Ukuhlola Umthelela Wendawo Ezungezile Nomphakathi

## I-PIMS 5686 Ukuthuthukiswa kwamaketango ayigugu emikhiqizweni etholakala ezinsizeni zofuzo ngokuhambisana nesivumelwano seNagoya sokufinyelela nokwabelana ngenzuzo kanye nesu kazwelonke lomnotho wezinto eziphilayo, eNingizimu Afrika.

Okusalungiswa 12 December 2024

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# Isifinyezo esiphezulu

Izobuyekezwa

# lwaseNingizimu Afrika lwezomthetho nolwesikhungo

## Izinqubomgomo, imithetho kazwelonke kanye nemithethonqubo

Le ESIA bheka lokhu okulandelayo uhlaka lukazwelonke lwezomthetho nesikhungo lwephrojekthi :

* + - **Umthethosisekelo WaseNingizimu Afrika** : Umthetho ophakeme waseNingizimu Afrika ochaza amalungelo ayisisekelo, izibopho, kanye nemigomo yokubusa, okuhlanganisa ukuvikelwa kwemvelo kanye nesithunzi somuntu.
    - **Isu Likazwelonke Lokuguquguquka Kwesimo Sezulu laseNingizimu Afrika** : Uhlaka lokuzivumelanisa nemithelela yokuguquguquka kwesimo sezulu ukuze kwakhiwe ukusimama nokuqinisekisa intuthuko esimeme.
    - **Umthetho Kazwelonke Wokuphathwa Kwemvelo, uNombolo 14 wezi-2009** : Uhlinzeka ngohlaka lokuphathwa kwemvelo ngokubambisana nokuphathwa kwemithombo esimeme eNingizimu Afrika.
    - **Ukuphathwa Kwemvelo Kazwelonke: Umthetho Wezinto Ezihlukahlukene Zemvelo, Nombolo 10 wezi-2004** : Ulawula ukuphathwa kanye nokongiwa kwezinhlobonhlobo zezilwane zaseNingizimu Afrika futhi uqinisekisa ukusetshenziswa okuqhubekayo kwemithombo yemvelo.
    - **Ukuphathwa Kwemvelo Kazwelonke: Umthetho Wezindawo Ezivikelekile, Nombolo 181 ka-2004** : Usungula uhlaka lomthetho lokumenyezelwa, ukuphatha kanye nokuvikela izindawo ezivikelekile eNingizimu Afrika.

## Ukuphathwa Kwemvelo Kazwelonke: Umthetho Wemfucuza, Nombolo 32 ka-2009

: Ulawula ukuphathwa kukadoti ukuze kuvikelwe impilo kanye nemvelo ngokunciphisa, ukuphinda kusetshenziswe, kanye nokugaywa kabusha kwemfucuza.

* + - **Umthetho Wamanzi Kazwelonke, Nombolo 36 ka-1998** : Uqinisekisa ukusetshenziswa okusimeme, ukongiwa, kanye nokusatshalaliswa ngokulinganayo kwemithombo yamanzi yaseNingizimu Afrika.
    - **Umthetho Wezimo Eziyisisekelo Zokuqashwa, uNombolo 11 wezi-2002** : Ubeka izimo ezilinganiselwe zokuqashwa, njengamahora okusebenza kanye namalungelo ekhefu, ukuze kuvikelwe amalungelo abasebenzi.
    - **I-Traditional Health Practitioners Act** : Ulawula izinqubo zezempilo zendabuko kanye nabelaphi ukuze kuqinisekiswe ukuphepha, ikhwalithi, nokuqashelwa kokwelapha kwendabuko eNingizimu Afrika.
    - **Umthetho Wezinto Eziyingozi, 15 ka-1973** : Ulawula ukuphathwa, ukusetshenziswa, nokulahlwa kwezinto eziyingozi ukuze kuvikelwe impilo nokuphepha komphakathi.
    - **Umthetho Wezempilo Nokuphepha Emsebenzini, onguNombolo 85 ka-1993** : Ugunyaza abaqashi ukuthi bahlinzeke ngendawo yokusebenza ephephile ukuze kuvinjelwe ukulimala kanye nezifo emsebenzini.
    - **Umthetho Wokulimala Nezifo Emsebenzini, Nombolo 61 ka-1997** : Uhlinzeka ngesinxephezelo kubasebenzi abahlushwa ukulimala noma izifo ezihlobene nomsebenzi.
    - **Umthetho Wokuvikela, Ukukhuthazwa, Ukuthuthukiswa Nokuphathwa Kolwazi Lwendabuko Nombolo 6 wezi-2019** : Uvikela futhi ukhuthaze ulwazi lwendabuko futhi ulawule ukwabelana ngenzuzo ekusetshenzisweni kwalo.
    - **Umthetho Wokuchibiyela Ilungelo Lobunikazi** : Uchibiyela imithetho yelungelo lobunikazi yaseNingizimu Afrika ukuze kuthuthukiswe ukuvikelwa kanye nokulawulwa kwamalungelo empahla yengqondo.
    - **Umthethosivivinywa Wokuguquguquka Kwesimo Sezulu wezi-2018** : Uhlaka lomthetho oluhlongozwayo lokulawula ukukhishwa kwesisi esibamba ukushisa nokukhuthaza intuthuko ekwazi ukumelana nesimo sezulu.
    - **Inqubomgomo Yezinhlelo Zolwazi Lomdabu (2004)** : Isungula imihlahlandlela yokuqaphela, ukuvikela, nokuthuthukisa ulwazi lwendabuko kanye nokuluhlanganisa ekuthuthukisweni kwezwe.
    - **Imithethonqubo ye-Bioprospecting, Ukufinyelela kanye Nokwabelana Ngenzuzo (i-BABS Regulations)** : Ilawula ukufinyelela kwimithombo yebhayoloji futhi iqinisekisa ukwabelana ngenzuzo ngokulinganayo emisebenzini ye-Bioprospecting.
    - **Imithetho Yezilwane Ezisengozini noma Evikelekile, 2007 (No. R. 152 ka-2007)** : Ilawula ukuphathwa, ukuzingela, kanye nokuhweba kwezilwane ezisongelwa noma ezivikelekile ukuze kuqinisekiswe ukulondolozwa kwazo.
    - **I-White Paper on Conservation and Sustainable Use of Biodiversity of South Africa of 2023** : Libeka izinqubomgomo zokuqinisekisa ukongiwa kwezinhlobonhlobo zemvelo kanye nokusetshenziswa okusimeme kwemithombo yemvelo lapho kubhekene nezinselelo zemvelo.

## Izivumelwano nezivumelwano zamazwe ngamazwe ezisebenzayo

INingizimu Afrika iyingxenye yohlu lweZivumelwano Zamazwe Ngamazwe, eziqondisa izibopho zayo maqondana nakho kokubili Ukwabiwa Okufanelekile Nokulinganayo Kokutholakala Nezinzuzo (i-ABS) kanye nokuvikelwa kwemvelo nenhlalakahle. INingizimu Afrika iphinde izibophezele ezivumelwaneni eziningana zamazwe ngamazwe, ezivikela imvelo namalungelo abantu.

* + - **I-Nagoya Protocol, yango-2010, yamukelwa ngo-2013** : Isivumelwano esengeziwe seNgqungquthela Yokuhlukahluka Kwezinto Eziphilayo esiqinisekisa ukwabelana okulungile nokulinganayo kwezinzuzo ezivela ekusetshenzisweni kwemithombo yofuzo.
    - **I-Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), yavunywa ngo-1975** : Ilawula ukuhwebelana kwamazwe ngamazwe

ngezilwane zasendle ukuze kuqinisekiswe ukuthi akusongeli ukuphila kwezilwane zasendle.

* + - **I-Convention on Biological Diversity ka-1992, yaqinisekiswa ngo-1995** : Isivumelwano somhlaba wonke esikhuthaza ukongiwa kwezinhlobonhlobo zezinto eziphilayo, ukusetshenziswa okusimeme kwemithombo yebhayoloji, nokwabelana ngenzuzo okufanelekile okuvela ezinsizeni zofuzo.
    - **1971 Convention on Wetlands of International Importance (Ramsar), yamukelwa ngo-1975** : Ihlinzeka ngohlaka lokongiwa kanye nokusetshenziswa ngendlela eqhubekayo kwamaxhaphozi ukuze kuvikelwe izinhlobonhlobo zezinto eziphilayo kanye nezinsiza ze-ecosystem.
    - **1992 I-United Nations Framework Convention on Climate Change, yagunyazwa ngo-1997** : Isungula uhlaka lwamazwe ngamazwe lokubhekana nokushintsha kwesimo sezulu ngokuzinzisa ukukhishwa kwegesi ebamba ukushisa kanye nokusekela imizamo yokuzivumelanisa nezimo nokunciphisa.

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## Amakhono esikhungo

UMnyango Wezamahlathi, Wezokudoba kanye Nezemvelo (i-DFFE) eNingizimu Afrika uphethe igunya eliyinhloko lokuqalisa i-Nagoya Protocol on Access and Benefit Sharing (ABS). Leli gunya libandakanya ukwengamela ukwabelana ngokulinganayo nokulinganayo kwezinzuzo ezivela ekusetshenzisweni kwemithombo yezofuzo yezwe nolwazi lwendabuko oluhlobene, ngokuhambisana nemigomo yoMthetho Wokuphathwa Kwemvelo Kazwelonke: Umthetho Wezinto Ezinhlobonhlobo (i-NEMBA) kanye ne-Bioprospecting, Ukufinyelela kanye Nenzuzo ehlobene- Ukwabelana (BABS) Regulations.

I-DFFE ilawula izimvume zokufinyelela ze-Bioprospecting kanye nokuxhashazwa kwezohwebo, iqinisekisa ukuthotshelwa kwezivumelwano ze-ABS, futhi ikhuthaza ubudlelwano phakathi kwabacwaningi, ababambiqhaza bemboni, kanye nemiphakathi yendabuko noma yendawo. Umnyango futhi unamandla okuqapha nokuphoqelela le mithethonqubo, wenze lula izivumelwano zokwabelana ngenzuzo, kanye nokuqinisekisa ukuthi izinhlobonhlobo zemvelo zaseNingizimu Afrika zisetshenziswa ngendlela esekela ukongiwa kwemvelo nentuthuko esimeme, kuyilapho kuvikela amalungelo nezintshisakalo zabanikazi bolwazi lwendabuko. Ngale misebenzi, i-DFFE isekela izibopho zeNingizimu Afrika ngaphansi kweSivumelwano saseNagoya, ukugqugquzela ukulingana, ukungafihli, kanye nokusetshenziswa okuqhubekayo kwemithombo yemvelo.

## Izidingo ezisebenzayo ngaphansi kwe-SES ye-UNDP

Imithelela yezemvelo nenhlalo yephrojekthi yahlolwa ngokusebenzisa Inqubo Yokuhlolwa Kwezenhlalo Nezemvelo ye-UNDP (SESP) . Ukuhlolwa kwahlola imisebenzi yephrojekthi ngokumelene ne-UNDP Social and Environmental Standards:

## Izinga 1: Ukongiwa Kwezinhlobonhlobo Zezinto Eziphilayo Nokuphathwa Kwemithombo Yemvelo Esimeme

Kuqinisekisa ukuthi amaphrojekthi alondoloza ukuhlukahluka kwemvelo, avikele imvelo, futhi akhuthaze ukuphathwa okusimeme kwemithombo yemvelo.

## Izinga lesi-2: Ukunciphisa Nokuzivumelanisa Nokuguquguquka Kwesimo Sezulu

Kudinga amaphrojekthi ukuthi acubungule futhi anciphise ukukhishwa kwamagesi abamba ukushisa kanye nokuthuthukisa ukumelana nesimo sezulu.

## Izinga lesi-3: Impilo Yomphakathi, Ukuphepha, Nokuvikeleka

Kuhloswe ukuvikela inhlalakahle yomphakathi ngokuvimbela ubungozi empilweni, ukuphepha, nokuvikeleka okuhambisana nemisebenzi yephrojekthi.

## Izinga lesi-4: Amagugu Ezamasiko

Avikela amagugu amasiko futhi aqinisekise ukulondolozwa nokuphathwa ngendlela efanele kumongo wemiklamo yentuthuko.

## Izinga lesi-5: Ukufuduka kanye Nokuhlaliswa Kabusha

Kuqinisekisa ukuthi noma yikuphi ukufuduka ngokomzimba noma ngokwezomnotho kuyancishiswa nokuthi abantu abathintekile banikezwa isinxephezelo nokusekelwa okwanele.

## Izinga lesi-6: Abantu Bomdabu

Livikela amalungelo Abantu Bomdabu, liqinisekisa ukubamba kwabo iqhaza okugcwele, imvume, kanye nokwabelana ngezinzuzo ezinhlelweni zentuthuko.

## Izinga lesi-7: Izimo Zabasebenzi Nezimo Zokusebenza

Likhuthaza izinqubo zabasebenzi ezinobulungiswa, izimo zokusebenza eziphephile, nokuvikelwa kwamalungelo abasebenzi.

* + - **Izinga lesi-8: Ukuvinjelwa Kokungcola kanye Nokusebenza Kahle Kwensiza** Likhuthaza ukunciphisa s~~z~~ukungcoliswa komhlaba, ukulawula izinto eziyingozi, kanye nokukhuthaza ukusebenza kahle kwezinsiza emisebenzini yephrojekthi.

Lokhu kuhlolwa kuqala kwenziwa njengengxenye yokulungiselela iphrojekthi futhi kwabuyekezwa ngoZibandlela wezi-2024 ngokusekelwe ku-SESP yokuqala kanye nokubuyekezwa kwemisebenzi egunyazwe iKomidi Lokuqondisa Lomklamo ngoNovemba 2024 . Inqubo yokuhlola ikhombe izingozi ezi-1 3 ezihlukene ( ezi-2 eziphakeme, ezi-4 ezinkulu

, ezi-4 ezimaphakathi nezi-3 eziphansi ). Ubungozi bephrojekthi bubonke bahlukaniswa ngokuthi Phezulu.

# Incazelo yephrojekthi

## Izinjongo kanye nemiphumela

Inhloso yephrojekthi ye-UNDP GEF 6 ukuqinisa iketango lenani lemikhiqizo etholakala ezinsizeni zofuzo zezitshalo zomdabu ngenhloso yokufaka isandla ekwabelaneni ngokulinganayo ngezinzuzo nokongiwa kwezinhlobonhlobo zemvelo. Umgomo wephrojekthi uhlongozwa ukuthi uzuzwe ngemiphumela emithathu yephrojekthi yezobuchwepheshe (Ingxenye 1, 2 kanye ne-3) kanye nokusatshalaliswa okukodwa komphumela wezifundo zephrojekthi (Ingxenye 4).

* + - Ingxenye 1: Ucwaningo nokuthuthukiswa kwemikhiqizo kuhambisana nencazelo yokusetshenziswa kwemithombo yofuzo ye-Nagoya Protocol, egxile kakhulu ku- Bioprospecting, ezinqubweni ze-R&D kanye nokunqoba izithiyo eziqondene nomongo. Umphumela owodwa obalulekile ngaphansi kwalesi sigaba sokuqala okuzogxila kukho kuzogxila esiFundazweni saseNyakatho Kapa, lapho kuzosungulwa khona isizinda sokusungula nokusekela amabhizinisi. Ingxenye izophinde isheshise ukubhaliswa kanye nokushintshela ekutshalweni kwe- *Siphonochilus aethiopicus* (I-African Ginger) esengozini enkulu yokushabalala njengomkhiqizo wokwelapha isifuba somoya kanye nokungezwani komzimba nezinto ezithile, kuyilapho kucutshungulwa nokuthi yini engadingeka ukuze kugcinwe izinhlobonhlobo zezakhi zofuzo zesitshalo endle.
    - Ingxenye yesi-2: Amamodeli okubambisana asekela ukongiwa, kanye nohwebo lwezentengiselwano, imikhiqizo yomdabu yemvelo, egxile ekuthuthukisweni kwe-value chain. Kokubili ukuphathwa kwe-biotrade kanye ne-landscape-level kuvelele phakathi kwemisebenzi ebalulekile ngaphansi kwalo mphumela, lapho inhloso kuwukuqinisekisa ukuthobela kwe-ABS nokuphathwa okusimeme kwezinhlobo nezindawo. Izinhlobo okuzogxilwa kuzo zizobandakanya *i-Pelargonium sidoides* , *i-Aloe ferox* , i-Honeybush (kuhlanganise okungenani ne- *Cyclopia* spp. emithathu esetshenziswa embonini) kanye ne-Rooibos ( *Aspalathus linearis* ).
    - Ingxenye 3: I-Bioprospecting kanye nokudluliselwa kolwazi lokwengezwa kwenani kuyathuthukiswa ukuze kube nokwabelana ngenzuzo ngokulinganayo kuklanyelwe ukwakha amandla ababambiqhaza bakazwelonke ukuze baqonde izindaba ze-ABS, ukuthobelana nomthetho kazwelonke nowamazwe ngamazwe kanye nokusingatha kangcono ubudlelwano obuyinkimbinkimbi obushiwo lapho, kuhlanganisa nobudlelwano bezentengiselwano.
    - Ingxenye yesi-4: Ukulawulwa Kolwazi kanye ne-M&E kuzokwenza kube lula inqubo yokufunda kwesikhungo ngokubamba iqhaza okubonakalayo kwawo wonke amaqembu ababambiqhaza ekuqalisweni kwephrojekthi, ukuqapha njalo kwemisebenzi yephrojekthi, kanye nokubuyekezwa kwephrojekthi nokuhlolwa ngaphakathi kohlaka lwe-M&E olufanele lwamaphrojekthi we-UNDP GEF. .

Iphrojekthi ibe nesikhathi sokuqala iminyaka emi-5 (2020-2024) futhi yanwetshwa izinyanga eziyi-18 kusukela ngo-Okthoba 2024 .

