory certainty for stakeholders and investors were investigated.



Practical trainings reignite community owned productivity:

Under the partnership, community members were provided with accredited agricultural training, which included practical element that enabled them to grow their own chilies. This enabled the community to put to practice what they have learnt. This learning and practical engagement resuscitated the community's drive to establish a community owned agricultural to plant vegetables to be sold at the local market. Learning and training initiatives in communities need to be coupled with practical elements to make it tangible for communities.

Learning and insights and from implementation



Being transparent and build a good network:

Building a good network of local partners/collaborators and communities allows for more predictable process. Long term relations are of importance increasing the chance of a mutually beneficial, viable and investable business model going forward. Further it supports the adoption and legitimacy of bioprospecting initiatives where sometimes it is often hard to communicate that no revenue is being generated.



Empowerment in citizen science and tree guardianship:

Thirty-two community members (4 citizen scientists and 28 tree guardians) were recruited from both communities to monitor tree resources and protect wild populations. These roles gave participants a renewed sense of purpose and stronger connection to their natural environment, exemplifying how community-centred value chain projects transform residents from resource access providers into dedicated environmental stewards.

Sustaining momentum: Future directions

Building on the progress achieved thus far, the path forward requires strategic focus on key areas that will amplify impact and ensure long-term sustainability. The following initiatives represent critical next steps for advancing the reach of the work beyond its current scope, and continue with the work that was started before the partnership:

- Expanding the community nursery to support the growing of seedlings for trials but more importantly also for vegetable growing projects in the community.
- Conducting further cultivation and extraction trials including exploring other technological solutions including biotechnology.
- Supporting the community with the development of a business plan for a vegetable growing project

Impressions of our collaboration



Practical session at the Buchu industry short course training.

© Photo: Avril Harvey



“The partnership enabled the Buchu industry to develop and implement a truly innovative and groundbreaking model for non-monetary benefit sharing. The did not only support industry compliance but also deepened the partnership between industry and TK Holders, laying the foundation for a more inclusive and sustainable future.”

Paul Hartwing,
Chairperson Buchu Association



Buchu plant.

© Photo: Jonathon Rees

Impressions of our collaboration



Training to Rooibos farmers on sustainable practices for readiness to UEBT certification and regenerative agriculture

© Photo: Daniel Fourie



“The partnership simultaneously brought awareness of new developments related to sustainability and supported the industry to respond in a proactive manner. This enables the Rooibos industry to position itself strongly in terms of biodiversity and market requirements.”

Marthane Swart, Secretariat, South African Rooibos Council.



© Photo: Jonathon Rees



Honeybush Harvesting.

© Photo: Jonathon Rees



“Bridging the gap between policy and practice is never straightforward. New legislation, and the compliance that comes with it, can be difficult for industries to interpret and put into action. Programs like GIZ’s Bio-Innovation Africa make this transition far more achievable. By providing not only financial support but also expert technical guidance, the initiative helps private companies understand and implement access and benefit-sharing policies in a practical way. It also encourages companies to go further, exploring mechanisms such as UEBT Rainforest certification to strengthen biodiversity conservation alongside business.”

Daniel Fourie,
Regenerative Agricultural
Specialist, Grounded



Drying of rooibos – Tea Garden Klipopmekaar.

© Photo: Amanda Nyingwa



forestry, fisheries
& the environment
Department:
Forestry, Fisheries and the Environment
REPUBLIC OF SOUTH AFRICA



BIO
INNOVATION
AFRICA



german
cooperation
DEUTSCHE ZUSAMMENARBEIT

Implemented by:

giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH