

WILDLIFE FORUM

PROGRESS ON BIOPROSPECTING ECONOMY

29 NOV 2017

OUTLINE

- Purpose
- Context (Potential and Overview) of Bioprospecting Sector
- Bioprospecting Lab initiatives
- Species identified for cultivation and sustainable harvesting
- Progress on lab Initiatives
- Biodiversity Economy Indaba: Bioprospecting Stream
- Recommendation

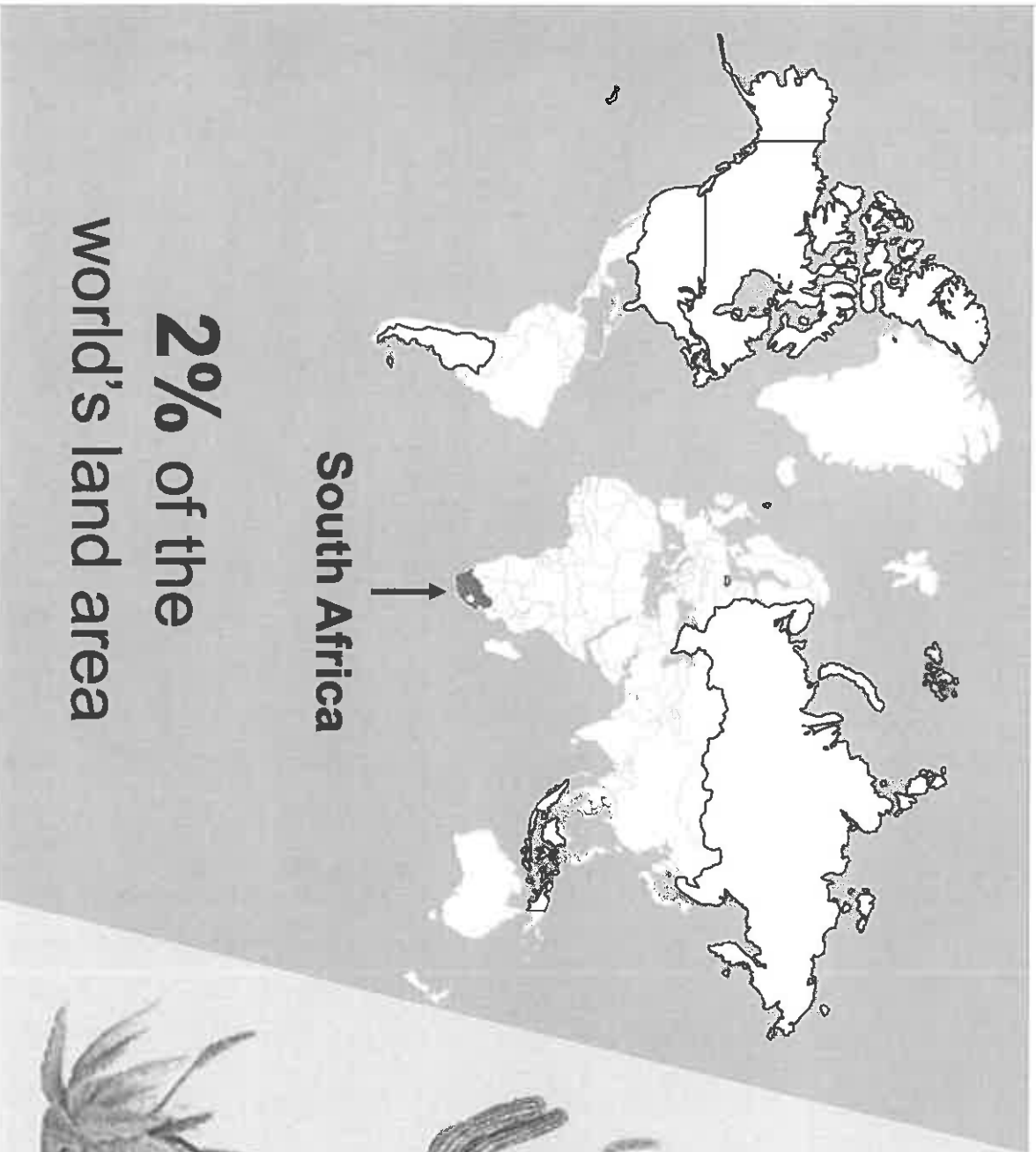
Purpose

To request the Wildlife Forum to:

1. Note the progress on the Bioprospecting Economy initiatives
2. Note the Bioprospecting programme for the Biodiversity Economy Indaba

CONTEXT

South Africa is the 3rd most biodiverse country in the world



**2% of the
world's land area**



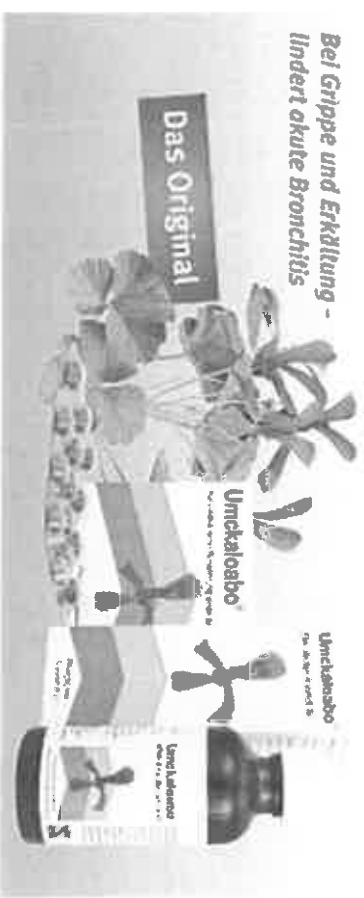
**10% of the
world's plants**

CONTEXT

Our plant resources have incredible commercial potential



*Pelargonium
sidoides*



2001
€8 million

2006
€80 million

CONTEXT

Bioprospecting sector overview

Revenue

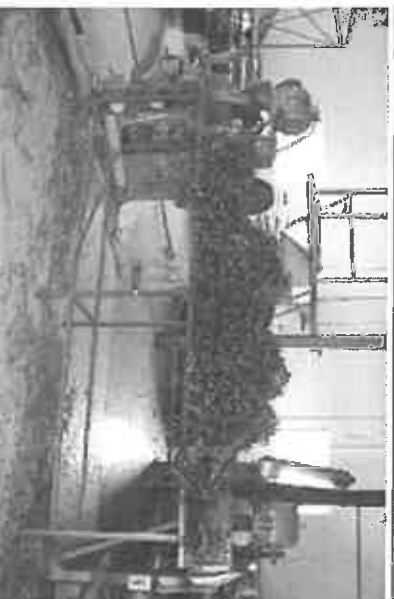
Resources



R 0.26 b

- Both wild harvesters and farmers supply the sector
- The market is largely focused on plant resources

Processing and trade



R 0.92 b

- Primarily trade in indigenous plant species, of which 70% are exported as raw materials
- Operate in two categories
 - Trade of raw and semi-processed materials
 - Development and sale of intermediary products

Final domestic products



R 2.08 b

- Development and sale of final value added products
- The trend towards “natural” products demand is high and customers pay a price premium for goods with indigenous resources

Key initiatives to drive growth in the Bioprospecting Economy

How do we increase the supply?



Promote a mass cultivation drive of 25 plant species of strategic importance and increase cultivation by 500 hectares per annum



Define management plans to ensure sustainable wild harvesting of 7 high value plant species to safeguard long term supply

How do we increase demand and local value addition?



Establish a coordinating and facilitating BiOPANZA (Bio Products Advancement Network South Africa) to harness existing initiatives and to address the innovation chasm

- Promote applied research, local processing, innovation and product development; and to promote the use and awareness of products with IBRs

Regulatory



Fast tracking amendments of Chapter 6 of National Environmental Management Biodiversity Act (NEM:BA) to ease compliance while ensuring protection of the rights and benefits of traditional knowledge (TK) holders and alignment with Nagoya Protocol on Access and Benefit Sharing



Improve efficiencies in the Bioprospecting Access and Benefit Sharing (BABS) permitting system

Transformation is a cross cutting essential

1 Top 25 species for cultivation



Hoodia gordonii
(Hoodia)



Agathosma betulina (Buchu)



Aspalathus
(Rooibos)



Buchu crenulata
(Buchu)



Bulbine frutescens
(Burn Jelly)



Cyclopia intermedia
(Honeybush)



Cyclopia genistoides
(Honeybush)



Eriosema kraussianum
(Bangalala)



Harpagophytum procumbens
(Devil's claw)



Helichrysum odoratissimum
(Golden everlasting) (African potato)



Kigelia africana
(Sausage tree)



Lobostemon fruticosus
(Lobostemon)



Pelargonium reniforme
(Kidney leaved pelargonium)



Pelargonium sidoides
(Kalwerbossie)



Sceletium tortuosum
(Kanna)



Siphonochilus aethiopicus
(Wild Ginger)



Sutherlandia frutescens (Cancer bush, balloon pea)



Trichilia emetic
(Mafura – oil)



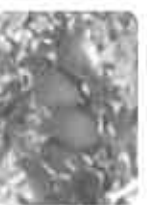
Tylosema esculentum
(Marama bean - oil)



Warburgia salutaris
(Pepperbark tree)



Ximenia americana (Sour plum – fruit and oil)



X. caffra (Sour plum – fruit and oil)



Xysmalobium undulatum
(Uzara)



Lippia javanica

INITIATIVES – SUSTAINABLE WILD HARVESTING

2

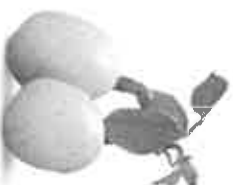
Top 7 species earmarked for sustainable harvesting