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| **Ingxenye Yephrojekthi** | **Imiphumela Yephrojekthi** | **Imisebenzi** |
| **Ingxenye 1:** Ucwaningo nokuthuthukis wa (R&D) kwemikhiqizo ngokuhambis ana nencazelo yokusetshenzi swa kwemithombo | **Umphumela 1.1** Izithiyo ze- R&D ezixhumene nezifundo zomtholampilo kanye nokubhaliswa kwe-African Ginger ( *Siphonochilus aethiopicus* ) njengomthombo wezinto eziphilayo ukwelapha izifo ezivuvukalayo kanye nezifo ezingezwani nomzimba zinqotshwa ngokuhlelekile | * Qondanisa isivumelwano se-ABS esenziwe ngokubonisana nemiphakathi ehlonzwe ezifundazweni zaseLimpopo, eMpumalanga naKwaZulu-Natal. * Yakha idosi lesiphakamiso senani kujinja yase- Afrika ukuze uthole ilayisense nebhizinisi. * Umnikazi welayisensi wazisa i-SAHPRA mayelana nenhloso yokwenza i-African Ginger ngaphandle kwezicelo zokwelapha |

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| yofuzo ye- Nagoya Protocol | ngendlela ehambisana ne- ABS. |  |
| Okuphumayo 1.2 I-R&D ye- Bioprospecting eNyakatho Kapa iyasekelwa, kukhuliswe umnotho wendawo we- Bioprospecting kanye  nokusungula 'Ihabhu Lokuthuthukiswa Kwemikhiqizo Yezinto Eziphilayo' etholakala endaweni efanele. | * Thola izimvume ezidingekayo kanye nokugunyazwa kokusungulwa, kweHub * Dala uhlelo locwaningo lweminyaka emi-3 lweqoqo lezinhlobo ezibalulekile ezihlanganisa iDevil's Claw kanye nohlobo olulodwa okungenani olulodwa olungatshalwa ngokuhlanganyela neDevil's Claw kumaphrojekthi omphakathi. * Sebenzisa uhlelo locwaningo lweminyaka emi- 3 * Yakha izindlela zokuphatha ezingcono kakhulu (BMPs) zokulima nokuvuna (izindlela zokuhlola, amasu kanye nezindlela) zohlobo ngalunye. * Thuthukisa izinqubo zokuphatha ezihamba phambili (ama-BMP) zokwesekwa kokucubungula kwezolimo kanye nokulawulwa kwekhwalithi yokusetshenziswa komkhiqizo uhlobo ngalunye * Sungula uhlelo olulula lokumaketha, olulinganiselwe ekusungulweni kwesizindalwazi esifanelekile ngenhloso yokusungula ukuxhumana nezimakethe. * Yenza uhlelo lwamandla okukhiqiza eNyakatho Kapa, olunezinkomba zokukhiqiza * Ukuklama insizakalo yokweseka kumaphrojekthi womphakathi lapho ama-BMP ahlukahlukene azodluliselwa khona njalo. * Gada ukukhiqizwa * Khiqiza izithombo ezizothengiswa/ukuphakele amaphrojekthi omphakathi |
| **Ingxenye yesi-2:** Amamodeli okubambisan a asekela ukongiwa kanye nohwebo lwemikhiqizo yemvelo yomdabu | **Umphumela 2.1** Ukuqaliswa kokusebenza kwe- Pelargonium Biodiversity Management Plan (BMP) kusekelwa ngokubambisana phakathi kweQembu Elisebenzayo lePelargonium, amabhizinisi omphakathi kanye nababambiqhaza be- CSO. | * Khetha Umphathi Wokuphumayo * Yenza ukuhlolwa kokulondolozwa komhlaba jikelele/i-NDF * Yenza ucwaningo lwe-ethnobotanical * Yenza ukuhlaziya i-value chain nokuhlaziya kwezenhlalo-mnotho * Buyekeza futhi ubuyekeze i-BMP (iphelelwa yisikhathi ngo-2018) * Ukuqeqeshwa kwabasebenzi abakhethiwe abavela ku-DEA, Eastern Cape DEDEAT naseFreyistata DESTEA ekusebenziseni i-BMP * Sekela abanikazi be-TK ukuthi babuyekeze futhi baxoxisane kabusha ngezivumelwano ze- ABS nezivumelwano zokuhlinzeka * Ukuthuthukiswa kwemihlahlandlela yokuvuna   esimeme |

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|  |  | * Ukuqeqeshwa kwabaqoqi bendawo ukuze kuthuthukiswe ukusimama kwezindlela zokuvuna * Yenza kube lula ukuthuthukiswa kokuphathwa kwama-Trust asemphakathini, nokusatshalaliswa kwezikhwama ze-trust * Nikeza usekelo lwezezimali ku-M.Sc. Abafundi * Ukusekela ukuphathwa kwePelargonium Working Group |
| **Okuphumayo 2.2**  Ukuthuthukiswa kwendawo yokuvuna, ukucubungula kanye nokuhweba *kwe-Aloe ferox* eMpumalanga Kapa ukuze kuthuthukiswe ukwabelana ngenzuzo okusimeme nokulinganayo kulo lonke uchungechunge lwenani. | * Khetha Umphathi Wokuphumayo * Umsizi womphakathi ozimele * I-Aloe Business Advisor * Ukuqeqeshwa komphakathi- Ukuphathwa kwephrojekthi Ukuphathwa Kwebhizinisi Ukuvuna Okuqhubekayo * Ukuhlelwa kwe-Horticultural kokuvuna zasendle * Ifemu ebonisana nge-EIA yokusungulwa kwehektha elilodwa lenhlaba kanye nendawo yokucubungula esebenza mahhala * Ihhovisi lemojuli elakhiwe ngaphambilini kanye neshabhu yokusebenzela yasensimini (okuhlanganisa nezinsiza eziningi kanye nempahla yasehhovisi/ ifenisha) * Izisebenzi zokuphatha ukuvuna zasendle * Ububanzi bokuthengwa kwempahla okufanele bufakwe ekuvuneni endle , maqondana nabasebenzi bokuvuna, izinto zokusebenza kanye nezinsiza * Umthamo wokuthengwa kwempahla uzosetshenziswa ekuvuneni kwasendle , maqondana nezinto ezisetshenziswayo zabasebenzi bokuvuna kanye nokuphatha * Indawo yokuhlola eyakhiwe ngaphambilini, ukucubungula kanye nokupakisha (okubandakanya izinsiza eziningi kanye nempahla/ ifenisha) * Ukuhlola, ukucubungula kanye nokupakisha abasebenzi * Ukuthengwa (noma ukuqashwa, njengoba kudingekile) kokucubungula impahla yabasebenzi basembonini * Ukuthengwa kwezinto ezisetshenziswayo zokucubungula abasebenzi nabaphathi * Inkampani yokuthengisa |
| **Umphumela 2.3** Amabhizinisi azinze emphakathini ekulimeni kwe -Honeybush ayasekelwa, aqinisekise ukongiwa kanye nemiphumela yokwabelana ngenzuzo elinganayo kuyo | * Ukusungulwa kweQembu Lokweluleka Ngobuchwepheshe Besikhwama * Yenza ucwaningo oluyisisekelo lwe- Honeybush Sector * Ukuthuthukisa Imihlahlandlela Yesikhwama; * Sebenzisa Imihlahlandlela Yesikhwama * Linganisa Umthelela Wesikhwama |

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|  | yonke i- *Cyclopia* spp. indawo esiFundeni saseKapa. |  |
| **Umphumela 2.4** Ukuqaliswa kwe-ABS ekulimeni kwe- Rooibos kuyaqiniswa,  kuqinisekisa ubulungisa,  ukulingana kanye nokusimama ebudlelwaneni obufanele phakathi kwabanikazi be-TK nezimboni. | * Phenya futhi uthuthukise indlela efanelekile yokwabelana ngenzuzo ye-TK ebamba ngempumelelo insiza yerenti evela kumalungelo e-TK - leyo ndlela yokwabelana ngenzuzo idinga ukusebenza kahle, ibe sobala, inciphise ubungozi bezentengiselwano futhi yandise izinzuzo ze-TK, futhi izodinga ukumodela kwezezimali nezomnotho kanye nokubikezela. ; * Phenya futhi uthuthukise izindlela zokwabelana ngenzuzo ye-TK okungeyona eyemali ezingase zisekele imiphakathi enamalungelo ngokunikela ngeminikelo nangezindlela ezihambisanayo zomkhakha ozimele. * Yakha futhi uphakamise uhlaka olufanele nolulula lokubusa kanye nokufakwa kwezikhungo ukuze kuqaliswe futhi kuqashwe indlela yokwabelana ngenzuzo ye-TK * Rekhoda izinqubo zamanje zokuxoxisana ze- SARC njengesibonelo socwaningo ngenhloso yokwakhiwa "kwepulani" yeminye imikhiqizo kanye nezivumelwano ze-TK. * Ukusabalalisa imiphumela yocwaningo   lwecala njengesibonelo kubabambiqhaza be- ABS eNingizimu Afrika nangale kwayo. |
| **Ingxenye 3:** Ukudluliswa kolwazi lwe- Bioprospectin g kanye nokwengezwa kwenani kuyathuthukis wa ukuze kwabelwane ngenzuzo ngokulingana yo | **Okukhiphayo 3.1 Uhlelo Lokubhalisa lwe** - TK oluxhumene ne- Bioprospecting luyasekelwa ukuze kuqinisekiswe ukuhambisana ne-ABS ezivumelwaneni zamanje nezesikhathi esizayo phakathi kwabanikazi bolwazi  lwendabuko kanye nendabuko kanye nezimboni. | * Imihlangano yokucobelelana ngolwazi ye-Bio- cultural Community Protocol kanye nemibhalo yaphothulwa (eyi-10 sezizonke, izinkundla zokucobelelana ngolwazi ezi-2/ngonyaka)- Imihlangano yokucobelelana ngolwazi esiFundazweni saseMpumalanga * Ukuqeqeshwa kwe-SANBI kwamarekhodi e-IK ukuze aqoqe izibonelo zezitshalo - Gxila ezitshalweni zesiFundazwe saseMpumalanga * Izindleko Zezinto Zokuqopha (incwajana, Ikhamera, izesekeli zekhamera, isikhwama sekhompuyutha ephathekayo) ngerekhodi le- IK ngalinye Izikhathi zokuqeqesha nge- Documentation Methodology p/a * Izindleko Zerekhoda ye-IK (amarekhodi e-IK angu-5 esewonke) * Uhlelo lokubhaliswa kwe-IKS eku-inthanethi lwenzelwe ukufakwa ku-NIKMAS ukuze   kusekelwe Ukuthobela kwe-ABS |
| **Okuphumayo 3.2** Uhlelo lwe - Biotrade certification lwaseNingizimu Afrika lwenziwa ngenhloso  yokuvikela ukongiwa | * Izincwadi zokuzibophezela * Uhlelo Lokugcina Lokusebenza Kwekesi Lokuhlola * Hlola ubungozi bokuhlolwa kanye nezinhlelo   zokwenza |

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|  | kwezinhlobonhlobo zemvelo ngaphakathi kweketango lenani le-Bioprospecting. | * Umbiko wenqubekelaphambili wokusetshenziswa kohlelo lwesenzo sokuhlola * Hlola Ikesi Report * I-Final National Biotrade Charter * Final Biotrade Charter Operational Manual |
| **Ingxenye yesi-4:** Ukuphathwa Kolwazi kanye ne-M&E. | **Umphumela 4.0**  Ababambiqhaza bakazwelonke nabamazwe ngamazwe basekelwe ukubamba iqhaza ku-M&E kanye nokuhlela izifundo ezitholwe ekusetshenzisweni kwayo. | * Ababambiqhaza bakazwelonke nabamazwe ngamazwe basekelwa ukubamba iqhaza ku- M&E kanye nokuhlela izifundo ezitholwe ekusetshenzisweni kwayo. |

## Ububanzi be-ESIA

Umgomo we-Environmental and Social Impact Assessment (ESIA) wukubheka umnikelo wephrojekthi ekuthuthukisweni kochungechunge lwenani lemikhiqizo etholakala ezisetshenziswa zofuzo kusetshenziswa ilensi yezemvelo nenhlalo, ukuze kuncishiswe s~~z~~imithelela emibi kanye nokukhulu s~~z~~. imithelela yentuthuko esikhathini eside nesifushane. Umbiko ube usuhlonza imithelela emihle nemibi yemisebenzi yephrojekthi, ugxile emithelela emibi ebingahlosiwe, okufanele incishiswe ukuze kuthuthukiswe imithelela emihle yomkhakha. I-ESIA ichaza imithelela ngokwamazinga e-UNDP ezenhlalo nezemvelo, inikeza inkomba yokubaluleka okuhlobene kwemithelela bese ibeka uchungechunge lwezinyathelo zokunciphisa ukuze kuncishiswe imiphumela yale mithelela. Izinyathelo zokunciphisa zizokwaziswa futhi Uhlaka Lokulawulwa Kwemvelo Nezenhlalakahle (ESMF) lapho imiphumela yalo izoba nomthelela ekuthuthukisweni koHlelo Oluphelele Lokuphathwa Kwemvelo Nezenhlalakahle (ESMP) . Ikakhulukazi, izinjongo ze-ESIA yilezi:

1. Qinisa imiphumela yezenhlalo nezemvelo yephrojekthi
2. Ukuhlanganisa ubungozi obuhlonzwe nge-SESP
3. Khomba imithelela emibi kwezenhlalo nezemvelo
4. Phakamisa i-ESMF ukuze inciphise s~~z~~, inciphise, futhi ilawule imithelela emibi lapho ukugwema kungenzeki khona
5. Qinisa i-UNDP namandla ozakwethu okulawula ubungozi bezenhlalo nezemvelo ezingeni lephrojekthi ngokwethulwa kwemiphumela.
6. Qinisekisa ukuthi usebenzisana ngokugcwele nababambe iqhaza ngokuxoxisana okubanzi

Ngokusekelwe ku-SESP, i-ESIA yenzelwe lokhu okulandelayo:

* + **Okukhiphayo 1.1.** Izithiyo ze-R&D ezixhumene nezifundo zomtholampilo kanye nokubhaliswa kwe-African Ginger ( *Siphonochilus aethiopicus* ) njengomthombo wezinto eziphilayo ukwelapha izifo ezivuvukalayo kanye nezifo ezingezwani nomzimba zinqotshwa ngokuhlelekile ngendlela ehambisana ne-ABS.
  + **Umphumela 1.2** I-R&D ye-Bioprospecting eNyakatho Kapa iyasekelwa, ithuthukisa umnotho wasekhaya we-Bioprospecting kanye nokusungula 'Isikhungo Sokuthuthukiswa Kwemikhiqizo Yezinto Eziphilayo' etholakala endaweni efanele..
  + **Umphumela 2.1** Ukuqaliswa kokusebenza kwe-Pelargonium Biodiversity Management Plan (BMP) kusekelwa ngokubambisana phakathi kweQembu Elisebenzayo lePelargonium, amabhizinisi omphakathi kanye nababambiqhaza be-CSO.
  + **Okuphumayo 2.2** Ukuthuthukiswa kwendawo yokuvuna, ukucubungula kanye nokuhweba *kwe-Aloe ferox* eMpumalanga Kapa ukuze kuthuthukiswe ukwabelana ngenzuzo okusimeme nokulinganayo kulo lonke uchungechunge lwenani.
  + **Umphumela 2.3** Amabhizinisi azinze emphakathini ekulimeni kwe -Honeybush ayasekelwa, aqinisekise ukongiwa kanye nemiphumela yokwabelana ngenzuzo elinganayo kuyo yonke i- *Cyclopia* spp. indawo esiFundeni saseKapa.
  + **Umphumela 2.4** Ukuqaliswa kwe-ABS ekulimeni kwe-Rooibos kuyaqiniswa, kuqinisekisa ubulungisa, ukulingana kanye nokusimama ebudlelwaneni obufanele phakathi kwabanikazi be-TK nezimboni.

# Ukuhlolwa komthelela kwezemvelo nezenhlalo ngokomphumela ngamunye

## 1.1. Okukhiphayo 1.1 . Izithiyo ze-R&D ezixhumene nezifundo zomtholampilo kanye nokubhaliswa kwe-African Ginger ( *Siphonochilus aethiopicus* ) njengomthombo wezinto eziphilayo ukwelapha izifo ezivuvukalayo kanye nezifo ezingezwani nomzimba zinqotshwa ngokuhlelekile ngendlela ehambisana ne-ABS.

* + 1. *Imisebenzi yokuphuma*

Umphumela 1.1 uhlose ukunqoba izithiyo ze-R&D ezixhumene nezifundo zomtholampilo kanye nokubhaliswa kwe-African Ginger ( *Siphonochilus aethiopicus* ) njengomthombo wezinto eziphilayo ukwelapha izifo ezivuvukalayo nezingaguquki ngendlela ehambisana ne-ABS. Umphumela uhlose ukufeza lokhu ngokufeza imisebenzi emithathu :

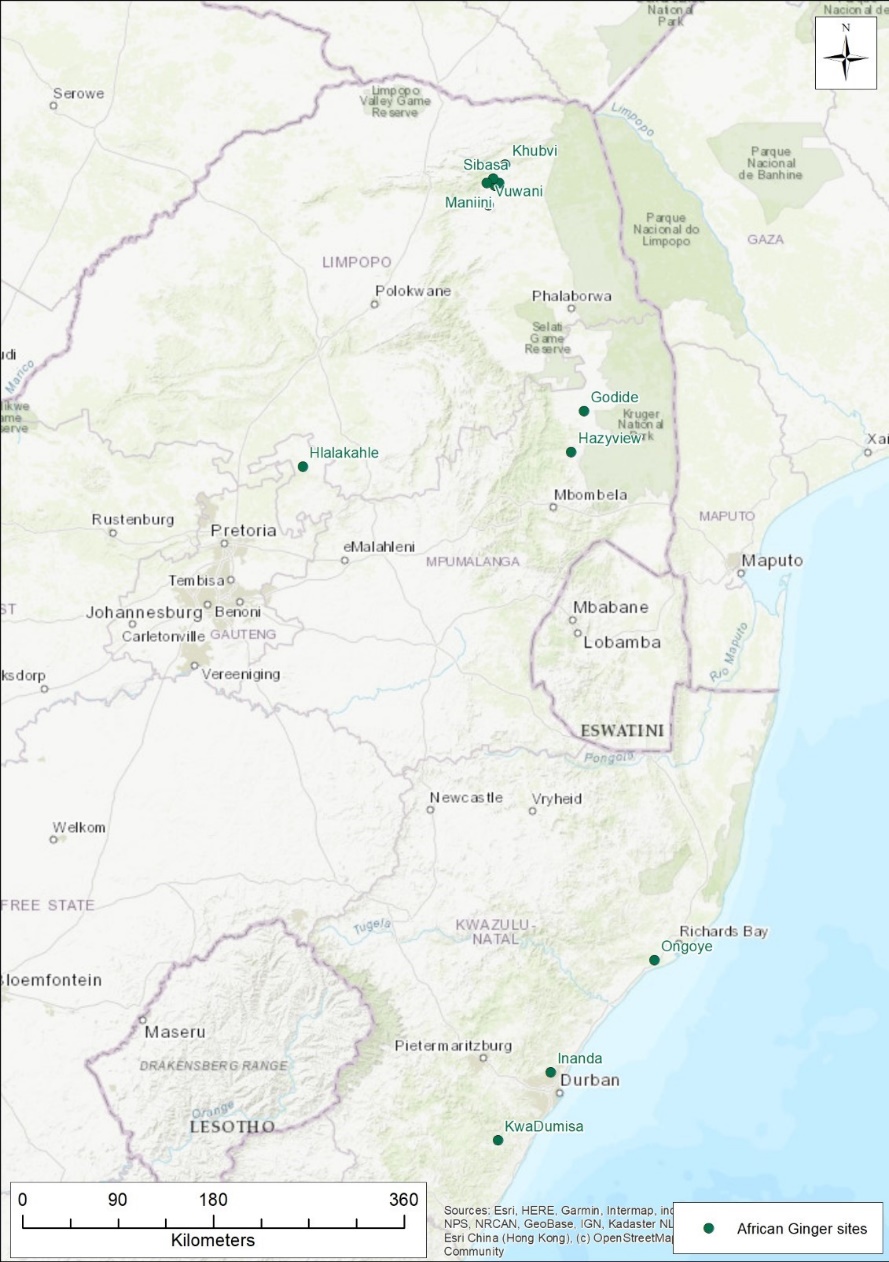
* Ukuthuthukisa izivumelwano ze-ABS nemiphakathi ehlonzwe ezifundazweni zaseLimpopo, eMpumalanga naKwaZulu-Natal.
  + Isivumelwano Sokwabelana Ngemihlomulo ukufaka izigatshana ezihambisana noMthetho Wezinto Ezihlukahlukene ZaseNingizimu Afrika
* Ukuthuthukisa isiphakamiso sokubaluleka kokunikeza ilayisensi ubuchwepheshe bejinja yase-Afrika nebhizinisi.
* Ukuthuthukisa isivumelwano selayisense yokuthengiswa kwejinja yase-Afrika (ukumaketha, ukukhiqiza nokusabalalisa)
  + 1. *Isisekelo*

## Indawo yephrojekthi

Okuphumayo kubhekana ngqo nezithiyo ekuthuthukisweni kochungechunge lwenani le-AG ngendlela ethobela i-ABS. Ngakho-ke okukhiphayo kuthonya isimo senhlalonhle sokulawulwa kwezwe kunesibonakalayo. Ngakho-ke, akukho ndawo eqondile yendawo noma indawo enomthelela kodwa kunalokho imiphakathi ebalulekile lapho Abaphathi be-TK bazothonywa

khona ngokuqondile. Lo mphumela uzosetshenziswa ezifundazweni ezintathu. Nakuba amadolobhana athile kanye nemiphakathi ikhethiwe ukuze iqalise ukusebenza, ngenxa yesimo sendawo ezungezile, le ESIA izobheka ingqikithi yesifunda.

Ijinja yase-Afrika (Siphonochilus aethiopicus) njengamanje isohlwini Lwezimila Ezisengozini Kakhulu Ohlwini Olubomvu lwe-SANBI Lwezitshalo zaseNingizimu Afrika. Izinhlobo zezilwane ziye zaba nokwehla okukhulu kwenani labantu basendle ngenxa yokuvunwa ngokweqile ngokwezinjongo zokwelapha. Isiphelile manje KwaZulu-Natal futhi sehlile isibalo sabantu esihlakazekile eLimpopo naseMpumalanga. Izidingo zayo ezibanzi zendawo yokuhlala ziphakamisa ukuthi yasatshalaliswa kabanzi ezindaweni ezishisayo zaseLimpopo, eMpumalanga naKwaZulu-Natal ngaphambi kokuvuna okukhulu. Ukusatshalaliswa kwale miphakathi kanye nabanikazi be-TK kungabonakala kuMdwebo ongezansi.



Umfanekiso . Indawo ejwayelekile yeziza ze-Output 1.1 kuzo zonke izifundazwe ezintathu

## eLimpopo

Lesi sifundazwe sisenyakatho yeNingizimu Afrika, sisemngceleni weBotswana, Zimbabwe kanye neMozambique. Lesi sifundazwe sakhiwe yizindawo ezintathu okwazalelwa kuzo iLebowa, iGazankulu kanye neVenda, kanye nengxenye yesifundazwe sangaphambili saseTransvaal. Inani labantu baseLimpopo lakhiwe izinhlanga ezimbalwa ezihlukaniswa

ngamasiko, ulimi, nobuhlanga. U-97.3% wabantu abamnyama, u-2.4% ngabaMhlophe, u-0.2% ngamaKhaladi, kanti u-0.1% ngamaNdiya/Ama-Asia. Izizwe ezihamba phambili ngamaPedi, amaTsonga kanye namaVenda. Abaholi bendabuko basawumgogodla oqinile wepolitiki yesifundazwe. Izigodi ezihlonzwe ukuthi zingabanikazi be-IK kulo msebenzi yiVuwani, iTshitomboni, iKhubvi, iLufule, neManiini.

Imisebenzi emikhulu yezomnotho esifundazweni ezolimo, ezezimayini nezokuvakasha. Isifundazwe siziqhenya nge-Waterberg UNESCO Biosphere okuyindawo yayo ehamba phambili eyihlathi elomile elivuthulukayo kanye nehlathi. Ngaphakathi kwe-Waterberg kukhona okutholwe ngemivubukulo esukela ku-Stone Age, futhi eduze kukhona okutholwe kokuziphendukela kwemvelo kwasekuqaleni okuhlobene nemvelaphi yabantu. ILimpopo yaziwa kakhulu ngezokuvakasha njengoba ziningi izindawo ezivikelwe kulesi sifundazwe, edume kakhulu yiKruger National Park, ehlanganyela nesifundazwe esingumakhelwane iMpumalanga. Kunezinhlobo eziningi zezindawo zokuhlala ezihlukaniswa ngokuthi ,Izinyoni Ezivikelekile Kakuhle eziningi ezisohlwini lwezinyoni nezinhlobo zezitshalo esifundazweni (ezivamile, ezisongelwa, ezingavamile, njll.), enye yazo i-ginger yase-Afrika ( *Siphonochilus aethiopicus* ).

## eMpumalanga

Isifundazwe saseMpumalanga sihlanganyela neLimpopo, KwaZulu Natal, Gauteng, Mozambique kanye ne-Eswatini. IMpumalanga ichaza “iMpumalanga” noma “Indawo lapho Ilanga Liphuma khona”, okubonisa indawo yalesi sifundazwe eNingizimu Afrika. Yakhiwe ezindaweni “zeBantustan ”ezazikhona ngaphambi kwenkululeko yango-1994, iKaNgwane, KwaNdebele kanye nezingxenye zeLebowa neGazankulu. Ngokwesibalo sabantu, isifundazwe sikleliswe endaweni yesithupha kweziyisishiyagalolunye zezwe. ISiSwati, isiZulu nesiTsonga yizona ~~most~~ zilimi ezihamba phambili. U-95.3% wabantu abamnyama, u-3.6% ngabaMhlophe, u-0.6% ngamaKhaladi, kanti u-0.5% ngamaNdiya/Ama-Asia. Iziza ezihlonziwe zalolu hlelo yiHazyview, Godide, kanye neHlalakahle.

Imisebenzi yayo eyinhloko yezomnotho ezolimo, izimayini nezokuvakasha. I-Drakensberg escarpment ihlukanisa iMpumalanga ibe ingxenye esentshonalanga ehlanganisa ikakhulukazi indawo yotshani ephakeme ephakeme ebizwa ngokuthi i-Highveld kanye nengxenye esempumalanga etholakala endaweni ephansi ye-Lowveld/Bushveld, ikakhulukazi indawo yokuhlala yase-savanna. Lokhu kwehlukahlukana kwezindawo kuholele ezinhlobonhlobo zezinto eziphilayo kanye nengqalasizinda eyingqayizivele yemvelo. IMpumalanga iyisifundazwe esinezimvula zasehlobo ezifudumele, eziqukethe izimila ezintathu kweziyisishiyagalolunye zaseNingizimu Afrika: indawo yotshani (amagquma aphakeme kanye namagquma), ama-savanna (ama-escarpment foothills kanye namathafa aphansi) kanye nehlathi (eningizimu nasempumalanga ezibheke izigodi ezibheke escarpment).

## KwaZulu Natali

Lesi sifundazwe sisogwini olusempumalanga olwandle i-Indian Ocean. Ihlukaniselana imingcele nezinye izifundazwe ezintathu kanye namazwe aseMozambique, Eswatini naseLesotho. Lesi sifundazwe sasungulwa ngo-1994 ngokuhlanganisa iKwaZulu Bantustan neNatal. Ikakhulukazi “izwe lamaZulu” futhi ingesinye sezifundazwe zaseNingizimu Afrika ezinezimpande zendabuko ezijulile. Ulimi lwayo oluhamba phambili isiZulu (80%), kanti isiNgisi (14.4%), isiXhosa (3.1%) nesiBhunu (1.0%) nazo ziyakhulunywa. Isibalo sabantu singu-84.8% abamnyama, 9.3% amaNdiya, 4.1% Abamhlophe, kanye no-1.5% amaKhaladi. Ubuholi boMdabu buwumgogodla wokubusa ezindaweni zasemakhaya njengoba iNgonyama kaZulu

iyona ntokazi ewumgogodla walolu hlobo lokuphatha. Izindawo esezihlonzwe ukwenza lolu hlelo esifundazweni Ongoye, Inanda, KwaDumisa naseMbambasa.

Umnotho wayo ungowesibili ngobukhulu ngemuva kowaseGauteng, kanti ezolimo, ezokukhiqiza nezokuvakasha yizona ezihamba phambili kwezomnotho.

Izindawo ezimbili KwaZulu-Natal sezimenyezelwe njengeziNdawo Zamagugu Omhlaba ze- UNESCO: iSimangaliso Wetland Park kanye noKhahlamba Drakensberg Park. Lezi zindawo zinhle kakhulu futhi zibalulekile ekongiweni kwezinhlobonhlobo zemvelo.

## Izimo zenhlalo-mnotho

Kuzo zontathu izifundazwe, kunobubha obudlangile futhi kusukela ngo-1994 uhulumeni uzama ukugqugquzela ukuqedwa kobubha ngokudala amathuba emisebenzi ukusiza le miphakathi entulayo. Lezi zinkinga zimbi kakhulu ezindaweni zasemakhaya, lapho iningi labantu lithembele ekulimaleni kokuziphilisa nakwizibonelelo zikahulumeni. Mancane kakhulu amathuba omsebenzi, osekubangele ukuthi abantu bafudukele ezindaweni zasemadolobheni. Ngisho nokulima kancane akusakhiqizi ngenxa yokushintsha kwesimo sezulu, ukuncipha komhlabathi, nezinye izinkinga zomphakathi. Nakuba ekhona amathuba okuthuthukisa ezokuvakasha, iningi ligxile ezindaweni ezizimele. Ngisho nezindawo ezivikelwe zikahulumeni ezinkulu nezidumile azibanga nomphumela wokugeleza kwezinzuzo ezibonakalayo emiphakathini ezungezile.

.Ngakho-ke le phrojekthi ye-ABS ithathwa njengethuluzi elingaba neqhaza to ekusizeni umphakathi, lisize ekuqedeni ububha kanye nokuntuleka kwemisebenzi ezindaweni ezibalulekile.

Ithebula: Izibalo zabantu bezifundazwe zocwaningo ngokobalo lwabantu lwango-2022

|  |  |  |  |
| --- | --- | --- | --- |
|  | eLimpopo | eMpumalanga | KwaZulu Natali |
| Inani labantu | 6 572 721 | 4 039 939 | 12 423 907 |
|  |  |  |  |
| Izingane ezincane (iminyaka engu-0-14) | 31,60% | 28,40% | 27,20% |
| Inani labantu beminyaka yokusebenza (iminyaka eyi-15-64) | 61,40% | 66,40% | 66,40% |
| Abantu abadala (iminyaka engu-65+) | 6,90% | 5,20% | 6,40% |
| Isilinganiso sokuncika | 62,7 | 50, 6 | 50,5 |
| Isilinganiso socansi | 89,2 | 92,4 | 91 |
| Akukho sikole (iminyaka engu-20+) | 14,10% | 11,70% | 8,30% |
| Imfundo ephakeme (iminyaka engu-20+) | 9,90% | 7,30% | 10,40% |
| Inani lemizi | 1 811 565 | 1 421 721 | 2 853 741 |
| Isilinganiso sosayizi wasekhaya | 3,6 | 3,6 | 4,4 |
| Izindawo zokuhlala ezihlelekile | 94,70% | 92,20% | 86,80% |
| Izindlu zangasese ezishaywayo ezixhunywe kundle | 35,20% | 54,90% | 58,90% |

|  |  |  |  |
| --- | --- | --- | --- |
| Isevisi yokulahla imfucuza yamasonto onke | 32,00% | 51,10% | 57,70% |
| Ukuthola amanzi ngamapayipi endlini | 31,40% | 47,00% | 51,80% |
| Ugesi wokukhanyisa | 95,50% | 93,70% | 96,70% |

Abahlomuli bomklamo bangahlukaniswa izigaba ezimbili, iKomidi Labelaphi Bendabuko (i- THC) nabayilungu layo kanye nabanye abaphethe Ulwazi Lwendabuko (TK) njengoba bemelwe imiphakathi efanele eMpumalanga, eLimpopo naKwaZulu-Natal.

* + - * **I-THC kanye nabavoti** : I-THC iyinethiwekhi Yabasebenzi Bezempilo Bendabuko (THPs) ezifundazweni ezahlukene zaseNingizimu Afrika, ngaphandle kweNtshonalanga Kapa. I-THC ixhumane ne-CSIR futhi yavumelana ngalokhu okulandelayo:
* I-THC kufanele idalule ulwazi oluyimfihlo mayelana nolwazi lwendabuko ngokusetshenziswa kwezinhlobo zezitshalo ukwelapha izifo zabantu futhi inikeze i-CSIR igunya lokuphenya ukusetshenziswa kwendabuko kwezitshalo.
* I-THC isayine iMemorandamu Yesivumelwano (i-MoA) ne-CSIR ukuze ibeke imigomo nemibandela yoCwaningo Nokuthuthukiswa kwephrojekthi, impahla yengqondo kanye nezinhlelo zokwabelana ngenzuzo.
* Isivumelwano Sokwabelana Ngemihlomulo sabophezela i-CSIR ukuthi yabelane ngezimali ezizuzwayo ezivela ekuhwebeni kobuchwepheshe nemikhiqizo ethuthukiswe ngejinja yase-Afrika neTHC.
  + - * **Imiphakathi kanye nabanikazi be-TK** : I-CSIR, i-Ejenti Yokuqaliswa kwalokhu kuphumayo yenza ukuhlolwa kwedeskithophu ukuze kutholakale abanikazi be-TK abafanelekile ezingeni lomphakathi. I-CSIR ihlonze ukuthi eLimpopo ijinja yase-Afrika isetshenziswa kakhulu imiphakathi yendawo yasezigodini zaseVuwani, eTshitomboni, eKhubvi, eLufule, eSibasa, eManiini naseMulenzhe ukwelapha izifo zokuphefumula, izinhlungu zesisu kanye nomalaleveva. EMpumalanga i-CSIR yathola ukuthi i-African Ginger ivela emiphakathini yaseGodide naseHlalakahle. KwaZulu-Natal bathole ukuthi lesi simila senzeka oNgoye, eNanda, eDumisa naseMbambasa (ePort Shepstone).

## Umongo we-Biophysical

Ijinja yase-Afrika itholakala ezindaweni eziphansi (<1,500 m) ezinesimo sezulu esishisayo esishisayo esishisayo esinesimo sezulu esishisayo, esinamaphethini okushisa alandelayo onyaka nenyanga kanye nezinga lokushisa . Iningi lemvula yonyaka (elisukela phakathi kuka- 600-900 mm ngonyaka) livela in ehlobo, kanti uMasingana noFebruwari kuvame ukuba yizinyanga ezinemvula kakhulu. I-Rainfall Concentration Index iphezulu, okubonisa ukuthi iningi lemvula ligcwala ezinyangeni ezimbalwa. Imvula ayitholakali ngesikhathi sasebusika, kanti izihlambi ngezikhathi ezithile ezihambisana nezimo zangaphambili. Lesi sifunda siba nezikhathi zokomisa isikhathi eside, ikakhulukazi kusukela ngoMeyi kuya kuNcwaba, okungaba nomthelela emisebenzini yezolimo.

Imvelo ye-geological and edaphic iyahlukahluka kakhulu kulo lonke uhla lomlando we-African Ginger, okuphakamisa ukuthi ayikhawulelwe kunoma iyiphi i-geology eyodwa noma uhlobo lomhlabathi. Indawo yokusabalalisa kuzwelonke imele cishe u-35 000 km2 empumalanga yeLimpopo naseMpumalanga kanye nogu lwaKwaZulu-Natali. Ucwaningo lwasenkulisa luphakamisa ukuthi ikhetha inhlabathi enesihlabathi evuthuluke kahle noma inhlabathi evundile enezinto eziphilayo eziphakeme kanye ne-acidic kancane ukuya kokungathathi hlangothi kwe- pH (5.5–7.0). Abantu bendawo be-African Ginger ngokuvamile batholakala ezindaweni ezivulekile zehlathi kanye ne-savanna ecosystem ezindaweni ezinomthunzi noma ezinomthunzi ngaphansi kwezihlahla noma izihlahlana noma phakathi kwezindawo ezinotshani obuminyene. Kubonakala sengathi ikhetha izindawo ezigcina amanzi kahle ngesikhathi sezimvula kodwa ezingajwayele ukugcwala amanzi, futhi ukomiswa kwenhlabathi ngezikhathi ezithile kungase kube yinzuzo ngesikhathi sayo sokungalali kahle.

A map of south africa with different colored areas

Description automatically generated

Ububanzi bokusabalalisa be-Siphonochilus aethiopicus

* + 1. *Imithelela Yenhlalo Nemvelo*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Ingozi** | **Incazelo** | **I-UNDP SES** | **Umsebenzi wethula**  **ubungozi** | **Ububanzi** | **Isilinganiso** |
| **Ingcuphe 1-** I- Nequitable i mpacts emaqenjini a -m arginallyized g roups , kuhlanganise nabesifazane. | **Umcimbi:** I-ABS ye-African Ginger ingase ibangele imithelela engalingani noma ebandlululayo kubantu ababencishwe amathuba emiphakathini, okuhlanganisa abesifazane, intsha kanye nabampofu kakhulu. | **Isimiso Ungashiyi Umuntu Ngemva** P.5, P.7,P.8,P.10  kanye no-P.11 | Umsebenzi 1 wokuqondanisa isivumelwano se- ABS | Zonke izindawo ezihlosiwe | Kuphakathi mina = 3  L = 3 |
|  | **Imbangela:** Ukucatshangelwa okunganele kokuguquguquka kwezenhlalo kanye neqhaza lobulili ekufinyeleleni nasekucutshungulweni kwe-African Ginger ekuqondaneni kwe-ABS ezifundazweni zaseLimpopo, eMpumalanga naKwaZulu-Natal. |  |  |  |  |
|  | **Umthelela:** Intsha, abesifazane kanye namaqembu ampofu noma angakwazi ukufunda nokubhala akukho noma okulinganiselwe kwabantu ukufinyelela izinzuzo zelayisensi ye-African Ginger. |  |  |  |  |
| **Ubungozi 2- Ingozi yokungakhulumisani kahle**  **nababambiqhaza** | **Umcimbi:** Ukubonisana nge-ABS ye- African Ginger akubandakanyi wonke amaqembu ababambiqhaza athintwa i-  ABS nokunikezwa kwamalayisensi. | **Isimiso Ungashiyi Umuntu Ngemva**  P.2 kanye no-P.13 | Umsebenzi 1 wokuqondanisa isivumelwano se-  ABS | Zonke izindawo ezihlosiwe | Phezulu mina = 4  L = 5 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Imbangela:** Ukungatholakali kwemephu eyanele kanye nokufinyelela kubantu ababambiqhaza ezifundazweni zaseLimpopo, eMpumalanga naKwaZulu-Natal nge- ABS yejinja yase-Afrika.  **Umthelela:** Bonke ababambiqhaza, okuhlanganisa intsha, abesifazane kanye namaqembu abantu abampofu noma abangafundile, imibono ayibonakali ku-ABS okuholela ekufinyeleleni okulinganiselwe kwezinzuzo zeGinger yase-Afrika. |  | Umsebenzi 2: Yakha idosi lesiphakamiso senani lejinja yase-Afrika ukuze uthole ilayisense nebhizinisi. |  |  |
| **Ubungozi 3- Ukukhathazeka noma izikhalo eziphakanyiswe ababambiqhaza azinakwa ngendlela efanele** | **Umcimbi:** Ababambiqhaza ababamba iqhaza ekuhlelweni kwe-ABS ye- African Ginger kanye nenqubo yokukhishwa kwamalayisensi babhekana nezinselele ekufuneni amalungelo ngempumelelo, ukuveza ukukhathazeka, noma ukufaka izikhalazo.  **Isizathu:** Abahlanganyeli noma abamukeli bangase babhekane nezinkinga ze -b kanye nezici ezikhawulelayo ezihlanganisa: | Isimiso Sokuziphendulela: P.14, P.15 | Umsebenzi 1 wokuqondanisa isivumelwano se- ABS  Umsebenzi 2: Yakha idosi lesiphakamiso senani lejinja yase-Afrika ukuze uthole ilayisense nebhizinisi. | Zonke izindawo ezihlosiwe | Phezulu mina = 5  L = 5 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | * Ukuntula ulwazi lwezinqubo zokuphakamisa isikhalo * Izinselele zokungena. * Umehluko wolimi, amasiko, nokufunda. * Ukufinyelela okulinganiselwe noma ukujwayelana nobuchwepheshe obudingekayo.   **Imithelela:**   * Ukuguguleka kokuthembana nokusebenzisana. * Isizukulwane/ukwanda kwezingxabano |  |  |  |  |
| **Ubungozi 4 - Ukungathobeli imithetho yemvelo kanye nokungqubuzana okungaba khona kwamazwe ngamazwe mayelana nemvelaphi ye- African Ginger engaqinisekisiwe** | **Umcimbi:** Ukungathobeli imithetho yemvelo kanye nokungqubuzana kwamazwe ngamazwe okungaba khona ngenxa yemvelaphi ye-A frican Ginger engaqinisekisiwe  **Imbangela:** Ukuntula ukukhuthala okufanele mayelana nemithethonqubo yezemvelo yokuvuna nokutshalwa kwe-African Ginger kanye nemvelaphi yayo ngaphambi kokusungulwa kwedokhumenti yokunikezwa kwelayisensi.  **Imithelela:** | **Izinga 1. Ukongiwa kwezinhlobonhlobo zezinto eziphilayo kanye ne-NRM S**  1.13 esimeme |  |  | Kuphakathi mina = 3  L = 3 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | * Izingozi ezingokomthetho, okuhlanganisa izinhlawulo nokubambezeleka kwephrojekthi. * Ukulimala kwesithunzi kanye nokulahlekelwa ukwethenjwa ngebhizinisi lokuthola amalayisense * Izingxabano zohwebo zamazwe   ngamazwe ezingaba khona. |  |  |  |  |
| **Ubungozi 5 - Ukungaphathwa kahle amagugu amasiko ngenxa yokulinywa kwezentengiso** | **Umcimbi:** Ukubukela phansi ulwazi lwendabuko lokusetshenziswa kanye nokucutshungulwa kwe-African Ginger ngabelaphi bendabuko  **Imbangela: Ukungabi bikho komgomo wokuqopha nokusebenzisa ulwazi lwendabuko lokubuyekeza i-ABS ku-African Ginger ngesikhathi sokuxoxisana nemiphakathi** yaseLimpopo , eMpumalanga naKwaZulu-Natal.  **Imithelela:**   * R ukufundisa ukufinyelela ku- African Ginger kubelaphi bendabuko ngenxa yokuthengisa ngokweqile ngaphansi kohlelo lwamalayisensi. * Ukufinyelela okungafanele emihlomulo yabelaphi bendabuko   ngaphansi kwe-ABS kulandela | **Izinga lesi-4: Amagugu Ezamasiko,** 4.5 |  |  | Kuphakathi mina = 3  L = 3 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | ukwabiwa kolwazi lwendabuko ngabamabhizinisi |  |  |  |  |

## Okuphumayo 1.2 I-R&D ye-Bioprospecting eNyakatho Kapa iyasekelwa, kukhuliswe umnotho wendawo we-Bioprospecting kanye nokusungula 'Ihabhu Lokuthuthukiswa Kwemikhiqizo Yezinto Eziphilayo' etholakala endaweni efanele.