Aloe ferox



Adansonia digitata
Baobab



Sclerocarya birrea
Marula



Cyclopia intermedia
Honeybush



Cyclopia genistoides
Honeybush



Agathosma betulina
Buchu



Harpagophytum procumbens
Devil's claws



Bioprospecting Economy

Progress

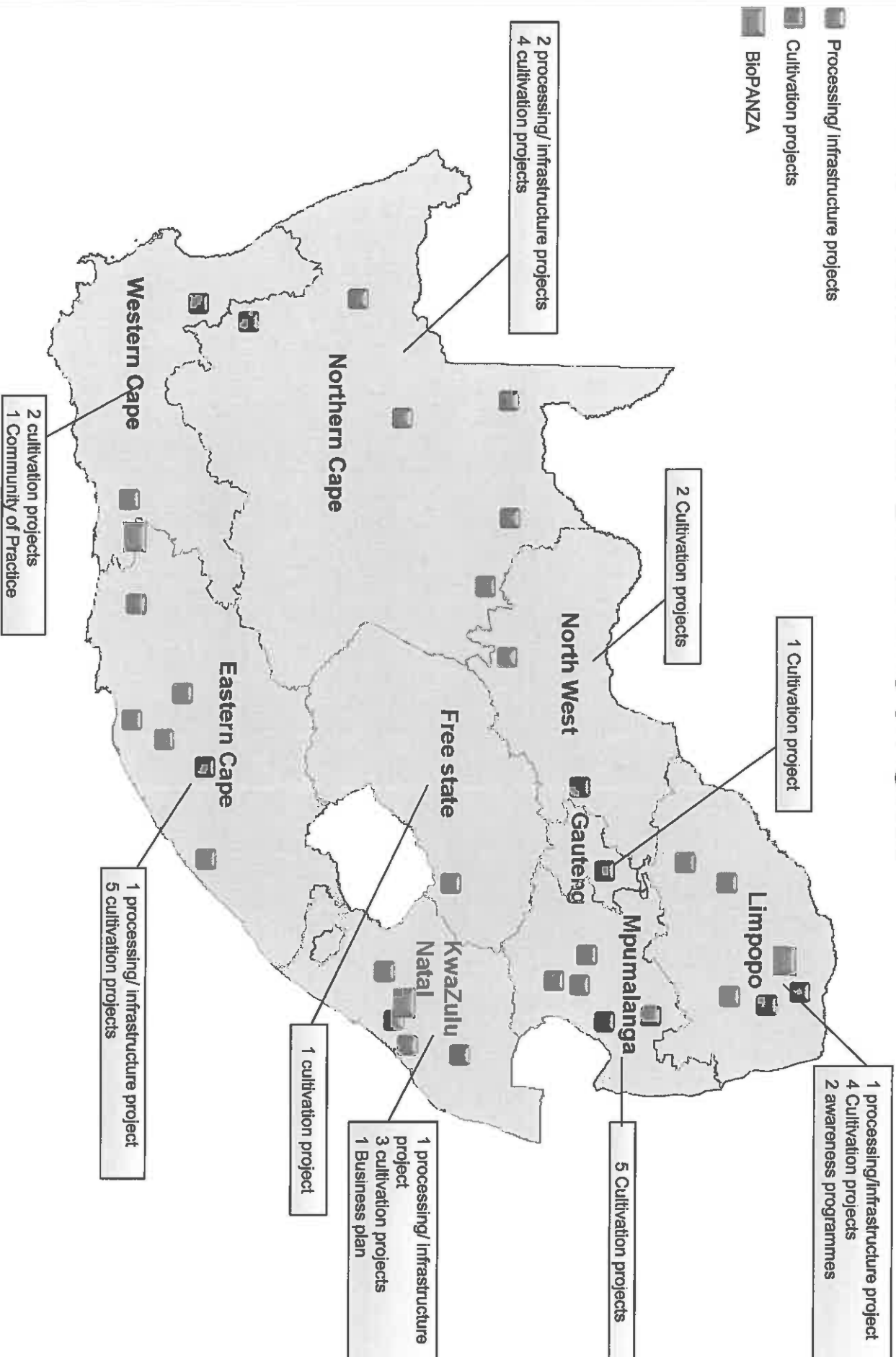


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tourism
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Summary of Bioprospecting Economy progress



Progress report on the lab initiatives

1



Promote a mass cultivation drive of 25 plant species of strategic importance and increase cultivation by 500 hectares per annum

Baseline study on cultivation in the regulated sector.
 - Currently, 294.52 ha has been cultivated

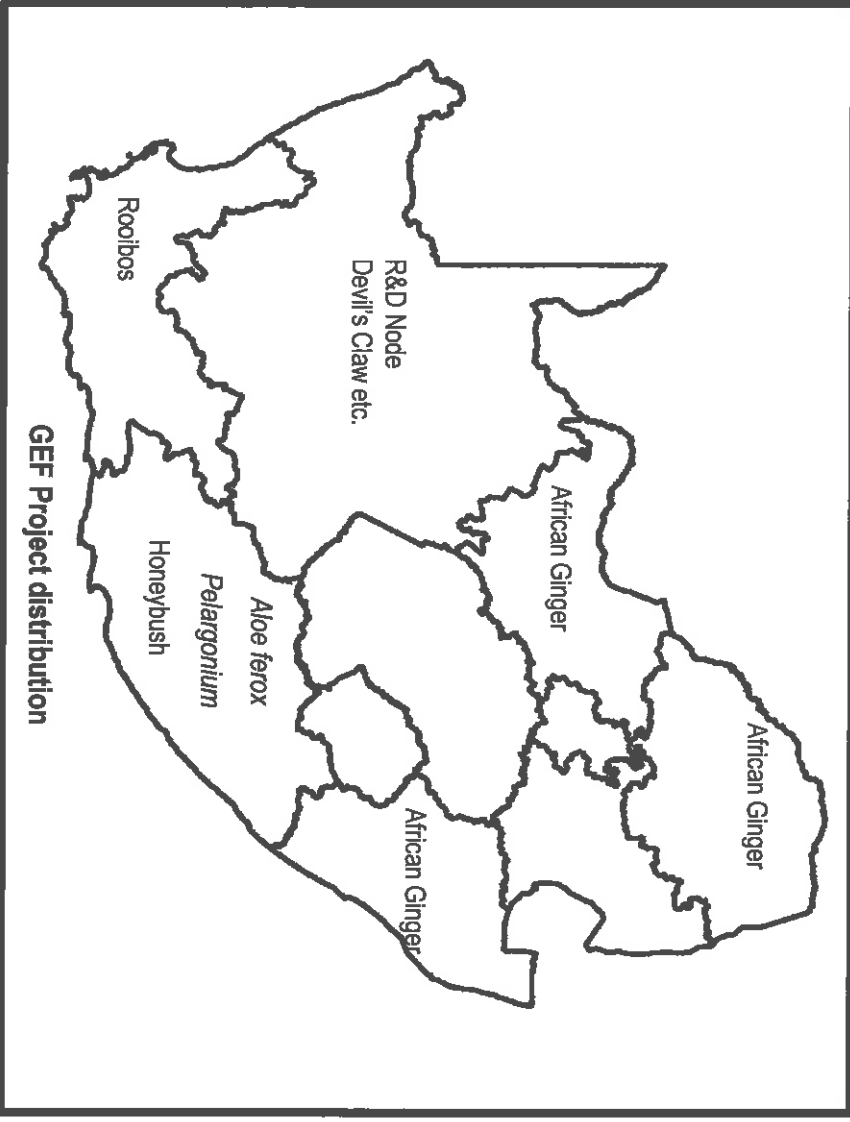
Expansion Plan for targeted species in all provinces