* + 1. *Imisebenzi yokuphuma*

Amabhizinisi omphakathi ahlukene, ama-NGO kanye nemboni ezimele imisebenzi ye- Bioprospecting isivele isebenza esiFundazweni ngezindlela zenhlangano yokukhiqiza ezingahle zichazwe ‘njengamabhizinisi omphakathi', okuhlanganisa ukuvuna zasendle okusekelwe kuphrojekthi, ukutshala nokuhweba kwemikhiqizo ephilayo. Lawa mabhizinisi omphakathi we-NC abhekana nezinselele ezihlukahlukene, kuwo wonke amaketango awo amanani, adinga ucwaningo, ukuthuthukiswa, ukudluliswa kobuchwepheshe kanye nokungenelela kokusungula okuhlobene. Izinhlobo ezintathu eziyinhloko (ngaphandle kwe- Rooibos) ezivame ukusetshenziswa ezinhlelweni zamabhizinisi omphakathi yilezi: Devil's Claw (Harpagophytum procumbens); I-Kanna (noma i-Kougoed, i-Sceletium tortuosum) kanye ne- Cancer Bush (i-Sutherlandia frutescens) .

Ngenxa yenani labantu asebekhulile abanenani elikhulayo labantu abaphethwe isifo samathambo, isidingo seDevil **'s claw** ( *Harpagophytum spp* ) siye sanda kakhulu phakathi neminyaka edlule. I-Devil's claw itholakale iphumelela ekwelapheni isifo samathambo esiwohlozayo, i-osteoarthritis, i-tendonitis, ukuvuvukala kwezinso, nesifo senhliziyo. Okuningi okuhlinzekwa emhlabeni wonke kuvela eNamibia, ngamanani amancane avela eNingizimu Afrika naseBotswana. Ngo-2002, unyaka ophakeme wokuthekelisa, amathani ayi-1,018 ezigaxa omisiwe athunyelwa ngaphandle esuka eningizimu ye-Afrika, emele ukuvunwa kwezigidi zezitshalo. Uzipho lukaDeveli luvunwa endle ngengozi yokuxhashazwa ngokweqile ngokuqoqwa kuhlanganiswe nokulimala kwendawo yokuhlala ngenxa yomsebenzi wokumba budedengu. Ukuvuna kuthuthukise amazinga emali engenayo emiphakathini encishwe amathuba, kodwa kuphinde kwaphakamisa imibuzo ngokusimama. Ukushintsha iqoqo lasendle ngokutshala kudale inkulumo-mpikiswano ngemiphumela emihle nemibi emalini etholwa abavuni kanye nabalimi basemaphandleni. Imizamo yokulima ephumelelayo iye yahilela amasu e-micropropagation kanye nokukhulisa isitshalo ngaphandle kwamanzi noma umanyolo. Ohulumeni bezifunda eziyinhloko ezihlukene basebenzisana nemiphakathi yasendaweni ukuthuthukisa izinqubomgomo nemithethonqubo yokuvikela izinhlobo zezilwane kanye nokunquma isivuno esiqhubekayo (Stewart & Cole, 2005, Schneider et al., 2006). *I- Harpagophytum I-procumbens* sekumenyezelwe ukuthi ivikelekile eNingizimu Afrika kusukela ngo-1975 futhi kwafakwa uhlelo oluvumela ukuvunwa nokutshalwa kwendle. Imizamo eminingi yangasese e-Namibia naseNingizimu Afrika isakaza ngempumelelo lesi sikhungo ngezinga elilinganiselwe lezentengiselwano futhi uhlelo lwezimvume lusaqala ukuqaliswa esiFundazweni saseNyakatho Kapa kanye naseNyakatho Ntshonalanga (Powell, 2001).

**ICancer Bush** ( *Lessertia frutescens* ) iyisihlahla esihlala isikhathi eside esidabuka eNingizimu Afrika futhi simila ezifundazweni zaseNtshonalanga, eMpumalanga, naseNyakatho Kapa nakwezinye izindawo KwaZulu-Natal. Sekungamakhulu eminyaka isetshenziswa imiphakathi yendabuko, njengezizwe zamaKhoiSan kanye namaZulu, ezazibona izici zayo zokwelapha ezimangalisayo. Lesi sitshalo sivunwa kakhulu endle kodwa izitshalo ezincane ezimbalwa zokuhweba zaseSutherlandia zitholakala eNtshonalanga Kapa naseMpumalanga. Izakhamuzi zokuqala zaseKapa, abantu baseKhoi San kanye namaNama, basebenzisa ama-decoctions enziwe nge *-Lessertia* ukuze bageze amanxeba futhi behlise imfiva, futhi kusengenye yezitshalo zokwelapha ezisetshenziswa kakhulu eNtshonalanga Kapa. Izingxoxo ezimayelana

namalungelo okuhlola izinto eziphilayo kanye namalungelo empahla esunguliwe mayelana nokusetshenziswa kwe *-Lessertia* zifaka ukwabelana ngenzuzo, i-bio-prospecting, namalungelo empahla yobuhlakani (Aboyade et al., 2014) kusukela ngo-2014.

**I-Kougoed/kanna** ( *I-Sceletium tortuosum* isetshenziswe abelusi baseNingizimu Afrika kanye nabaqoqi bezilwane njengento eshintsha isimo sengqondo kusukela ezikhathini zasendulo. I- akhawunti yokuqala eyaziwayo ebhaliwe yokusetshenziswa kwalesi sitshalo kwakungu- **1662** ngu-Jan van Riebeeck. izinombolo ngenxa yokuvuna ukusetshenziswa komuthi (Manganyi, et al., 2021's ukutholakala okungavamile kanye nokuba sengozini kokuvuna ngokweqile kubangele isidingo esicacile sokuthi ilinywe kabanzi ukuze kuvikelwe isitokwe sasendle esikhona Ngo-2008, uMkhandlu WaseNingizimu Afrika wasayina isivumelwano sokwabelana ngenzuzo, esihlanganisa ulwazi lwendabuko lwesitshalo se - *Sceletium* izingxenye ezisebenzayo zefekthri okwamanje ezikhangiswa yi-HG&H Pharmaceuticals eNingizimu Afrika, e-USA, e-Canada, e-Brazil, e-Malaysia, nase-Japan. kukho konke ukuthengiswa kwe-extract kukhokhwa esikhwameni se-trust yabantu base-San, futhi enye i-1% ikhokhelwe ukusetshenziswa kwe-logo ye-San emkhiqizweni Inzuzo yabelwa ngokulinganayo nemiphakathi emibili yaseNamaqualand, ehlinzeka ngokuhola okukhulu kumthuthukisi wezohwebo. Izingcaphuno zebhotanical ezijwayelekile zesitshalo manje sezisetshenziswa emkhiqizweni obizwa nge-Zembrin® ukuze kuliwe nokukhathazeka, ingcindezi, nokudangala (Shroeder et al. 2020).

Amaphrojekthi omphakathi eNyakatho Kapa ngokuvamile ahlanganisa ukuguqulwa komhlaba kanye namaphrojekthi asemapulazini angamahektha ayi-1000 ngobukhulu, ezindaweni ezikude. Amaphrojekthi atholakala phakathi kuka-200 km - 500 km ukusuka ezindaweni zasemadolobheni eziseduze. Ukuvuna kuvame ukuvela ezitshalweni zasendle futhi kwenziwa ngokungalindelekile manner, ngokuvamile lapho kungekho zinhlelo zokuvuna ezisimeme. Ukulima eskukhona kodwa kunomkhawulo. Ukuzuza isikali ngokulima kanye nokwenza ngcono ukusebenza kwebhizinisi lomphakathi ngokusebenzisa i-bioprocessing kubhekana nezinselelo eziningi ezahlukene ngendlela yokulima, ukwazi, nobuchwepheshe kanye nokufinyelela ezimakethe.

Umphumela 1.2 ubandakanya ukusekela i-Bioprospecting R&D eNyakatho Kapa, ukukhulisa umnotho wendawo we-Bioprospecting kanye nokusungula 'Ihabhu Lokuthuthukiswa Kwemikhiqizo Yezinto Eziphilayo' elibekwe endaweni efanele ngokusebenzisa the following:

* + - * Thola izimvume ezidingekayo kanye nokugunyazwa kokusungulwa, kweHub.
      * Dala uhlelo locwaningo lweminyaka emi-3 lweqoqo lezinhlobo ezibalulekile ezihlanganisa iDevil's Claw kanye nohlobo olulodwa okungenani olulodwa olungatshalwa ngokuhlanganyela neDevil's Claw kumaphrojekthi omphakathi..
      * Sebenzisa uhlelo locwaningo lweminyaka emi-3.
      * Yakha izindlela zokuphatha ezingcono kakhulu (BMPs) zokulima nokuvuna (izindlela zokuhlola, amasu kanye nezindlela) zohlobo ngalunye.
      * Thuthukisa izinqubo zokuphatha ezihamba phambili (ama-BMP) zokwesekwa kokucubungula kwezolimo kanye nokulawulwa kwekhwalithi yokusetshenziswa komkhiqizo for uhlobo ngalunye.
      * Sungula uhlelo olulula lokumaketha, olulinganiselwe ekusungulweni kwesizindalwazi esifanelekile ngenhloso yokusungula ukuxhumana nezimakethe.
      * Yenza uhlelo lwamandla okukhiqiza eNyakatho Kapa, olunezinkomba zokukhiqiza.
      * Ukuklama insizakalo yokweseka kumaphrojekthi womphakathi lapho ama-BMP ahlukahlukene azodluliselwa khona njalo.
      * Gada ukukhiqizwa.
      * Khiqiza izithombo ezizothengiswa/ukuphakele amaphrojekthi omphakathi,
    1. *Isisekelo*

## Indawo yephrojekthi

Izindawo zephrojekthi ezikhethelwe ucwaningo nokutshalwa kwe-Devil's Claw, cancerbush, ne-kanna/kougoed eNyakatho Kapa yilezi ezilandelayo:

* + - * **I-Upington** , lapho i-Die Eiland Research Farm ikhona, isebenza njengesihlalo sokuphatha se-DKLM. Ukuhlaliswa kwabantu e-Upington kwaqala ngamaKorana Hottentots ahlala ezibukweni loMfula Omkhulu obizwa ngokuthi i-Gariep. IKorana yayikhishwe izifiki ezimhlophe emazweni okhokho babo eningizimu futhi yathuthela enyakatho futhi yafuna ukukhosela osebeni lwalokho manje okubizwa ngokuthi i- Orange (Gariep) River. Isibalo sabantu ababalelwa ku-75,000 (StatsSA, 2011) silinganiselwa ku-63% amaKhaladi akhuluma ~~s~~isiBhunu. I-Upington ivamise ukuthola imvula engu-94mm ngonyaka, kanti iningi lemvula liba ekwindla. Izinga lokushisa elijwayelekile lansuku zonke lisukela ku-19.8°C ngoJuni kuya ku-33°C ngoJanuwari.
      * **U-Klein Mier** no **-Askham** bawela kuMasipala Wendawo wase-Dawid Kruiper (DKLM), oqanjwe ngomholi weKhomani San uDawid Kruiper, kuMasipala Wesifunda sase-ZF Mgcawu (ZFMDM). Ukufinyelela endaweni kuhamba ngo-R380, oxhumanisa i- Upington eningizimu-mpumalanga nomngcele waseNamibia enyakatho-ntshonalanga. Isimo sendawo yeningi lendawo yase-Mier sihlanganisa izindunduma ezibomvu ezihambisanayo, yingakho i-Red Dune Tourist Route, iqoqo lezindlu zezivakashi, amapulazi kanye neziqiwi endaweni ekude kakhulu enyakatho yeNyakatho Kapa. I- Haksteen Pan ilele eduze nemiphakathi yakwa-Mier futhi isingathe umcimbi waminyaka yonke werekhodi lejubane lomhlaba we-Bloodhound. Iningi lezakhamuzi ngamaKhomani San futhi likhuluma isiBhunu. Le ndawo yome kakhulu futhi ithola imvula encane yonyaka elinganiselwa ku-83mm ngonyaka, kanti iningi lemvula lina ehlobo. Izinga lokushisa elijwayelekile lansuku zonke lisukela ku-20°C ngoJulayi kuya ku-33°C ngoJanuwari.
      * **IKuruman** yasungulwa ngo-1887. Igama layo lisuselwa egameni lesiKhoikhoi elisho ukuthi 'lapho kumi khona ugwayi wasendle'. Umasipala Wendawo yase-Ga-Segonyana uwumkhakha wohulumeni basekhaya kuMasipala Wesifunda sase-John Taolo Gaetsewe eNyakatho Kapa. I-Segonyana igama lesitswana lesiphethu, esivame ukubizwa ngokuthi Iso Le-Kuruman. UKuruman uqanjwe ngokuthi "i-Oasis of the Kalahari" enemithombo yamaminerali (Iso), eletha amalitha ayizigidi ezingama-20 ngosuku. Itholakala kumzila omkhulu u-N14 phakathi kweGauteng neNamibia/Cape Town nge-Upington Segonyana IDP, 2023). Amaqembu abantu abamnyama base- Afrika, amaKhaladi, kanye namaNdiya/Abase-Asia ande ukusuka ku-1996 kuya ku- 2022, kuyilapho inani labantu abaMhlophe libonise ukwehla kancane ngesikhathi esifanayo. Kunokwenyuka okukhulu okulinganayo okubonwa kwabaNsundu base- Afrika, kulandele amaKhaladi. Ulimi olukhulunywa kakhulu yimizi kumasipala waseGa- Segonyana yisiTswana, (esikhulunywa ngama-86.9%) silandelwa isiBhunu (esikhulunywa u-9.3%). Izigodi zasemakhaya enyakatho-ntshonalanga ye-Kuruman ziphathwa ngohlelo lwabaphathi bendabuko nabaholi boMdabu ababili (Ga-Segonyana IDP, 2023). Umfula iKuruman udabuka empumalanga yeKuruman lapho uthola khona amanzi emithonjeni eminingana - iGreat Koning Eye, iLittle Koning Eye kanye neKuruman Eye. Kokubili uMfula iKuruman kanye nomngenela wawo omkhulu uMfula i-Ga-Mogara ngokuvamile womile, ugeleza isikhathi esifushane kuphela kulandela imvula eyanele. I-Kuruman ivamise ukuthola imvula engu-266mm ngonyaka, kanti iningi lemvula liba khona ikakhulukazi ehlobo. Amazinga okushisa aphakathi kwasemini aqala ku-17.5°C ngoJuni kuya ku-32.6°C ngoJanuwari.
      * **I-Springbok** itholakala eNamaqualand, iwela kuMasipala Wendawo WaseNama Khoi (NKLM), futhi yayinabantu abalinganiselwa ku-12,790 ngo-2011 (StatSA, 2011). I- Springbok iyisikhungo esikhulu sezohwebo nokuphatha sezimayini zethusi esifundeni. I-Springbok inguqulo yesiBhunu yegama lesiKhoikhoi lokuqala elisho isilwane. Idolobhana ekuqaleni lasungulwa ngo-1862 njengendawo yezimayini zethusi. I- Springbok itholakala ku-N7 oxhumanisa iKapa neNamibia, futhi emaphethelweni asentshonalanga ye-N14 ehlanganisa i-Upington ne-Pretoria. AmaKhaladi enza u- 79.9% wezakhamuzi zakhona nesiBhunu kuwulimi olukhulunywa kakhulu. Le ndawo eyomile iyikhaya lezimila zonyaka, ezifana nama-Namaqua daisies, kanye nama- succulents amelana nesomiso, njenge-kokerboom. Le ndawo idume ngoguquko olumangalisayo olwenzeka njalo entwasahlobo lapho i-scrubland ecishe ingaphili iqhuma ibe umbala ovela ezinkulungwaneni zezimbali ezilethwa ukuphila izimvula zasebusika. I-Springbok ivamise ukuthola imvula engu-106mm ngonyaka ebusika. Izinga lokushisa elijwayelekile lansuku zonke lisukela ku-16.5°C ngoJulayi kuya ku-

28.3°C ngoFebhuwari. Ukuphakelwa kwamanzi kamasipala edolobheni laseSpringbok kungamalitha ayi-11,000 kuya kweziyi-12,000 ngosuku atholakala enanini lamanzi. imigodi emanzini angaphansi komhlaba.

## Izimo zenhlalo-mnotho

ISifundazwe saseNyakatho Kapa singeyesithathu ngenani elikhulu labantu abaningi kuzo zonke izifundazwe eziyisishiyagalolunye. Izinga lokuqashwa kukaMasipala liphezulu uma kuqhathaniswa, njengoba cishe u-75% wabantu abaneminyaka yobudala abafuna umsebenzi bakwazi ukuthola umsebenzi. Kodwa-ke, iningi labantu abaqashiwe litholakala emisebenzini yaphansi, edinga amakhono amancane noma angenawo nhlobo. Lokhu kubonakala futhi emazingeni aphansi emfundo yabantu bendawo, njengoba cishe u-12% wabantu abaneminyaka engu-20 kuya phezulu abanalo uhlobo lwemfundo. Lokhu, ngokwezinga elithile, kuthikameza intuthuko kaMasipala ekuthuthukiseni izimboni ezithuthuke kakhulu. Izinga lokuqashwa kanye nohlobo lwemisebenzi ethathwa abantu bakaMasipala lithinta ngqo amazinga abo emali engenayo (Dawid Kruiper IDP, 2018). Ukwabiwa kwemali engenayo kuhlanekezelwe ngokwedlulele, nephesenti eliphezulu labantu eliphila ngobumpofu obudlulele. Ukuthuthukiswa komnotho eNyakatho Kapa kuphazanyiswa ubukhulu bendawo kanye nokuba kude kwemiphakathi yayo ezindaweni zasemakhaya. Intuthuko iphinde ithikamezeke izinga eliphansi lemfundo namakhono esifundazweni. Ukuntuleka kwemisebenzi eNyakatho Kapa kuletha inselelo enkulu. Umnotho ugxile emkhakheni wezohwebo nezokudayisa ngenxa yomkhakha wawo oqinile wezokuvakasha, okushiya umnotho wendawo usengozini kunoma yiziphi izinguquko ezibalulekile kule mboni. Umkhakha wezokukhiqiza womnotho awusebenzi kahle, nokho, uma kubhekwa isisekelo esihle sezolimo, amathuba okukhulisa imboni yokukhiqiza akhona ngokulungiswa kwezolimo neminye imisebenzi (Dawid Kruiper IDP, 2018). Amathemba ezolimo kule ndawo mancane, akwanele ukusekela umphakathi wonke.

Iningi labantu (90.3%) ngamaKhaladi/amaSan, lilandelwa ngabaMhlophe (4.4%), abamnyama (4%) kanye nama-Asia/Indian (0.6%). IsiBhunu wulimi olukhulunywa kakhulu endaweni (92.8%) kulandele iSetswana (0.8%), nesiNgisi (0.2%). Ngokwesilinganiso, inani labantu liqukethe u-49.9% wabantu besilisa kanye no-51.1 % wabantu besifazane (David Kruiper IDP, 2018).

Kulinganiselwa ukuthi abantu baseKhomani San abayi-1,500 bahlala eNyakatho Kapa kanti iningi labo lihlala kuMasipala Wendawo wase-Mier. Umphakathi wase-Askham wathuthuka wazungeza isikole esakhiwa ngo-1931, kanye ne-Dutch Reformed Church ekhonza iKalahari yonke. I-Mier, ehlanganisa i-Klein Mier ne-Askham, iwugwadule futhi le ndawo inemithombo yemvelo elinganiselwe. Ukukhiqiza okuyisisekelo kuphansi kakhulu futhi izindawo ezinkulu ziyadingeka ekufuyweni kwemfuyo okunomnotho. Amalungu e-!Khomani San akhiqiza futhi athengise izikhali zangempela zama-San njengomcibisholo nomcibisholo, kanye nezinto ezithokozisayo ezifana nobuhlalu obenziwe ngegobolondo lamaqanda ezintshe, noma izikhwama ezenziwe ngezikhumba zezilwane. AmaSan aphinde azijwayeze ukulandelela, ukuxoxa izindaba ezindala kanye nokuzingela kwendabuko kwelinye lamapulazi awo awanqoba esicelweni somhlaba ngo-1999.