- Categories
- Cultivation potential, +- 291 ha
 - Opportunity for job creation
 - Opportunity for youth and women
 - Potential for SMME establishment

Global Environment Fund

Expected investment from GEF:
 = \$4, 974, 000 ~ R68, 253, 147.55

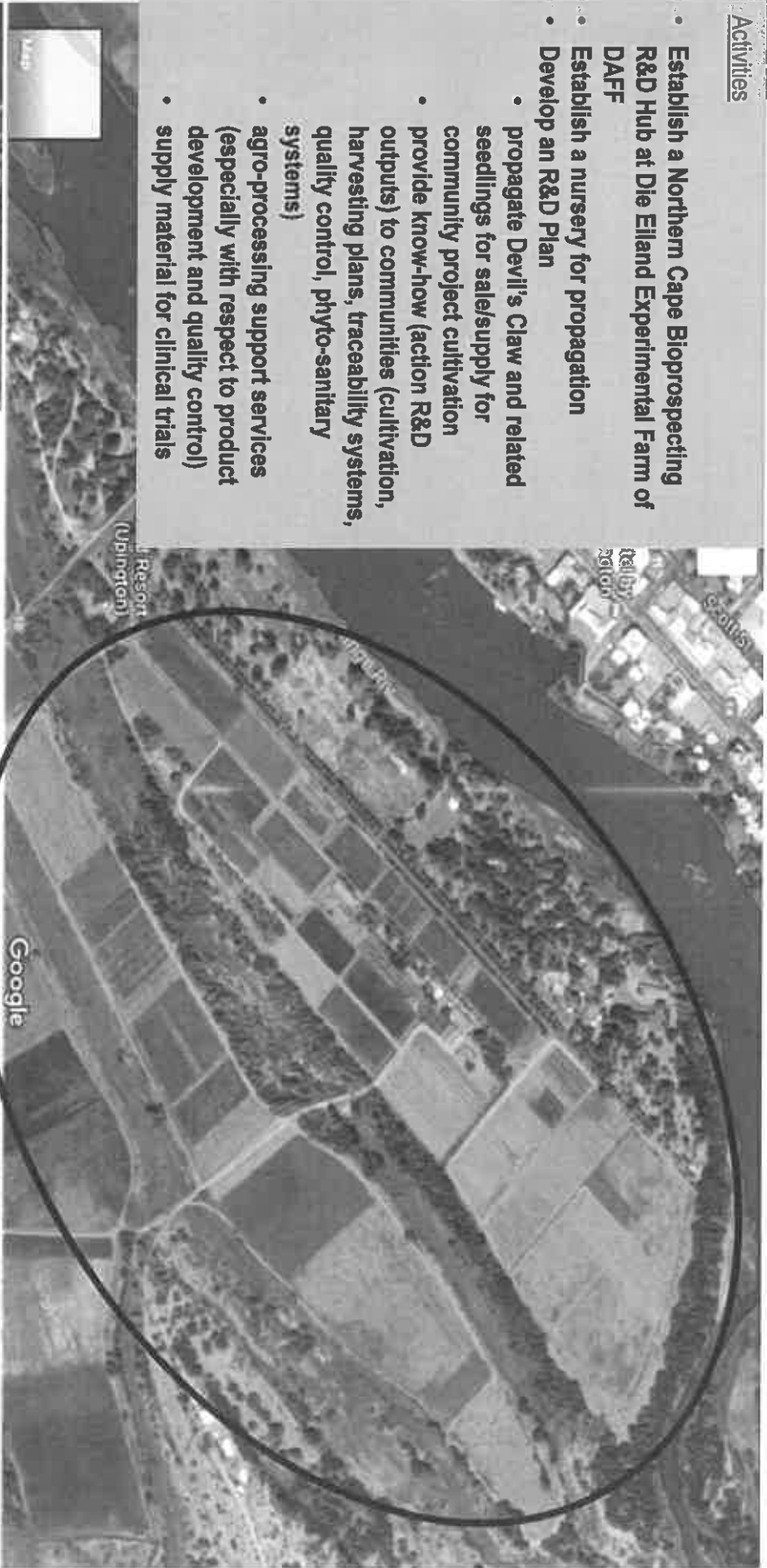
Expected total investment from DEA and implementing partners:
 = R 465, 232, 822.89



Bioprospecting R&D Hub (Northern Cape)

Activities

- Establish a Northern Cape Bioprospecting R&D Hub at Die Eliand Experimental Farm of DAFF
- Establish a nursery for propagation
- Develop an R&D Plan
 - propagate Devil's Claw and related seedlings for sale/supply for community project cultivation
 - provide know-how (action R&D outputs) to communities (cultivation, harvesting plans, traceability systems, quality control, phyto-sanitary systems)
 - agro-processing support services (especially with respect to product development and quality control)
 - supply material for clinical trials



Cultivation of African Ginger

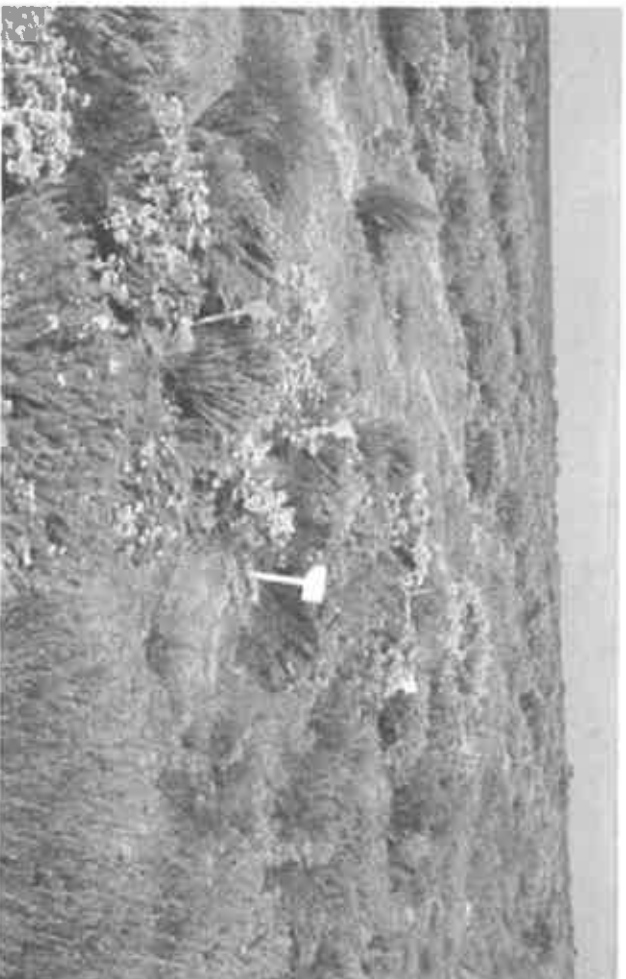


Activities

- Cultivation in Mpumalanga, North West and Kwazulu Natal
- Clinical studies (clinical trials, adsorption/metabolism studies and observation studies)–To determine safety
- Registration as a complementary medicine



Cultivation and local value addition of Honeybush (Eastern and Western Cape)



Activities

- Establish technical advisory group (TAG).
- Conduct Scoping Baseline Determination Study.
- Develop guidelines for call for proposals.
- Management of Grant process by GEF Small Grants Programme.