I-Mier Area, ehlanganisa i-Groot Mier, i-Klein Mier, i-Loubos, i-Rietfontein, i-Philandersbron, i- Andriesvale kanye ne-Askham, iyindawo enkulu yokulima imfuyo kanye nezilwane zasendle. Umasipala weMier unamahektha angama-30,000 wamapulazi ezilwane. Lawa kanye namanye amapulazi ezilwane ezifuywayo azimele ahlinzeka ngamathuba okuzingela futhi ahlinzeke ngezinsiza zokwenza i-biltong. I-Mier iphinde ibe nomzila we-4x4 osuka e-Rietfontein uye e- Pulai. Ukufuywa kwezimvu kubaluleke kakhulu ngezinkomo, izimbongolo, iminyuzi, izimbuzi kanye nezilwane zasendle njengemisebenzi yesibili yokulima endaweni. Ukuba kude kwendawo, ukuntuleka kukagesi kanye nokuhlinzekwa kwamanzi okulinganiselwe (kokubili ngobuningi nangokwekhwalithi) kunciphisa amathuba ebhizinisi. Indawo yase-Mier, njengengxenye yogwadule olukhulu lwe-Kalahari, ingahlukaniswa njengendawo engenamanzi. Ukuhlinzekwa kwamanzi kwezolimo kanye nangokwezinjongo zasekhaya, kwenzeka ngemigodi. Uhlelo lokuhlinzeka ngamanzi e-Kalahari East luhlinzeka ngamanzi endaweni yase- Mier esuka e-Upington. Ezingxenyeni ezinkulu ze-Mier Area awekho amanzi atholakalayo. Abanye abalimi kufanele bampompe amanzi ukuze bathole amasheya ngamapayipi noma bawathuthe ngomgwaqo ngamunye kanye namabanga amade nsuku zonke. Ukushoda kwamanzi angaphansi komhlaba kubangela ukuthi amapulazi angasetshenziswa kancane kwezomnotho futhi ngobuchwepheshe angahlelwa kahle. Amapulazi ase-Mier Area awakwazi ukusetshenziswa ngokwezomnotho, futhi emva kwalokho uphahla lubekwa emandleni emali engenayo yengqikithi yemboni yezolimo eMier (Dawid Kruiper IDP, 2018). Ukulethwa kwamanzi emigodini ephuma emigodini eya embonini yezolimo akwanele futhi nezinga lamanzi emigodini liphansi futhi alisebenziseki. Amadolobhana awanazo izinhlelo zokukhuculula indle ezanele nezisebenzayo. Ukuthuthwa kwendle emadolobheni ase-Mier kuqukethe ikakhulukazi izinhlelo zamabhakede, izinhlelo ze-VIP, kanye nezindlu zangasese zomgodi ezingathuthukisiwe, kuyilapho izindawo zasemadolobheni zihlinzekwa kakhulu ngezinhlelo ezishaywayo (Dawid Kruiper IDP, 2018).

**yase-Upington** iyomile kakhulu kodwa inhlabathi ivundile futhi izitshalo ezifana nezithelo zitshalwa emasimini aniselwayo. Le ndawo yaziwa kakhulu ngamagilebhisi, amagilebhisi kanye namawayini ekhwalithi yokuthekelisa kwamanye amazwe, atshalwa ezindaweni ezigcwele izikhukhula zomfula i-Orange River. Indawo esetshenziswa kakhulu endaweni ixhumene nokulima kwamagilebhisi kanye nezolimo ngasemfuleni iGariep (Orange River) kanye nokufuya kude nomfula. Inqwaba yemiklamo yamandla elanga iye yahlongozwa futhi isendaweni kanye nendawo yokuphehla amandla elanga i-Upington, okuyiplanti yokuqala ye- photovoltaic yelanga eNingizimu Afrika, yafakwa ngo-2016 futhi iyakwazi ukukhiqiza ngaphezu

kuka-20 GWh ngonyaka. Izindawo ezahlukahlukene ezizungeze i-Upington zihlukaniswa njengezindawo zokongiwa kwemvelo. I-Spitskop Nature Reserve, eyi-13 km enyakatho ye- Upington, icishe ibe amahektha ayizi-6 000 futhi isekela i-gemsbok, idube, i-springbok, intshe, i-eland, i-willebeest eluhlaza okwesibhakabhaka, kanye nezilwane ezincane. Imitapo yolwazi emine isebenzela umphakathi wase-Upington, isiteshi semishini esasungulwa ngo-1871 sineMnyuziyamu i-Kalahari Orange, enomfanekiso wezimbongolo ukuhlonipha iqhaza elenziwa isilwane ekuthuthukisweni kwesifunda ngezinsuku zokuqala zekhulu le-19. Amanzi okulima nawokusetshenziswa ekhaya athathwa emfuleni iOrange.

**I-Kuruman** iwumgogodla womsebenzi wezomnotho endaweni kaMasipala Wendawo yase-Ga- Segonyana futhi ibalulekile embonini yezimayini yesifunda esikhulu. Nakuba umncane noma ungekho umsebenzi wezimayini emingceleni yendawo kamasipala waseGa-Segonyana uqobo, i-manganese, insimbi, iso lengwe kanye namadiphozi e-asbestos aluhlaza akumbiwa ezindaweni zomasipala ezingomakhelwane. Umnotho odlondlobalayo eKuruman nasezindaweni ezizungezile usuyenze yaba isikhungo sezohwebo, izikhungo kanye nezindawo zokuhlala kule ndawo (Segonyana IDP, 2023). Imikhakha yamabhizinisi amancane nayo izotholakala ezindaweni zamakhosi, njengaseMaruping naseBatlharos. Ingxenye encane yamabhizinisi emakhaya nayo izotholakala kuyo yonke indawo kamasipala futhi ziyanda ama- tuck shops, amahhovisi kanye nezakhamuzi ezisebenzela emakhaya zingatholakala. Umkhakha wezolimo nowezokuthutha kanye nezokuxhumana uqashe abantu abaningi. Umkhakha kahulumeni, kanye nemikhakha yomphakathi kanye nezinsizakalo zezenhlalakahle nazo zineqhaza elibalulekile. Kodwa-ke, ubumpofu endaweni bubangelwa yizici ezimbili, okuyizinga eliphezulu labantu abangasebenzi kanye neqiniso lokuthi ikakhulukazi yimisebenzi eyisisekelo edala amathuba emisebenzi. Umasipala Wendawo yase-Ga-Segonyana waziwa ngemithombo yawo yemvelo ewunikeza ithuba lokuncintisana kanye nokuqhathaniswa emanzini, izimayini, ezokuvakasha kanye nezolimo. Umfula iKuruman udlula amapulazi azungezile; ngaleyo ndlela ihlinzeke ngomthombo ovikelekile wamanzi wokulima emakhaya, ezolimo kanye nemfuyo. Umsebenzi wezimayini ube nembangela yokukhula komnotho kwakamuva. Ngaphandle kwezimayini, ezolimo (izinkomo nezilwane) zisekela umnotho wedolobha. Okungeziwe kulokhu yizokuvakasha, ikakhulukazi ezokuvakasha zamabhizinisi ezihehwa ukukhula kwezimayini. Ngakho-ke imboni yezokuvakasha ingalindelwa ukuthi iqhubeke nokukhula iqiniswa ukuzingela kanye ne-eco-tourism. Indawo yaseKuruman ibhekene nokukhula kwezokuvakasha okuhlobene nezilwane okugcizelela ngokukhethekile ukuzingela. Umasipala waseGa-Segonyana unomphakathi omkhulu wasemakhaya (amaphesenti angama-80 abantu) onomphakathi omkhulu wabalimi oseningizimu yeKuruman kanye nendawo yesizwe esenyakatho yeKuruman .(IDP yaseSegonyane, 2023). Iningi lemiphakathi engaphakathi kwe-GLM ithola amanzi mahhala. Kuyo yonke imizi, u-6.6% kuphela okwazi ukuthola amanzi ngamapayipi ezindaweni zokuhlala noma egcekeni. Ngokobalo-bantu luka-2011, u-71.7% wamanzi wawuthola kubahlinzeki bezinsizakalo zamanzi (umasipala noma omunye), u-15.6% wasebenzisa amanzi agelezayo kwathi u-5.8% wathola amanzi ngeloli elithwala amanzi. Iningi labantu lisebenzisa izindlu zangasese zemigodi (ama-40.3% anezindlu zokungena komoya kanye nama-36.7% angenawo umoya), u-10.3% wabantu abanazo izindlu zangasese, kanti u-6% uxhumeke ohlelweni lokukhuculula indle (DMR, 2012). Ukuphuzwa ngokweqile kotshwala nobugebengu obuhlobene notshwala, kanye nokuluthwa utshwala emiphakathini kuyinselelo enkulu endaweni (Mpani, 2015). I-Kuruman inesibalo esiphezulu

sezakhamuzi eziphothule u-matric futhi ezineziqu eziphakeme, futhi abantu abadala abangaphezudlwana kwengxenye eyodwa kwezintathu yabantu abadala abanesitifiketi sikamatikuletsheni (Stats SA, 2017). Ngakho-ke amazinga emfundo aphakathi kodwa anendawo enkulu yokwenza ngcono.

**I-Springbok** iyisikhungo esikhulu sezohwebo nokuphatha sezimayini zethusi esifundeni. Imboni yezimayini inegalelo elikhulu ekudaleni amathuba emisebenzi nasekukhuleni komnotho kanye nomkhakha wezokuvakasha (Umbiko Wonyaka wama-Nama Khoi, wezi-2024) kanye nomkhakha kahulumeni (i-Savannah Environmental, 2023). Nokho ukuntuleka kwemisebenzi ikakhulukazi entsheni kuyinselelo ebhekene nale ndawo. Ukuphakelwa kwamanzi kamasipala edolobheni laseSpringbok kungamalitha ayi-11,000 kuya kweziyi-12,000 ngosuku atholakala emigodini eminingi emanzini angaphansi komhlaba. IGoegap Reserve ilinganiselwa kumahektha ayi-15,000 ngobukhulu futhi ingamakhilomitha ayi-15 ukuya eningizimu- mpumalanga yeSpringbok. Iqukethe ama-granite koppies namathafa anesihlabathi.

Izindawo zase-Upington kanye nezaseSpringbok zingena ngaphansi Kwezindawo Zokuthuthukiswa Kwamandla Avuselelwayo, ezimenyezelwe ku-DFFE ngowezi-2018. Amandla avuselelekayo ahlinzeka ngokuhlukahluka okudingeka kakhulu kokuphehlwa kukagesi eNingizimu Afrika, nokho kuyaqashelwa ukuthi izikhungo zamandla avuselelekayo zingaba nomthelela omubi ezinhlobonhlobo zezinto eziphilayo (DFFE, 2019).

## Umongo we-Biophysical

Indawo yephrojekthi ezungeze i-Klein Mier iseduze ne-Kgalakgadi Transfrontier Park, indawo yokongiwa kwemvelo enkulu kunazo zonke emhlabeni. Lezi zindawo ezikhethiwe zimbozwe kumephu yokusatshalaliswa kwendawo ye-Harpagophytum procumbens (Devil's Claw) emfanekisweni ongezansi.



**Umfanekiso 3 ‑ 2: Izindawo zephrojekthi ezembozwe ekusabalaliseni ngokwezwe kwe *-Harpagophytum procumbens* (Devil's Claw) eNingizimu Afrika (ithathwe ku: Mowa & Maas, 2013)**

I-Devil's Claw isatshalaliswe kakhulu e-Afrika futhi ingatholakala e-Angola, Botswana, Mozambique, Namibia, South Africa, Zambia naseZimbabwe. ENingizimu Afrika lolu hlobo

lwezilwane lutholakala eNyakatho Kapa, eNyakatho Ntshonalanga, eFreyistata naseLimpopo futhi abantu abaningi batholakala ezindaweni eziphethwe umphakathi esifundazweni saseNyakatho Ntshonalanga kanye nezingxenyeni ezisenyakatho-mpumalanga yeNyakatho Kapa. Izinhlobo ezisabalele kakhulu futhi eziningi, ezinezinga lokuvela (EOO) elingaphezu kuka-400 000 km². Ukuvunwa ngenjongo yokuhwebelana ngemithi yamazwe ngamazwe njengamanje kuthinta kuphela ingxenye encane yenani labantu baseNingizimu Afrika (<2%). Izitshalo ziyalulama ekuvuneni futhi lolu hlobo lwamavulandlela luyachuma ezindaweni ezidliwe ngokweqile neziphazamisekile. Ngakho-ke inani labantu lizinzile futhi alikho engozini. Ngakho- ke kuhlolwa njengokukhathazeka Okuncane (Raimondo et al., 2012). I-Devil's Claw plant iyisitshalo esihlala isikhathi eside, esimila minyaka yonke esigabeni esine-tuber primary lapho kwakhiwa khona izigaxa zesibili. Izilimo eziyizigaxa zesibili zivunwa ngezinhloso zokwelapha njengoba ziqukethe izithako ezisebenzayo ezine-analgesic kanye ne-anti-inflammatory properties. I-Devil's Claw inezindawo zokwelapha ezibalulekile futhi okwamanje uhwebo olukhulu ngezilimo eziyizigaxa zezitshalo ezomisiwe zenzeka. Abantu bomdabu baseSan namaKhoi aseningizimu ne-Afrika basebenzise izigaxa zeDevil's Claw ngezinhloso zokwelapha amakhulu eminyaka (Fell, 2002, Gxaba, & Manganyi, 2022).

Izindawo zephrojekthi ezikhethiwe ze-Kanna/Kougoed zimbozwe kumephu yokusatshalaliswa kwendawo ye- *Sceletium tortuosum* esithombeni esingezansi.

A map of south africa with different colored areas

Description automatically generated

**Umfanekiso 3 ‑ 3: Ukusatshalaliswa kwendawo ye *-Sceletium tortuosum (kanna noma kougoed) eNingizimu Afrika. (Umthombo:*** [***https://sceletium.com/sceletium-botany/***](https://sceletium.com/sceletium-botany/) ***.)***

I-Kanna noma i-kougoed isitshalo esinamanzi, esiqhakaza, esidabuka eNingizimu Afrika. Lolu hlobo lutholakala ezifundazweni zaseNyakatho, eNtshonalanga kanye naseMpumalanga Kapa eNingizimu Afrika, lapho lusuka eNamaqualand ukuya eMontagu nase-Aberdeen. Lolu hlobo lusabalele futhi luvela ngokujwayelekile ezingxenyeni eziningi zobubanzi balo, nokho isibalo sabantu kusolakala ukuthi sehla ngenani eliphansi ngenxa yokuvunwa ukuze sisetshenziswe njengomuthi (Raimondo et al., 2023). Lesi sitshalo saziwa ngokwesiko ngekhono laso lokuphakamisa imizwa, ukunciphisa ingcindezi, ukushuba, ukulwa nokukhathazeka kanye nezici zaso ezinokuthula. Iphinde isetshenziselwe izifo ezifana nezinhlungu zesisu, amazinyo, futhi abanye abantu bayahlafuna, bayabhema, noma bayisebenzise njengetiye noma isinemfu ikakhulukazi ukucindezela. Imiphumela yomtholampilo ye-antidepressant ne-anxiolytic ye *-S. tortuosum* itholwe kokubili kumibiko yecala kanye nezifundo ezingaboni kabili. Amarekhodi e- anecdotal aveza ukuthi abantu baseKhoikhoi nabamaSan basebenzise lesi sitshalo kusukela ezikhathini zasendulo njengengxenye ebalulekile yesiko lendabuko kanye ne-materia mediac.

Abaqoqi babazingeli kanye nabelusi basebenzise *i-S. tortuosum* ukuze babekezelele ukuhlaselwa kokuzingela kanye nokulawula ingcindezi ehambisana nokuhlala ezindaweni ezomile neziyinselelo ezweni lamaBushman, eNamaqualand, naseKaroo (Manganya et al., 2021).

Izindawo zephrojekthi ezikhethiwe ze-cancerbush zimbozwe ebalazweni lokusatshalaliswa kwendawo *Lessertia frutescens* emfanekisweni ongezansi.

A map of south africa with green text

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## Umfanekiso 3 ‑ 4: Izindawo zephrojekthi ezembozwe ekusabalaleni ngokwendawo kwe- *Lessertia frutescens* (Cancerbush) eNingizimu Afrika (ithathwe ku: Mncwangia et al., 2023)

I-Cancerbush ivela ngokwemvelo kuzo zonke izingxenye ezomile eningizimu ye-Afrika - eNtshonalanga Kapa futhi ikhuphuke ogwini olusentshonalanga kuze kufike enyakatho eNamibia naseBotswana, nasentshonalanga yeKaroo ukuya eMpumalanga Kapa. Itholakala KwaZulu-Natal naseMpumalanga. Sekuyisikhathi eside saziwa, sisetshenziswa futhi sihlonishwa njengesitshalo sokwelapha eningizimu ye-Afrika. Izakhamuzi zokuqala zaseKapa, abantu baseKhoi San kanye namaNama, babewusebenzisa kakhulu njengesiphuzo sokugeza amanxeba futhi bakufaka ngaphakathi ukuze behlise imfiva. Amakholoni okuqala ayekubheka njengokunikeza imiphumela ephumelelayo ekwelapheni upokisi, izinkinga zesisu, nokwelapha umdlavuza wangaphakathi. Kuyaziwa futhi ukuthi ibisetshenziswa ekwelapheni izifo zamehlo, amehlo egezwa nge-decoction yesitshalo. Isaqhubeka nokusetshenziswa nanamuhla njengekhambi lalezi zifo ezibalwe ngenhla. Isasetshenziswa njengendawo yokugeza izilonda, ukwehlisa imfiva, ukwelapha i-chicken pox, umdlavuza wangaphakathi, kanti abasebenzi basemapulazini eKapa basayisebenzisa ukwelapha izinkinga zamehlo. Isetshenziselwa futhi ukwelapha imikhuhlane, 'umkhuhlane, isifuba somoya, i-TB, i-bronchitis, i-rheumatism, i- rheumatoid arthritis kanye ne-osteo-arthritis, izinkinga zesibindi, ama-hemorrhoids, ama-piles, isinye, isibeletho & nezikhalazo 'zabesifazane', isifo sohudo & nesifo sohudo, izifo zesisu, isilungulela. , izilonda ze-peptic, i-backache, isifo sikashukela, i-varicose veins nokuvuvukala. Ibuye isetshenziselwe ekwelapheni ukucindezelwa kwengqondo nemizwa, okuhlanganisa ukucasuka, ukukhathazeka nokucindezeleka futhi isetshenziswa njengesithambiso esimnene. Kuthiwa i-tonic ebabayo ewusizo nokuthi kancane ethathwe ngaphambi kokudla kuzosiza ukugaya futhi kuthuthukise isifiso sokudla. Kubhekwa njengomuthi omuhle jikelele. Okwamanje akukho ukusekelwa kwesayensi kwezimangalo eziningi kanye nama-anecdotes okuthi lesi sitshalo singakwazi ukwelapha umdlavuza, kodwa kunobufakazi bokuqala bomtholampilo bokuthi sinomthelela oqondile wokulwa nomdlavuza kweminye imidlavuza nokuthi sisebenza njengesikhuthazi sokuzivikela ezifweni .

* + 1. *Imithelela Yenhlalo Nemvelo*

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| --- | --- | --- | --- | --- | --- |
| **Ingozi** | **Incazelo** | **I-UNDP SES** | **Umsebenzi wethula**  **ubungozi** | **Ububanzi** | **Isilinganiso** |
| **Ingcuphe 1-** I- | **Umcimbi:** The usizo | **Isimiso Ungashiyi** | * Ukuklama insizakalo yokweseka kumaphrojekthi womphakathi lapho ama- BMP ahlukahlukene azodluliselwa khona njalo. * Khiqiza izithombo ezizothengiswa/ukuphakele amaphrojekthi omphakathi | Zonke | Kuphakathi |
| Nequitable i mpacts | lokusekela amaphrojekthi | **Umuntu Ngemva** | izindawo | mina = 3 |
| emaqenjini a -m | omphakathi ngokusebenzisa | P.5, P.7,P.8,P.10 | ezihlosiwe | L = 3 |
| arginallyized g roups , | Ihabhu lokutshalwa , | kanye no-P.11 |  |  |
| kuhlanganise | ukuvunwa kanye |  |  |  |
| nabesifazane. | nokucutshungulwa kwe- |  |  |  |
|  | Devil's claw kuzodluliswa |  |  |  |
|  | kungase kubangele imithelela |  |  |  |
|  | engalingani noma |  |  |  |
|  | ebandlululayo kubantu |  |  |  |
|  | bamaSan, intsha, |  |  |  |
|  | nabesifazane kanye namanye |  |  |  |
|  | amaqembu asengozini. |  |  |  |
|  | **Imbangela:** |  |  |  |
|  | Ukungacatshangwa |  |  |  |
|  | okwanele |  |  |  |
|  | kokushintshashintsha |  |  |  |
|  | kwezenhlalo kanye nezindima |  |  |  |
|  | zobulili ekulinyweni , |  |  |  |
|  | ukuvunwa kanye |  |  |  |
|  | nokucutshungulwa kwe- |  |  |  |
|  | Devil's claw , okuholela |  |  |  |
|  | emikhawulweni kubantu |  |  |  |
|  | bamaSan, abesifazane, kanye |  |  |  |
|  | namanye amaqembu |  |  |  |
|  | asengozini yokuthola usizo. |  |  |  |

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|  | **Umthelela:** Abantu bakwaSan, intsha, nabesifazane kanye namanye amaqembu asengozini. ingase ibhekane nokungalingani okwengeziwe ekufinyeleleni izinzuzo ngaphansi |  |  |  |  |
| **Ubungozi 2- Ingozi** | **Umcimbi:** Ukuxhumana | **Isimiso Ungashiyi** | * Ukuklama insizakalo yokweseka kumaphrojekthi womphakathi lapho ama- BMP ahlukahlukene azodluliselwa khona njalo. * Khiqiza izithombo ezizothengiswa/ukuphakele amaphrojekthi omphakathi | Zonke | Phezulu |
| **yokuxhumana** | okunganele kwemiphakathi | **Umuntu Ngemva** P.2 | izindawo | mina = 4 |
| **okunganele**  **nemiphakathi** | ezinqumweni zephrojekthi  ezithinta yona. | kanye no-P.13 | ezihlosiwe | L = 5 |
| **ezuzayo ku-Hub** |  |  |  |  |
|  | **Imbangela:** Ukuxoxisana |  |  |  |
|  | ngendlela eyanele futhi |  |  |  |
|  | okungenzeka |  |  |  |
|  | ngokungalungile ukuze |  |  |  |
|  | kutholwe imisebenzi yesevisi |  |  |  |
|  | yokweseka ehlinzekwa yi- |  |  |  |
|  | Hub kumaphrojekthi |  |  |  |
|  | omphakathi asekelwe |  |  |  |
|  | ekuphathweni okungcono |  |  |  |
|  | kakhulu kokutshalwa kwe- |  |  |  |
|  | Devil's claw, ukucubungula |  |  |  |
|  | nokumaketha kanye |  |  |  |
|  | nokufinyelela kwezithombo. |  |  |  |
|  | **Imithelela:** |  |  |  |

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| --- | --- | --- | --- | --- | --- |
|  | * Ukuguguleka kokuthembana phakathi kwamabhizinisi omphakathi . * encishisiwe yephrojekthi yomphakathi esekelwayo. * Ukubandlululwa ekutholeni izinsiza zokusekela kanye nezithombo emaqenjini   ahlonziwe. |  |  |  |  |
| **Ubungozi 3- Ukukhathazeka noma izikhalo eziphakanyiswe abamukeli ababambiqhaza obizweni lwesiphakamiso olungasingathwanga ngendlela efanele.** | **Umcimbi:** Ababambiqhaza, kokubili imiphakathi kanye nabasebenzi be-Hub, babhekana nezinselele ekufuneni amalungelo ngokuphumelelayo, ukuveza ukukhathazeka, noma ukufaka izikhalazo.  **Imbangela:** Ababambiqhaza bangabhekana nezinkinga b kanye nezici ezikhawulelayo ezihlanganisa:   * Ukuntula ulwazi lwezinqubo zokuphakamisa isikhalo * Izinselele zokungena. | Isimiso Sokuziphendulela: P.14, P.15 | Yonke imisebenzi | Zonke izindawo ezihlosiwe | Phezulu mina = 5  L = 5 |

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|  | * Umehluko wolimi, amasiko, nokufunda. * Ukufinyelela okulinganiselwe noma ukujwayelana nobuchwepheshe obudingekayo.   **Imithelela:**   * Ukuguguleka kokuthembana nokusebenzisana. * Isizukulwane/ukwanda kwezingxabano * Ukwephulwa komthetho akubikwanga. |  |  |  |  |
| **Ubungozi 4 - Ukungathobeli imithetho yezemvelo kanye nokungqubuzana okungaba khona kwamazwe ngamazwe mayelana nemvelaphi yozipho lukaDeveli olungaqinisekisiwe** | **Umcimbi:** Ukungathobeli imithetho yemvelo kanye nokungqubuzana kwamazwe ngamazwe okungaba khona ngenxa yemvelaphi yozipho lukaDeveli olungaqinisekisiwe  **Imbangela:** Ukutshala nokusabalalisa i-Devil's Claw ngaphandle kokugunyazwa kwangaphambili kwemvelo  **Imithelela:** | **Izinga 1. Ukongiwa kwezinhlobonhlobo zezinto eziphilayo kanye ne-NRM S**  1.13 esimeme | * Thola izimvume ezidingekayo kanye nokugunyazwa s~~z~~kokusungulwa, kweHub * Dala uhlelo locwaningo lweminyaka emi-3 lweqoqo lezinhlobo ezibalulekile ezihlanganisa iDevil's Claw kanye nohlobo olulodwa okungenani olulodwa olungatshalwa ngokuhlanganyela   neDevil's Claw |  | Kuphakathi mina = 3  L = 3 |

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|  | * Izingozi ezingokomthetho, okuhlanganisa izinhlawulo nokubambezeleka kwephrojekthi. * Ukulimala kwesithunzi nokulahlekelwa ukwethembana phakathi   kwababambe iqhaza. |  | kumaphrojekthi omphakathi.   * Sebenzisa uhlelo locwaningo lweminyaka emi-3 |  |  |
| **Ubungozi 5 - Ukungaphathwa kahle amagugu amasiko ngenxa yokulinywa kwezentengiso** | **Umcimbi:** Ukubukela phansi ulwazi lwendabuko lwe- Devil's claw, kuhlanganise nolwazi lwendabuko lwabantu baseSan  **Imbangela: Ukushoda kwephrothokholi yokuthi** ulwazi lwendabuko lusetshenziswa kanjani **ocwaningweni nasekuthuthukisweni kwezentengiso kweDevil's Claw** .  **Imithelela:**   * Izingxabano zokusebenzisa izinzipho zikasathane ezinhlelweni zomphakathi . | **Izinga lesi-4: Amagugu Ezamasiko,** 4.5 | * Yakha izindlela zokuphatha ezingcono kakhulu (BMPs) zokulima nokuvuna (izindlela zokuhlola, amasu kanye nezindlela) zohlobo ngalunye. * Thuthukisa izinqubo zokuphatha ezihamba phambili (ama-BMP) zokwesekwa kokucubungula kwezolimo kanye nokulawulwa kwekhwalithi yokusetshenziswa komkhiqizo uhlobo ngalunye |  | Kuphakathi mina = 3  L = 3 |

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|  | * Ukuphazamiseka kwe- ecosystem kulandela ukusakazwa . |  |  |  |  |
| **Ubungozi 6 -Abantu baseSan bangase bathinteke kabi ngokusetshenziswa kwemisebenzi, okuhlanganisa Imvume Yamahhala Yangaphambili Enolwazi (i-FPIC) engatholwanga ngendlela efanele.** | **Umcimbi:** Ukusetshenziswa kolwazi lwendabuko lwezinzipho zikaDeveli akunaki imithelela engemihle engaba khona kubantu baseSan  **Imbangela:** Ukwehluleka ukwenza ukubonisana ngokuhambisana nezivumelwano zemvume yamahhala, yangaphambili, kanye nenolwazi (FPIC) ngemisebenzi ethinta amalungelo, imihlaba, izinsiza, kanye nemikhuba yamasiko yama-San eNyakatho Kapa.  **Imithelela:**   * Ukuphazamiseka kwezindawo zamaSan, ukufinyelela ezinsizeni, kanye nemikhuba yamasiko. * Izingxabano ezingaba khona kanye nokuncipha   kokuthembana | **Izinga lesi-6: Abantu Bomdabu** 6.1, 6.2, 6.3, 6.4, 6.5  kanye no-6.7 | * Yakha izindlela zokuphatha ezingcono kakhulu (BMPs) zokulima nokuvuna (izindlela zokuhlola, amasu kanye nezindlela) zohlobo ngalunye. * Thuthukisa izinqubo zokuphatha ezihamba phambili (ama-BMP) zokwesekwa kokucubungula kwezolimo kanye nokulawulwa kwekhwalithi yokusetshenziswa komkhiqizo uhlobo ngalunye |  | Okukhulu mina = 4  L = 4 |

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|  | emisebenzini yephrojekthi . |  |  |  |  |
| **Ubungozi 7 - Ukungahloniphi okungaba khona kwabasebenzi nezimo zokusebenza** | **Umcimbi:** Ukungathobeli izimo zokusebenza ezinobulungiswa kanye namazinga ezempilo nokuphepha emsebenzini kwabasebenzi abahilelekile ekutshalweni kwe-Devil's Claw esikhungweni .  **Imbangela:** Isikhungo esibandakanyekayo ekulinyweni kweDevil's Claw ayinazo izinhlelo ezikhona zokuqinisekisa ukuthotshelwa komthetho wezabasebenzi kubasebenzi bayo.  **Imithelela:**   * Ukwephulwa kwemithetho nezimiso zabasebenzi. * Ukwanda kwengozi yezingozi emsebenzini, ukuhlukunyezwa, nezimo zokusebenza ezingaphephile. * Izindlela zokukhokha ezingalungile noma ezingekho   emthethweni, | **Izinga lesi-7: Izimo zomsebenzi nezimo zokusebenza** P.7.1, 7.2, 7.3, 7.4, 7.5, 7.6 | * Thola izimvume ezidingekayo kanye nokugunyazwa s~~z~~kokusungulwa, kweHub * Dala uhlelo locwaningo lweminyaka emi-3 lweqoqo lezinhlobo ezibalulekile ezihlanganisa iDevil's Claw kanye nohlobo olulodwa okungenani olulodwa olungatshalwa ngokuhlanganyela neDevil's Claw kumaphrojekthi omphakathi. * Sebenzisa uhlelo locwaningo lweminyaka emi-3 |  | S ubstantly mina = 4  L = 3 |

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|  | eziholela ekunganeliseki kwabasebenzi kanye nezinselele zomthetho ezingaba khona. |  |  |  |  |
| **Ubungozi 13 – Ukungcoliswa okungaba khona kwe-ecosystem kanye nokusetshenziswa kwamandla ukuze kutshalwe i-Devil's Claw.** | **Umcimbi:** Ukulimala okungaba khona kwemvelo okuhlobene nokutshalwa kweDevil 's Claw.  **Imbangela:** Ukusetshenziswa okungaba khona kwezibulala- zinambuzane, ukudalwa kwemfucuza, kanye nokusetshenziswa ngokweqile kwezinsiza ngesikhathi kutshalwa i- Devil's Claw eNyakatho Kapa.  **Imithelela:**   * Ukungcoliswa komhlabathi, amanzi nomoya, okuholela ekulimaleni kwemvelo. | **Izinga lesi-8: Ukuvinjelwa Kokungcola kanye Nezinsizakusebenza** P8.1, 8.2, 8.5 kanye  8.6 | * Thola izimvume ezidingekayo kanye nokugunyazwa s~~z~~kokusungulwa, kweHub * Dala uhlelo locwaningo lweminyaka emi-3 lweqoqo lezinhlobo ezibalulekile ezihlanganisa iDevil's Claw kanye nohlobo olulodwa okungenani olulodwa olungatshalwa ngokuhlanganyela neDevil's Claw kumaphrojekthi omphakathi. * Sebenzisa uhlelo locwaningo lweminyaka emi-3 |  | Kuphakathi mina = 3  L = 4 |

## Umphumela 2.1 Ukuqaliswa kokusebenza kwe-Pelargonium Biodiversity Management Plan (BMP) kusekelwa ngokubambisana phakathi kweQembu Elisebenzayo lePelargonium, amabhizinisi omphakathi kanye nababambiqhaza be-CSO.

* + 1. *Imisebenzi yokuphuma*

Umphumela 2.1 uhlose ukusekela ukuqaliswa kwe-Pelargonium Biodiversity Management Plan (BMP) ngokubambisana okukhulu phakathi kweQembu Elisebenzayo lePelargonium, amabhizinisi omphakathi kanye nababambiqhaza be-CSO.

1. BMP izobuyekezwa ngokwakhiwa kwamadokhumenti adingekayo. Amadokhumenti okokufaka azothuthukiswa ahlanganisa lokhu okulandelayo:
   1. I-Non-Detriment Finding (NDF) ehlola ukusimama kokuvunwa kwezinhlobo zasendle. Lokhu kubandakanya ukuhlola ukongiwa komhlaba wonke. Lokhu okukhiphayo kudinga ukubonisana okubanzi kanye neworkshop nochwepheshe ababalulekile bezobuchwepheshe kanye nabaphathi bolwazi.
   2. Ukuhlolwa Kwensiza (RA) okuhlola izinga labantu basendle. Lokhu kuzokwenziwa ngokuthengwa kwe-Capensis Botanical Services
   3. Ucwaningo lwe-ethnobotanical. Lolu cwaningo luzoveza ukuxhumana imiphakathi yendawo enakho nezinhlobo zezilwane. Lokhu kuzothuthukiswa ngumfundi wePhD obhalise eNyuvesi yaseKapa egxile emiphakathini yaseNingizimu Afrika kanye naseLesotho.
   4. Ukuhlaziywa kwezenhlalo-mnotho. Lokhu kuzothuthukiswa ngumfundi wePhD obhalise eNyuvesi yaseKapa egxile emiphakathini yaseNingizimu Afrika kanye naseLesotho.
   5. Ukuhlaziywa kochungechunge lwenani, kokubili kwasekhaya nakwamanye amazwe, okuzokwenziwa yi-Traffic Europe.

Le mibhalo izofaka okokufaka okubalulekile ekubuyekezweni kwe-BMP. Ukubuyekezwa kwe- BMP kuzokwenziwa ngokubambisana nePelargonium Working Group (PWG).

Umphumela uzobandakanya ukwakhiwa kwemihlahlandlela yokuvuna esimeme ye-P. sidoides ezosetshenziselwa ukuqeqesha abavuni bendawo. Ukwakhiwa kwalo mbhalo kuzodinga imibono evela kubanikazi bolwazi abaningi bezobuchwepheshe kanye nabasendaweni.

Umphumela uzoqinisa ukuthobela kwe-ABS yendawo ngokusekela imiphakathi yendawo kanye nokuthembela ezingxoxweni nokuphathwa kwezinzuzo eziqoqiwe kanye nezinhlelo zokwabelana ngenzuzo. Lolu xhaso luzohlinzekwa ngokubambisana nophiko lwe-BABS kwa- DFFE ukuze kwenziwe le misebenzi ebalulekile elandelayo:

1. Ngokusebenzisa umeluleki onguchwepheshe oqokwe yi-TRAFFIC, sisekela abanikazi boLwazi Lwendabuko ukuthi babuyekeze futhi baxoxisane ngezivumelwano ze-ABS kanye nezivumelwano zokuhlinzeka ngokwakha umhlahlandlela we-Pelargonium sidoides Ukufinyelela Nokwabelana Ngenzuzo egxile kulezi zindawo ezibalulekile ezilandelayo:
2. Ukubuyekezwa kwe-ABS ye-P.sidoides ngokuhlobene nomthetho wamanje nobulili.
3. Thola izikhala nezinselele zohlelo lwe-P.sidoides ABS.
4. Khomba izindawo lapho kudingeka khona ukwesekwa okwengeziwe/ucwaningo lapho kuxoxwa ngezivumelwano.
5. Iyunithi ye-DFFE BABS izosiza ekwakhiweni kwalo mhlahlandlela ngokunikeza ulwazi kanye nemininingwane futhi izoqapha inqubekelaphambili yalo mphumela.
6. I-TRAFFIC kanye ne-DFFE bazokweseka imboni ukuthi yenze ukuqeqeshwa koMhlahlandlela Wokuvuna we *-P. sidoides* , ifaka izivumelwano ze-supply chain kanye nezimakethe. Ngalolu qeqesho, abavuni bazonikezwa amandla okunikeza ulwazi mayelana nokuhlangana phakathi kwezokongiwa kwemvelo kanye nebhizinisi kanye nendlela uchungechunge lokuhlinzekwa kwe- *P . sidoides* oluphathwa ngayo
   * 1. *Isisekelo*

## Indawo yephrojekthi

Lesi sifundazwe sasungulwa ngo-1994 ngokuhlanganisa amaBantustan amabili (iTranskei neCiskei) neSifundazwe saseKapa. It is mainly “Xhosa land” with diverse Xhosa culture which tribes include AmaMpondo, AbaThembu, AmaMpondomise, AmaHlubi, AmaBhaca, AmaXesibe, and AmaBomvana. Isibalo sabantu bakulesi sifundazwe singu-85.7% abamnyama, 7.6% amaKhaladi, 5.6% abaMhlophe kanye no-0.5% wamaNdiya. IsiXhosa siwulimi oluhamba phambili (81.8%) kulandele isiBhunu (9.6%) bese kuba isiNgisi (4.8%). I-Eastern Cape ithathwa njengengesinye sezifundazwe ezihlwempu kakhulu kanti ezolimo yizona ezihamba phambili kwezomnotho.

E-Eastern Cape Output 2.1 yephrojekthi isetshenziswa emiphakathini ekhethiwe yase- Hanover, Mlungisi, Cathcart, Sawutana, Tshazibane, kanye neMbiza. Lezi zincazelo ezilandelayo ze-biophysical kanye nenhlalo-mnotho zisebenza ezifundeni ezizungeze lezi zindawo, njengoba indawo yokugxilisa ingqondo ayikhawulelwe emphakathini, futhi cishe ayisekho endaweni eduzane nezindawo zokuhlala.

A map of the south africa

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Figure . General location of Output 2.1 sites across the Eastern Cape Province

## Izimo zenhlalo-mnotho

Although this output is implemented in the Eastern Cape, the exact sites differe significantly in terms of their respective socio-economic conditions. Hanover is located in Buffalo City Metropolitan while the rest of the sites are located in the Amathole District Municipality (whose relevant local municipalities are Amahlathi and Mquma). The discussion below is presented with respect to their respective municipalities.

Subsequent to 1994, there was an amalgamation of various areas, some of which belonged to the Bantustants while others were urban South Africa. Most areas in the Amathole District Municipality belonged to the Transkei and Ciskei. This historical context still expresses itself even today. Communities in these areas are rural and predominantly poor. As can be seen in the table below, the majority still to not enjoy the benefits that communities in previous South Africa enjoyed. A comparison between Buffalo City Metropolitan with the local municipalities under the Amathole District Municipality suggests this. Most people in these rural areas still practice subsistence farming, even though it is no longer productive.

The use of natural resources becomes an alternative subsistance mechanism. The selected sites are not the only ones that use *Perlagonium sidoides.* They are just a selected few on which the project can be implemented. Throughout the Eastern Cape, Perlagonium sidoides is one of the prefered trading natural resource.

Table: Population statistics of the municipalities in which Output 2.1 is located as per Census 2022

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Buffalo City Metropolitan | Amathole District | Amahlathi  Local Municipality | Mnquma Local Municipality |
| Total population | 975 255 | 871 601 | 115 703 | 232 993 |
|  |  |  |  |  |
| Young children (0- 14 years) | 24.8% | 29.3% | 27.8% | 29.9% |
| Working age population (15-64 years) | 67.4% | 60.4% | 62.7% | 59.3% |
| Elderly (65+ years) | 7.8% | 10.4$ | 9.5% | 10.8% |
| Dependency ratio | 48.3 | 65.7 | 59.4 | 68.7 |
| Sex ratio | 89.9 | 90.9 | 95.3 | 91.6 |
| No schooling (20+ years) | 4.1% | 9.2% | 7.1% | 7.6% |
| Higher education (20+ years) | 15.0% | 7.2% | 6.1% | 8.6% |
| Number of households | 268 438 | 241 612 | 33 621 | 65 221 |
| Average household size | 3.6 | 3.6 | 3.4 | 3.6 |
| Formal dwellings | 85.6% | 81.1% | 84.3% | 79.0% |
| Flush toilets connected to sewerage | 80.7% | 40.1% | 46.4% | 34.1% |
| Weekly refuse disposal service | 71.3% | 35.4% | 39.7% | 32.3% |
| Access to piped water in the dwelling | 65.7% | 34.6% | 38.3% | 33.3% |
| Electricity for lighting | 94.6% | 94.5% | 94.8% | 94.9% |

The beneficiaries for this output are the entire community of the Eastern Cape, not only the selected sites.