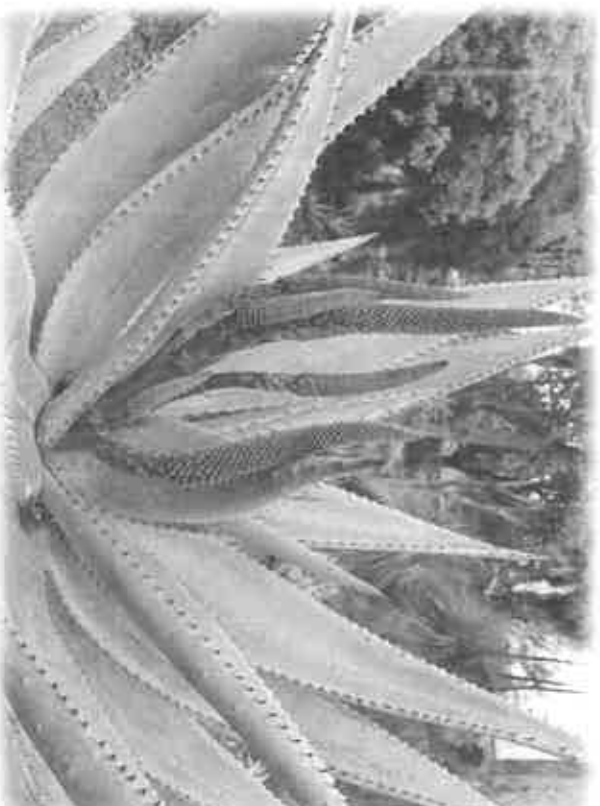
Progress report on the lab initiatives

2



Define management plans to ensure sustainable wild harvesting of 7 high value plant species to safeguard long term supply

- Draft Biodiversity Management Plans on Aloe ferrox and Honeybush
- Stakeholder engagements



Progress report on the lab initiatives

3



Establish a Bio-Product Advancement Network (BioPANZA) to coordinate the sector and address the innovation chasm

Memorandum of Understanding with Department of Small Business Development

- Support to business enterprises in the Bioprospecting/ biotrade sector
- Register co-operatives
- Train co-operatives on co-operative models and governance
- Assistance to access to markets

Signed Letter of Intention with the ABS Capacity Building Initiative

- Collaboration with the ABS Capacity Building Initiative on the implementation of the Nagoya Protocol **150 000 €**
 - Cluster 1: Improving and streamlining the South African ABS regulatory system
 - Cluster 2: Supporting the implementation of the National Biodiversity Economy Strategy (NBES)
 - Cluster 3: Promote Indigenous Peoples and Local Communities (IPLC) Participation in ABS related workshops
 - Cluster 4: Develop Communication, Education and Public Awareness (CEPA) tools and training

ABS Compliant Biotrade in South(ern) Africa

- Collaboration with the ABS Capacity Building Initiative to develop an innovative biotrade sector compliant with national ABS regulations
- **70% of CHF 3 million over 3.5 years commencing 2018**
 - Component 1: Technical assistance to South(ern) African and Regional ABS compliant biotrade value chains
 - Sub-component 1.1: Market access and development
 - Sub-component 1.2: Supporting the role of IPLCs in biotrade value chains
 - Sub-component 1.3: Business planning support to SMEs
 - Component 2: Financial assistance through the innovation facility
 - Sub-component 2.1: Facility design and set up
 - Sub-component 2.2: Operation of facility
 - Component 3: Policy dialogue and enabling environment
 - Sub-component 3.1: Policy improvement through NEMBA and BABS amendments
 - Sub-component 3.2: Industry/sector organisation best practices and alignment
 - Sub-component 3.3: Knowledge management and sharing

Progress report on the lab initiatives

3



Establish a Bio-Product Advancement Network (BioPANZA) to coordinate the sector and address the innovation chasm

Local product and business development/support:

Business Plan for the *Aloe ferox* commercial venture in UMzinkhulu, KZN



Honeybush Community of Practice (COP) - co-chaired by Western Cape and Eastern Cape

- Developed guidelines for the sustainable harvesting of Honeybush of the wild population.
- Next steps: Appoint a service provider to implement the guidelines and training for local harvesters.