## Umongo we-Biophysical

*I-Pelargonium I-sidoides* iyindawo evamile yokuhlala futhi ivela ezindaweni ezinotshani eziphansi nasezihlahleni ezinesimo sezulu esishisayo esishisayo ngezikhathi ezithile zonyaka namazinga okushisa aphakathi nendawo aphakathi kokushisa okuphansi kuka-10-15°C okungu-17-22°C. Lesi sitshalo sithanda ilanga eligcwele, kodwa ezindaweni ezishisa kakhulu, kungase kudinge umthunzi oyingxenye ukuvimbela ukucindezeleka. Ikhetha inhlabathi

ephuma kahle ye-shale- noma ye-basalt. Lolu hlobo lutholakala endaweni ebanzi yokuphakama, ukusuka eduze kwezinga lolwandle ukuya kumamitha ayi-2,300 eLesotho. I- Pelargonium sidoides isebenzisa i-dormancy ukuze imelane nenkathi eyomile, ebandayo yasebusika.

* + 1. *Imithelela Yenhlalo Nemvelo*

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| --- | --- | --- | --- | --- | --- |
| **Ingozi** | **Incazelo** | **I-UNDP SES** | **Umsebenzi wethula**  **ubungozi** | **Ububanzi** | **Isilinganiso** |
| **Ingcuphe 1-** I- | **Umcimbi:** The usizo | **Isimiso Ungashiyi** | * Ukuklama insizakalo yokweseka kumaphrojekthi womphakathi lapho ama- BMP ahlukahlukene azodluliselwa khona njalo. * Khiqiza izithombo ezizothengiswa/ukuphakele amaphrojekthi omphakathi | Zonke | Kuphakathi |
| Nequitable i mpacts | lokweseka amaphrojekthi | **Umuntu Ngemva** | izindawo | mina = 3 |
| emaqenjini a -m | omphakathi lapho izindlela | P.5, P.7,P.8,P.10 | ezihlosiwe | L = 3 |
| arginallyized g roups , | zokuphatha ezingcono | kanye no-P.11 |  |  |
| kuhlanganise | kakhulu (BMPs) zokutshalwa , |  |  |  |
| nabesifazane. | ukuvunwa kanye |  |  |  |
|  | nokucutshungulwa kwe - |  |  |  |
|  | pergalonium zizodluliswa |  |  |  |
|  | kungase kubangele imithelela |  |  |  |
|  | engalungile noma |  |  |  |
|  | ebandlululayo kubantu |  |  |  |
|  | baseSan, abanikazi |  |  |  |
|  | abamnyama kanye |  |  |  |
|  | nabesifazane. |  |  |  |
|  | **Imbangela:** |  |  |  |
|  | Ukungacatshangelwa |  |  |  |
|  | okwanele kokuguquguquka |  |  |  |
|  | kwezenhlalo kanye neqhaza |  |  |  |
|  | lobulili ekulinyweni , |  |  |  |
|  | ukuvunwa kanye |  |  |  |
|  | nokucutshungulwa kwe - |  |  |  |
|  | pergalonium , okuholela |  |  |  |
|  | emikhawulweni kubantu |  |  |  |
|  | bamaSan, abesifazane, |  |  |  |
|  | abantu abamnyama kanye |  |  |  |

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|  | namanye amaqembu asengozini yokuthola usizo.  **Umthelela: AbakwaSan, b** ukuntula abesifazane kanye namanye amaqembu asengozini angase abhekane nokungalingani okukhulayo ekufinyeleleni ukusekelwa kanye nezithombo ezivela ku- Bioproducts Development Hub. |  |  |  |  |
| **Ubungozi 2- Ingozi** | **Umcimbi:** Ukungakhulumisani | **Isimiso Ungashiyi** | * Ukuklama insizakalo yokweseka kumaphrojekthi womphakathi lapho ama- BMP ahlukahlukene azodluliselwa khona njalo. * Khiqiza izithombo ezizothengiswa/ukuphakele amaphrojekthi omphakathi | Zonke | Phezulu |
| **yokuxhumana** | ngokwanele kwemiphakathi , | **Umuntu Ngemva** P.2 | izindawo | mina = 4 |
| **okunganele**  **nemiphakathi** | okuhlanganisa ukuvalelwa  ngaphandle kwamaSan, | kanye no-P.13 | ezihlosiwe | L = 5 |
| **ezuzayo ku-Hub** | abesifazane, abantu |  |  |  |
|  | abamnyama kanye namanye |  |  |  |
|  | amaqembu asengozini |  |  |  |
|  | ezinqumweni zephrojekthi |  |  |  |
|  | ezibathintayo. |  |  |  |
|  | **Imbangela:** Ukuxoxisana |  |  |  |
|  | ngendlela eyanele futhi |  |  |  |
|  | okungenzeka |  |  |  |
|  | ngokungalungile ukuze |  |  |  |
|  | kutholwe imisebenzi yesevisi |  |  |  |
|  | yokweseka ehlinzekwa yi-Hub |  |  |  |
|  | kumaphrojekthi omphakathi |  |  |  |

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| --- | --- | --- | --- | --- | --- |
|  | asekelwe ekuphathweni okungcono kakhulu kokutshalwa kwe-Devil's claw, ukucubungula nokumaketha kanye nokufinyelela kwezithombo.  **Imithelela:**   * Ukuguguleka kokuthembana phakathi kwamabhizinisi omphakathi . * encishisiwe yephrojekthi yomphakathi esekelwayo. * Ukubandlululwa ekutholeni izinsiza zokusekela kanye nezithombo emaqenjini   ahlonziwe. |  |  |  |  |
| **Ubungozi 3- Ukukhathazeka noma izikhalo eziphakanyiswe abamukeli ababambiqhaza obizweni lwesiphakamiso olungasingathwanga**  **ngendlela efanele.** | **Umcimbi:** Ababambiqhaza, kokubili imiphakathi kanye nabasebenzi be-Hub, babhekana nezinselele ekufuneni amalungelo ngokuphumelelayo, ukuveza ukukhathazeka, noma ukufaka izikhalazo.  **Imbangela:** Ababambiqhaza  bangabhekana nezinkinga b | Isimiso Sokuziphendulela: P.14, P.15 | Yonke imisebenzi | Zonke izindawo ezihlosiwe | Phezulu mina = 5  L = 5 |

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|  | kanye nezici ezikhawulelayo ezihlanganisa:   * Ukuntula ulwazi lwezinqubo zokuphakamisa isikhalo * Izinselele zokungena. * Umehluko wolimi, amasiko, nokufunda. * Ukufinyelela okulinganiselwe noma ukujwayelana nobuchwepheshe obudingekayo.   **Imithelela:**   * Ukuguguleka kokuthembana nokusebenzisana. * Isizukulwane/ukwanda kwezingxabano * Ukwephulwa komthetho akubikwanga. |  |  |  |  |
| **Ubungozi 4 - Ukungathobeli imithetho yezemvelo kanye nokungqubuzana okungaba khona** | **Umcimbi:** Ukungathobeli imithetho yemvelo kanye nokungqubuzana kwamazwe ngamazwe okungaba khona ngenxa yemvelaphi yozipho lukaDeveli olungaqinisekisiwe | **Izinga 1. Ukongiwa kwezinhlobonhlobo zezinto eziphilayo kanye ne-NRM S**  1.13 esimeme | * Thola izimvume ezidingekayo kanye nokugunyazwa kokusungulwa, kweHub * Dala uhlelo locwaningo   lweminyaka emi-3 lweqoqo |  | Kuphakathi mina = 3  L = 3 |

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| --- | --- | --- | --- | --- | --- |
| **kwamazwe ngamazwe mayelana nemvelaphi yozipho lukaDeveli olungaqinisekisiwe** | **Imbangela:** Ukutshala nokusabalalisa i-Devil's Claw ngaphandle kokugunyazwa kwangaphambili kwemvelo  **Imithelela:**   * Izingozi ezingokomthetho, okuhlanganisa izinhlawulo nokubambezeleka kwephrojekthi. * Ukulimala kwesithunzi nokulahlekelwa ukwethembana phakathi kwababambe   iqhaza. |  | lezinhlobo ezibalulekile ezihlanganisa iDevil's Claw kanye nohlobo olulodwa okungenani olulodwa olungatshalwa ngokuhlanganyela neDevil's Claw kumaphrojekthi omphakathi.   * Sebenzisa uhlelo locwaningo lweminyaka emi-3 |  |  |
| **Ubungozi 5 - Ukungaphathwa kahle amagugu amasiko ngenxa yokulinywa kwezentengiso** | **Umcimbi:** Ukubukela phansi ulwazi lwendabuko lwe-Devil's claw, kuhlanganise nolwazi lwendabuko lwabantu baseSan  **Imbangela: Ukushoda kwephrothokholi yokuthi** ulwazi lwendabuko lusetshenziswa kanjani **ocwaningweni nasekuthuthukisweni kwezentengiso kweDevil's Claw** . | **Izinga lesi-4: Amagugu Ezamasiko,** 4.5 | * Yakha izindlela zokuphatha ezingcono kakhulu (BMPs) zokulima nokuvuna (izindlela zokuhlola, amasu kanye nezindlela) zohlobo ngalunye. * Thuthukisa izinqubo zokuphatha ezihamba phambili (ama-BMP) zokwesekwa kokucubungula kwezolimo kanye nokulawulwa kwekhwalithi yokusetshenziswa |  | Kuphakathi mina = 3  L = 3 |

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|  | **Imithelela:**   * Izingxabano zokusebenzisa izinzipho zikasathane ezinhlelweni zomphakathi . * Ukuphazamiseka kwe- ecosystem kulandela   ukusakazwa . |  | komkhiqizo uhlobo ngalunye |  |  |
| **Ubungozi 6 -Abantu baseSan bangase bathinteke kabi ngokusetshenziswa kwemisebenzi, okuhlanganisa Imvume Yamahhala Yangaphambili Enolwazi (i-FPIC) engatholwanga ngendlela efanele.** | **Umcimbi:** Ukusetshenziswa kolwazi lwendabuko lwezinzipho zikaDeveli akunaki imithelela engemihle engaba khona kubantu baseSan  **Imbangela:** Ukwehluleka ukwenza ukubonisana ngokuhambisana nezivumelwano zemvume yamahhala, yangaphambili, kanye nenolwazi (FPIC) ngemisebenzi ethinta amalungelo, imihlaba, izinsiza, kanye nemikhuba yamasiko yama-San eNyakatho Kapa.  **Imithelela:**   * Ukuphazamiseka kwezindawo zamaSan, ukufinyelela ezinsizeni, | **Izinga lesi-6: Abantu Bomdabu** 6.1, 6.2, 6.3, 6.4, 6.5  kanye no-6.7 | * Yakha izindlela zokuphatha ezingcono kakhulu (BMPs) zokulima nokuvuna (izindlela zokuhlola, amasu kanye nezindlela) zohlobo ngalunye. * Thuthukisa izinqubo zokuphatha ezihamba phambili (ama-BMP) zokwesekwa kokucubungula kwezolimo kanye nokulawulwa kwekhwalithi yokusetshenziswa komkhiqizo uhlobo ngalunye |  | Okukhulu mina = 4  L = 4 |

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|  | kanye nemikhuba yamasiko.   * Izingxabano ezingaba khona kanye nokuncipha kokuthembana emisebenzini   yephrojekthi . |  |  |  |  |
| **Ubungozi 7 - Ukungahloniphi okungaba khona kwabasebenzi nezimo zokusebenza** | **Umcimbi:** Ukungathobeli izimo zokusebenza ezinobulungiswa kanye namazinga ezempilo nokuphepha emsebenzini kwabasebenzi abahilelekile ekutshalweni kwe-Devil's Claw esikhungweni .  **Imbangela:** Isikhungo esibandakanyekayo ekulinyweni kweDevil's Claw ayinazo izinhlelo ezikhona zokuqinisekisa ukuthotshelwa komthetho wezabasebenzi kubasebenzi bayo.  **Imithelela:**   * Ukwephulwa kwemithetho nezimiso zabasebenzi. * Ukwanda kwengozi yezingozi emsebenzini,   ukuhlukunyezwa, | **Izinga lesi-7: Izimo zomsebenzi nezimo zokusebenza** P.7.1, 7.2, 7.3, 7.4, 7.5, 7.6 | * Thola izimvume ezidingekayo kanye nokugunyazwa kokusungulwa, kweHub * Dala uhlelo locwaningo lweminyaka emi-3 lweqoqo lezinhlobo ezibalulekile ezihlanganisa iDevil's Claw kanye nohlobo olulodwa okungenani olulodwa olungatshalwa ngokuhlanganyela neDevil's Claw kumaphrojekthi omphakathi. * Sebenzisa uhlelo locwaningo lweminyaka emi-3 |  | S ubstantly mina = 4  L = 3 |

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|  | nezimo zokusebenza ezingaphephile.   * Izindlela zokukhokha ezingalungile noma ezingekho emthethweni, eziholela ekunganeliseki kwabasebenzi kanye nezinselele zomthetho   ezingaba khona. |  |  |  |  |
| **Ubungozi 8 – Ukungcoliswa okungaba khona kwe-ecosystem kanye nokusetshenziswa kwamandla ukuze kutshalwe i-Devil's Claw.** | **Umcimbi:** Ukulimala okungaba khona kwemvelo okuhlobene nokutshalwa kweDevil 's Claw.  **Imbangela:** Ukusetshenziswa okungaba khona kwezibulala- zinambuzane, ukudalwa kwemfucuza, kanye nokusetshenziswa ngokweqile kwezinsiza ngesikhathi kutshalwa i-Devil's Claw eNyakatho Kapa.  **Imithelela:**   * Ukungcoliswa komhlabathi, amanzi nomoya, okuholela ekulimaleni kwemvelo. | **Izinga lesi-8: Ukuvinjelwa Kokungcola kanye Nezinsizakusebenza** P8.1, 8.2, 8.5 kanye  8.6 | * Thola izimvume ezidingekayo kanye nokugunyazwa kokusungulwa, kweHub * Dala uhlelo locwaningo lweminyaka emi-3 lweqoqo lezinhlobo ezibalulekile ezihlanganisa iDevil's Claw kanye nohlobo olulodwa okungenani olulodwa olungatshalwa ngokuhlanganyela neDevil's Claw kumaphrojekthi omphakathi. * Sebenzisa uhlelo locwaningo lweminyaka emi-3 |  | Kuphakathi mina = 3  L = 4 |

## Okuphumayo 2.2 Ukuthuthukiswa kwendawo yokuvuna, ukucubungula kanye nokuhweba *kwe-Aloe ferox* eMpumalanga Kapa ukuze kuthuthukiswe ukwabelana ngenzuzo okusimeme nokulinganayo kulo lonke uchungechunge lwenani.

* + 1. *Imisebenzi yokuphuma*

*I-Aloe ferox* iyisitshalo sesibili esisetshenziswa kakhulu kwezohwebo eNingizimu Afrika (emva kwe-Rooibos), esinamajeli ababavayo nenhlaba akhishwa emaqabunga ezitshalo aphinde asetshenziswe ezimonyoni, emikhiqizweni yenhlanzeko, emikhiqizweni yokudla ekhiqizwayo, kanye nanjengemithi ehambisanayo. lesi sitshalo sisetshenziselwa ukuphulukisa isikhumba esiphukile kanye namanxeba ngokufaka ubisi endaweni ethintekile. Ulwazi lokusetshenziswa kokwelapha kwendabuko kwe-A. ferox seludlulisiwe futhi lwasetshenziswa ezimbonini ezivamile zemithi nezimonyo, zasekhaya nezamazwe ngamazwe, futhi selucwaningiwe kabanzi.

I-Aloe ferox isitshalo esinamanzi esinezimpande esingashoni, esiphila isikhathi eside esibonakala ngokuma okufana nesihlahla. Lesi sitshalo ngokuvamile sinesiqu esisodwa esigqokiswa isiketi samaqabunga omile esiphikelelayo, futhi singafinyelela ubude obungaphezu kuka-2m. Esiqwini esikhulu se-A. ferox kukhona ama-rosette amaqabunga amnandi akha isisekelo semboni ye-A. ferox ephumelelayo eNingizimu Afrika. Lesi sitshalo sitholakala e-Free State, KwaZulu-Natal, Eastern Cape naseWestern Cape Province. Kulinganiselwa ukuthi u-95% we-A. ferox uvunwa endle eNtshonalanga naseMpumalanga Kapa. Umbuso wokuvuna eMpumalanga naseNtshonalanga Kapa wehluka kakhulu, ngokuthi izitshalo zaseNtshonalanga Kapa zivunwa ezindaweni ezizimele, kuyilapho izitshalo zaseMpumalanga Kapa zivunwa ezindaweni zomphakathi ngemvume yomholi wendabuko (imvamisa eyiNduna). Indlela evamile yokuvuna i-A. ferox ukusika amaqabunga ngesandla. Amaqabunga ayisishiyagalombili kuya kwayishumi nanhlanu (noma ngaphezulu) amaqabunga aphansi omuntu omdala wezitshalo ze-A. ferox avunwa kanye ngonyaka. Amaqabunga asikwa ngesikela eduze nesiqu (3-4 cm) ngangokunokwenzeka.

A map of south africa with black text

Description automatically generated

Ukusatshalaliswa kwe-Aloe ferox

Nakuba izindlela zokudala zokuvunwa kwe-exudate nezindlela zokuzilungiselela zisaqhubeka nokusetshenziswa ngokulungiswa okumbalwa kwamanje, i-A. ferox esetshenziselwe ukuthengisa manje isisetshenziswa kakhulu emikhiqizweni yokudla ekhiqizwayo efana nengxube yeconfectionary nejusi yezithelo, kanye nasezimbonini zemithi nezimonyo. izindlela ezimbili eziyinhloko zokucubungula amaqabunga A. ferox asikiwe:

* Esokuqala sihlanganisa 'ukukhipha' inhlaba exudate emaqabunga asikiwe ngokubeka amaqabunga asikiwe 'esitaki' azungeze umgodi olayini wepulasitiki emhlabathini, nesiphetho esisikiwe sibheke maphakathi nesiyingi. Lokhu kuvumela uketshezi oluyinhloko olusuka 'ekuthepheni', ubisi 'lwenhlaba olubabayo' oluphuzi, ukuthi luphume eqabungeni ukuze luqoqwe futhi lucutshungulwe. Ukucutshungulwa kwencindi yenhlaba ebabayo kubandakanya ukubilisa ubisi ukuze kwehliswe umswakama ube ngaphansi kuka-6 %, ukukhiqiza 'indawo ebabayo'. Ama-aloe bitters abe esehwetshwa ngezindlela ezimbili: (i) i-crystalline 'gamp' concentrate (edayiswa njenge-aloe solid); kanye (ii) nama-bitters ayimpuphu (ahweba njengempushana yenhlaba), akhiqizwa ngokugaya inhlaba eyikristalu.
* Okwesibili kuhlanganisa ukuwasha nokubulala amagciwane eqabunga. Iphansi leqabunga liyanqunywa, futhi amaqabunga ashiywe ukuze "ophe" i-aloin (lena ingxenye yesitshalo eyaziwa ngokubaba kwayo kanye nomphumela wayo wokulalisa). Ngemva kwesikhathi esithile sokuvuza, inqubo iyaqhubeka ngokusika emaphethelweni ahlabayo amaqabunga nokusebenzisa umshini (isb umshini we-AGS) ukugoqa, nokuhlukanisa ijeli neqabunga. Ngemuva kokuthi i-gel isusiwe ezitshalweni iyahlungwa, i-homogenized, i-pasteurized futhi iqiniswe. Ngalezi zinqubo, ijeli iyashintsha isuke ekubeni sobala ibe umbala onsundu woju. Isinyathelo sokugcina ke ukugxilisa ijeli. Umphumela uba ijeli ye-Aloe ezinzile elungele ukusetshenziswa noma ukucutshungulwa okwengeziwe njengokugxilisa uketshezi noma ukwenza impushana.