Progress report on the lab initiatives

Promotion and awareness of the South African Bioprospecting Sector



- Partnered with The Universal Greening Organisation in hosting the 3rd annual Green Economy Conference, Thohoyandou, Limpopo Province.
- Target audience: Mostly youth and community members
 - Number of participants: **283**
 - Output: Awareness on opportunities in the Biodiversity Economy Sector



- Conceptualised and conducted a Biodiversity Social Entrepreneurship Programme: A case for Baobab, Limpopo Province.
- Target Group: Entrepreneurs
 - Number of Participants: **19**
 - Output: Through a competition, one applicant received an entrepreneurship opportunity on value creation on Baobab waste, and was linked with 3 mentors from EcoProducts, Botanica Natural Products, SEOBI.

Progress report on the lab initiatives

4 & 5



Fast tracking chapter 6 of NEMBA amendments, and
Improve efficiencies in the Bioprospecting Access and
Benefit Sharing (BABS) permitting system

- **NEMBA Amendment:** Draft legal document prepared by DEA's Legal Drafting team on Amendment of Chapter 6 of NEMBA. The draft legal document was shared with Chief Directorates Legal Services and Appeals and Corporate Legal Support and Litigation for comments and input. Draft legal document on Amendment of Chapter 6 of NEMBA was presented at the Branch Strategic Planning session. A follow-up workshop was convened between Branch: B&C and Directorate: Law Reform.
- **Amnesty Request:** Obtained Ministerial approval to publish a notice of her intention to grant an Amnesty for public comments. Currently, the publication of the notice is still in progress.
- **Transaction Advisors:** Obtained DAC approval to appoint a panel of experts to act as transactional advisors. Currently in the process of developing project specific Terms of Reference ToRs. Also feroc ToRs for 37 BSAs from Eastern and Western Cape Provinces & 15 Companies circulated for quotations.

Biodiversity Economy Indaba

Bioprospecting Stream



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tourism
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of Tourism
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Build up : 8 March 2018
Launching Tyefu Aloe Ferox Project



Handing over of Cheque

**Cultivation, harvesting and trading of Aloe
ferox products- Tyefu, Eastern Cape**

Build up : 8 March 2018

Launching Tyefu Aloe Ferox Project

Activities

- **Build capacity (training + equipment) of existing harvesters**
- **Fence off plantation and prepare land for propagation and cultivation**
- **Collect, transport and re-plant wild adult plants in plantation**
- **Establish field nursery for cultivation of seedlings**
- **Construct and equip a small plantation workshop**
- **Contract, train and equip plantation staff from local villages**
- **Construct and equip a small testing, processing and packaging plant for A. ferox products**
- **Contract, train and equip testing, processing and packaging plant staff**
- **Develop a Tyefu-based aloe product brand**
- **Negotiate and conclude a working/supply agreement between the plantation and the existing harvesters and tappers**
- **Negotiate and conclude supply contract agreements with manufacturers and retail industries**



Official Opening

Biodiversity activities to be launched:

- Launch of the Biodiversity Economy Strategy (NBES) and the Biodiversity Delivery Lab Outcomes;
- Launch of the BioProducts Advancement Network South Africa (BioPANZA);
- Launch of the Honeybush Community of Practice;
- Signing off on the Memorandum of Understanding with Agriculture Research Council;
- Signing off on the Memorandum of Understanding with Department of Small Business Development;



Day 2: 9 March 2018

BIOSPROPECTING

Block 1

- 1) Intellectual property rights from Research and Development
 - Research and Development
- 2) Indigenous Knowledge Systems and Innovation
 - Business Support: access to funding
 - Sharing of experience by various entrepreneurs: Highlight issues related to international markets
- 3) Mentorship

Parallel Session: Regional Negotiations on Nagoya Protocol

BIOPROSPECTING

Block 2

- 4) Market Readiness for domestic and international markets**
- Regulatory:
 - CITES
 - Nagoya Protocol
 - Co-operative governance, co-ordinated growth
 - Specific international requirements to enter markets:
 - EU Cosmetics Regulations
 - International Regulation of Natural Health Products
 - The Food and Drug Administration Requirements

Recommendations

It is recommended that the Wildlife Forum takes note of:

- Progress on the Bioprospecting Economy lab initiatives
- Bioprospecting programme for the Biodiversity Economy Indaba

CONTACT DETAILS

Ms Natalie Feltman

Tel: +2712 399 8917

Cel: +27826532713

Email: Nfeltman@environment.gov.za

DEA website

www.environment.gov.za

Hotline 0800 205 005

THANK YOU