Amasimu okutshalwa kwe-Aloe ferox - athatha uhlobo lwamasimu afana nezitshalo ane-A. ferox etshalwe futhi yatshalwa emigqeni noma emaqenjini - asanda kusungulwa esifundeni sase-Uniondale nase-Albertinia eNtshonalanga Kapa. Lokhu kwenza kube lula ukuthi abavuni/abacofayo bavune, futhi kunikeza nokulawula ikhwalithi engcono. Lezi zindawo zokulimela ukuhweba zitholakala. Nakuba ukuhlolwa kokutshalwa kwezinhlobo zezitshalo

eMpumalanga Kapa kwenziwe ezindaweni ezahlukene, okwamanje awekho amasimu okulima asemisiwe esifundazweni.

Imboni ye-A. ferox ihlinzeka ngezinzuzo ezibalulekile zezenhlalo nezomnotho eNingizimu Afrika, okuhlanganisa izinzuzo kubantu abampofu abathola imali ngokuvunwa kwezitshalo. Imboni iphinde yeseke amabhizinisi anhlobonhlobo ezweni, akhiqiza imikhiqizo ye-A. ferox emakethe yasekhaya neyamazwe ngamazwe. Ingxenye enkulu ye-A. ferox evunwa ukuze kuhwetshwe ngayo ingeyemakethe yokuthekelisa ngaphandle, enokucubungula okuncane kakhulu noma okuphakeme eNingizimu Afrika. Inzuzo yemboni ye-A. ferox ikhulise inzalo evela kuhulumeni nezinhlangano zentuthuko ezifuna amathuba okuthuthukiswa kwamabhizinisi ezingeni lendawo ukuze kuliwe nobubha ezindaweni zasemakhaya.

Kulo mongo, Umphumela 2.2 ubandakanya ukuthuthukiswa kwesizinda sokuvuna, ukucubungula nokuhweba kwe-Aloe ferox eMpumalanga Kapa ukuze kuthuthukiswe ukwabelana ngenzuzo okusimeme nokulinganayo kulo lonke uchungechunge lwenani kusekelwa ngalezi:

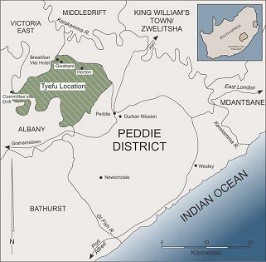
* Khetha Umphathi Wokuphumayo
* Umsizi womphakathi ozimele
* I-Aloe Business Advisor
* Ukuqeqeshwa komphakathi- Ukuphathwa kwephrojekthi Ukuphathwa Kwebhizinisi Ukuvuna Okuqhubekayo
* Ukuhlelwa kwe-Horticultural kokuvuna zasendle
* Ifemu ebonisana nge-EIA yokusungulwa kwehektha elilodwa lenhlaba kanye nendawo yokucubungula esebenza mahhala
* Ihhovisi lemojuli elakhiwe ngaphambilini kanye neshabhu yokusebenzela yasensimini (okuhlanganisa nezinsiza eziningi kanye nempahla yasehhovisi/ ifenisha)
* Izisebenzi zokuphatha ukuvuna zasendle
* Ububanzi bokuthengwa kwempahla okufanele bufakwe ekuvuneni endle , maqondana nabasebenzi bokuvuna, izinto zokusebenza kanye nezinsiza
* Umthamo wokuthengwa kwempahla uzosetshenziswa ekuvuneni endle , maqondana nezinto ezisetshenziswayo zabasebenzi bokuvuna kanye nokuphatha
* Indawo yokuhlola eyakhiwe ngaphambilini, ukucubungula kanye nokupakisha (okubandakanya izinsiza eziningi kanye nempahla/ ifenisha)
* Ukuhlola, ukucubungula kanye nokupakisha abasebenzi
* Ukuthengwa (noma ukuqashwa, njengoba kudingekile) kokucubungula impahla yabasebenzi basembonini
* Ukuthengwa kwezinto ezisetshenziswayo zokucubungula abasebenzi nabaphathi
* Qasha inkampani yokukhangisa
  + 1. *Isisekelo*

## Indawo yephrojekthi

1. Tyefu iwumhlaba womphakathi, esendaweni engaphansi kukamasipala wendawo yaseNgqushwa kanye noMasipala wesiFunda i-Amathole eMpumalanga Kapa. Izungezwe uMfula iGreat Fish ngasentshonalanga kanye noMfula iKeiskamma empumalanga. Umphakathi wakwaTyefu wakhiwe yizigodi eziyishumi ezisangaphansi kobuholi bomdabu endaweni yenkosi uSizwe Msutu. Ukwakhiwa komphakathi waseTyhefu kunomlando wakamuva. Abantu basuswa ngendluzula ezindaweni zabo zendabuko ukuze kwakhiwe indawo yeGreat Fish Nature Reserve. Lokhu kususwa ngenkani kwenani elikhulu labantu

endaweni encane futhi evalekile kubangele ukugcwala ngokweqile kanye nokwanda kokusetshenziswa kwemithombo yemvelo. Ukudlisa ngokweqile kwaholela ekwandeni kokuguguleka kwenhlabathi nomhlaba ongakhiqizi kangako.

Le ndawo yaziwa ngobuhle bayo kanye nokukhangayo kwasemakhaya, okunabantu abaningi abakhuluma isiXhosa. Umphakathi ubumbene, futhi idolobhana lizungezwe umhlaba wokulima, oyingxenye ebalulekile yomnotho wendawo. Le ndawo ibonakala ngamagquma ayo aguquguqukayo kanye nezwe lezolimo. Imvelo yemvelo yakhiwe ikakhulukazi amasimu okulima kanye nezimila ezincane zemvelo.



## Izimo zenhlalo-mnotho

Ngokolwazi lwe-StatsSA umphakathi wakwaTyhefu uhambisana nezimo kazwelonke, abantu besifazane yibona abaningi futhi kunesibalo esikhulu sezingane endaweni. Futhi, ngokuhambisana nesifunda nezinye izindawo zasemakhaya zaseNingizimu Afrika kusukela eminyakeni engu-16-30, izibalo zehla kakhulu. Lokhu kudalwa wukufudukela kwabantu abasha emadolobheni beyofuna umsebenzi uma sebekhulile. Lokhu kufuduka kubangelwa wukuntuleka kwamathuba omsebenzi ezindaweni zasemakhaya njengaseTyhefu.

Umphakathi wakwaTyhefu ungaphansi kukaMasipala waseNgqushwa ongaphansi kukamasipala wesifunda Amathole. Izimo zenhlalo-mnotho yomphakathi waseNgqushwa zivezwe kuleli thebula elingezansi.

Ithebula: Izibalo zabantu zomasipala lapho i-Output 2.2 itholakala khona ngokobalo-bantu luka-2022

|  |  |  |
| --- | --- | --- |
|  | Amathole District | Ngqushwa Local  Municipality |
| Total population | 871 601 | 68 300 |
|  |  |  |
| Young children (0- 14 years) | 29.3% | 26.1% |
| Working age population (15-64 years) | 60.4% | 60.3% |
| Elderly (65+ years) | 10.4$ | 13.6% |
| Dependency ratio | 65.7 | 65.8 |
| Sex ratio | 90.9 | 91.4 |
| No schooling (20+ years) | 9.2% | 8.4% |
| Higher education (20+ years) | 7.2% | 5.2% |
| Number of households | 241 612 | 24 913 |
| Average household size | 3.6 | 2.7 |
| Formal dwellings | 81.1% | 89.4% |
| Flush toilets connected to sewerage | 40.1% | 28.6% |
| Weekly refuse disposal service | 35.4% | 24.2% |
| Access to piped water in the dwelling | 34.6% | 29.1% |
| Electricity for lighting | 94.5% | 97.4% |

Okungenani abavuni abangama-50 abavela emphakathini waseTyefu njengamanje bavuna amaqabunga *e-A. ferox* echichima ngokwemvelo endaweni yomphakathi elinganiselwa ku- 50,000 ha. Lezi zivuni zivame ukusebenza njengosomabhizinisi abazimele, okubikwa ukuthi bathengisa ubisi lwenhlaba olungacutshungulwanga kubathengi bendawo ngesigamu kuphela senani lemakethe. Ababambiqhaza ababalulekile (uMkhandlu weTyefu Traditional, abavuni bendawo, iTyefu Traditional Trust, DFFE, iNgqushwa LM kanye ne-ASPIRE) bahlonze lezi zinselelo ezilandelayo ezihlobene nokuvuna kwe *-A. ferox* eTyefu:

* + Awekho amandla eqoqo abavuni nabathaphayo ukuze baxoxisane ngamanani nabathengi bomuthi wenhlaba.
  + Ezinye zezindawo zenhlaba ziyingozi kakhulu kubavuni ngenxa yemithambeka ewumqansa, futhi amahlozi aminyene enza ukufinyelela kwezinye izindawo zenhlaba kube nzima futhi kudle isikhathi.
  + Azikho izinto zokuhamba eziya kubavuni ukuze bafinyelele ezitshalweni zenhlaba ezikude namadolobhana.
  + Ayikho ingqalasizinda etholakalayo yokubamba futhi icubungule ubisi lwenhlaba oluqoqwe abacoci.
  + Abavuni kanye nemishini yokuqopha inomkhawulo, noma cha, ukuphepha, ukuvuna, ukugcinwa kanye nemishini yezokuxhumana.
  + Kunamakhono alinganiselwe, nolwazi lwezinqubo zokuvunwa inhlaba esimeme (njengamazinga ezinto ezibonakalayo ze-SABS Aloe - SANS 368:2008) phakathi kwabavuni nabathapha.
  + Kunokuphathwa kabi kakhulu kohlelo lokuvumela ukuvunwa kwenhlaba, okuholela emikhubeni yokuvuna engalawuleki nengalawuleki.
  + Ayikho imali eyanele etholakala ngokuvunwa kwenhlaba endle ukuze kuqhubeke izidingo zomvuni kanye nezokucofa.
  + Izinga lencindi yenhlaba alihlali lihlangabezana nezindinganiso nezimfuneko zemboni, okuholela emananini aphansi kanye nemali engenayo kubavuni nabacoci; futhi
  + Nakuba kunamathuba okuthuthukisa imithombo yemali engenayo yomphakathi wakwaTyefu emikhiqizweni ekhiqizwe inhlaba, lezi zisalokhu zingathuthukisiwe ngokuphelele ngenxa yokuntuleka kokutshalwa kwezimali kanye nokusekelwa kwezobuchwepheshe.

## Umongo we-Biophysical

Indawo yaseTyhefu inendawo yomfula enesimo sezulu esingachazwa ngokuthi sifudumele futhi somile. Ihlobo endaweni ngokuvamile lishisa kakhulu kuyilapho izinga lokushisa lasebusika lipholile. Isilinganiso semvula ngonyaka kule ndawo singaphansi kuka-400mm. Le ndawo ngokomlando ibichazwa 'njengenye yezindawo ezigugulekile nezimpofu kakhulu e- Eastern Cape. Ezinye zezingxenye ezomile zibonakala zingaphezu kokuvuselelwa kwemvelo ngaphandle kokungenelela komuntu. Le ndawo inabantu abaningi futhi ihlaselwe yisomiso kangangokuthi abantu abasakwazi ukuziphilisa. Ukukhiqiza kwezolimo endaweni yaseTyhefu kuncishiswa kakhulu yi-agro-ecology yalesi sifunda. Lokhu kuhlanganisa inhlabathi empofu, imvula ephansi nengavamile, inkinga yekhwalithi yamanzi, izinga eliphezulu lokuphefumula komhwamuko, amazinga okushisa aphakeme ngokwezinkathi ezithile zonyaka kanye nesisekelo esibi semithombo.

A map of the mountains

Description automatically generated with medium confidence

Isimo sezulu saseTyhefu sivamise ukusesilinganisweni, sinehlobo elifudumele nobusika obupholile. Le ndawo ithola inani elifanelekile lemvula, elisekela imisebenzi yezolimo esifundeni1. Ihlobo lingase lishise kakhulu, amazinga okushisa ngezinye izikhathi afinyelele ngaphezu kuka-30°C, kuyilapho ubusika buba ncane, futhi ngezinye izikhathi amazinga okushisa ehle ngaphansi kuka-10°C.

* + 1. *Imithelela Yenhlalo Nemvelo*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Ingozi** | **Incazelo** | **I-UNDP SES** | **Umsebenzi**  **wethula ubungozi** | **Ububanzi** | **Isilinganiso** |
| **Ubungozi 1- Imithelela engalingani emaqenjini ancishwe amathuba, okuhlanganisa nabesifazane baseTyefu** | **Umcimbi:** Isicelo sesiphakamiso singase sibangele imithelela engalingani noma ebandlululayo entsheni, abesifazane noma abantu abadala emphakathini waseTyefu .  **Imbangela:** Ukucatshangelwa okunganele kokuguquguquka kwezenhlalo kanye nezindima zobulili ekwakhiweni kwemisebenzi eholela ekukhawulweni kwentsha, abesifazane noma abantu asebekhulile ukuba babambe iqhaza, bafinyelele amathuba nezinzuzo, noma baphathe imisebenzi yokuvuna noma yokucubungula i-Aloe Ferox ngempumelelo. | **Isimiso Ungashiyi Umuntu Ngemva** P.5, P.7,P.8,P.10  kanye no-P.11 | Konke | Zonke izindawo ezihlosiwe | Kuphakathi mina = 3  L = 3 |
|  | **Umthelela:** Kanye, abesifazane noma abantu asebekhulile bangase babhekane nokukhuphuka kokungalingani kanye nezinzuzo ezincishisiwe ezivela emisebenzini yokukhiphayo. |  |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Ubungozi 2- Ingozi yokuxhumana nomphakathi waseTyefu okunganele** | **Umcimbi:** Ukusebenzelana okunganele komphakathi wakwaTyefu ekwakhiweni nasekusetshenzisweni kwemisebenzi yokuphumayo kuyabathinta. | **Isimiso Ungashiyi Umuntu Ngemva** P.2 kanye no-P.13 | Konke | Zonke izindawo ezihlosiwe | Phezulu mina = 4  L = 5 |
|  | **Imbangela:** Ngiqhuba ukubonisana ngendlela eyanele futhi okungenzeka ingafaneleki ukuze nginqume imisebenzi elandela ukubuyekezwa kokuphumayo. |  |  |  |  |
|  | **Imithelela:**   * Ukuguguleka kokuthembana phakathi kwephrojekthi yokuklomelisa umphakathi . * Dlala ukuqaliswa kwemisebenzi kanye nokubamba iqhaza okulinganiselwe kwamalungu emiphakathi. |  |  |  |  |
| **Ubungozi 3-** | **Umcimbi:** Amalungu omphakathi |  | Konke | Zonke | Phezulu |
| **Ukukhathazeka noma** | waseTyefu abhekana nezinselele |  |  | izindawo | mina = 5 |
| **izikhalazo** | ekufuneni amalungelo |  |  | ezihlosiwe | L = 5 |
| **eziphakanyiswe** | ngokuphumelelayo, ukuveza |  |  |  |  |
| **amalungu omphakathi** | ukukhathazeka, noma ukufaka | Isimiso |  |  |  |
| **waseTyefu** | izikhalazo. | Sokuziphendulela: |  |  |  |
| **ekwakhiweni** |  | P.14, P.15 |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **nasekusetshenzisweni kwemisebenzi** | **Isizathu:** Abahlanganyeli noma abamukeli bangase babhekane nezinkinga ze -b kanye nezici ezikhawulelayo ezihlanganisa:   * Ukuntula ulwazi lwezinqubo zokuphakamisa isikhalo * Izinselele zokungena. * Umehluko wolimi, amasiko, nokufunda. * Ukufinyelela okulinganiselwe noma ukujwayelana nobuchwepheshe obudingekayo.   **Imithelela:**   * Ukuguguleka kokuthembana nokusebenzisana. * Isizukulwane/ukwanda kwezingxabano |  |  |  |  |
| **Ubungozi 12 - Ukungahloniphi okungaba khona kwabasebenzi nezimo zokusebenza** | **Umcimbi:** Ukungathobeli izimo zokusebenza ezinobulungiswa kanye namazinga ezempilo nokuphepha emsebenzini kubasebenzi ababambe iqhaza ekuvuneni, ukucubungula, ukumaketha kanye nokwakhiwa kwesikhungo. | **Izinga lesi-7: Izimo zomsebenzi nezimo zokusebenza** P.7.1, 7.2, 7.3, 7.4, 7.5, 7.6 | * Ihhovisi lemojuli elakhiwe ngaphambilini kanye neshabhu yokusebenzela yasensimini (okuhlanganisa nezinsiza eziningi kanye |  | S ubstantly mina = 4  L = 3 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Imbangela:** Inhlangano yomphakathi ebambe iqhaza ekulawuleni ukuvuna zasendle, ukucutshungulwa, ukupakishwa, nokudayiswa kwe-Aloe ferox (Okukhiphayo 2.2) ayinazo izinhlelo ezikhona zokuqinisekisa ukuthotshelwa komthetho wezabasebenzi.  **Imithelela:**   * Ukwephulwa kwemithetho nezimiso zabasebenzi. * Ukwanda kwengozi yezingozi emsebenzini, ukuhlukunyezwa, nezimo zokusebenza ezingaphephile. * Izindlela zokukhokha ezingalungile noma ezingekho emthethweni, eziholela ekunganeliseki kwabasebenzi kanye nezinselele zomthetho ezingaba khona. |  | nempahla yasehhovisi/ ifenisha)   * Izisebenzi zokuphatha ukuvuna zasendle * Indawo yokuhlola eyakhiwe ngaphambilini, ukucubungula kanye nokupakisha (okubandakanya izinsiza eziningi kanye nempahla/ ifenisha) * Ukuhlola, ukucubungula kanye nokupakisha abasebenzi |  |  |
| **Ubungozi 13 - Ukungcoliswa okungenzeka kwe- ecosystem kanye nokusetshenziswa kwamandla esikhungweni** | **Umcimbi:** Ukulimala okungenzeka kwemvelo okuhlobene nokucutshungulwa kwe-Aloe Feroc  **Imbangela:** Ukusetshenziswa okungaba khona kwamakhemikhali ukucubungula i-Aloe Ferox, | **Izinga lesi-8: Ukuvinjelwa Kokungcola kanye Nezinsizakusebenza** P8.1, 8.2, 8.5 kanye  8.6 | * Ihhovisi lemojuli elakhiwe ngaphambilini kanye neshabhu yokusebenzela yasensimini (okuhlanganisa |  | Kuphakathi mina = 3  L = 4 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **sokucubungula i-Aloe Ferox** | ukukhiqizwa kwemfucuza, kanye nokusetshenziswa ngokweqile kwezinsiza endaweni esanda kusungulwa.  **Imithelela:**   * Ukungcoliswa komhlabathi, amanzi nomoya, okuholela ekulimaleni kwemvelo. * Ubungozi obungaba khona ezinhlobonhlobo zezinto eziphilayo zendawo kanye nemvelo. * Ukwenyuka kokuqedwa kwezinsiza kanye nokuncipha kokusimama kwemvelo ngenxa yokudalwa udoti kanye nokusetshenziswa ngokweqile kwamanzi namandla. |  | nezinsiza eziningi kanye nempahla yasehhovisi/ ifenisha)   * Indawo yokuhlola, yokucubungula kanye nokupakisha eyakhiwe ngaphambilini (okuhlanganisa izinsiza eziningi kanye nempahla/ ifenisha) Ukuthengwa (noma ukuqashwa, njengoba kudingekile) kwezinto zokusebenza zabasebenzi basembonini. |  |  |

## Umphumela 2.3 Amabhizinisi azinze emphakathini ekulimeni kwe -Honeybush ayasekelwa, aqinisekise ukongiwa kanye nemiphumela yokwabelana ngenzuzo elinganayo kuyo yonke i- *Cyclopia* spp. indawo esiFundeni saseKapa.

* + 1. *Imisebenzi yokuphuma*

Umphumela 2.3 uhlose ukusekela amabhizinisi asemphakathini ekulimeni kwe-Honeybush , ukuqinisekisa ukongiwa kanye nemiphumela yokwabelana ngenzuzo elinganayo kuyo yonke i-Cyclopia spp. indawo esiFundeni saseKapa.

Lo mphumela uzosekela amabhizinisi asekelwe emphakathini nakuba uhlelo lwe-Small Grant Fund endaweni okuhloswe ngayo ukukhuthaza ukutshala nokunciphisa umthelela wamanje wokucekelwa phansi kwezindawo zokuhlala kanye nokuvunwa ngokweqile. Inqubo yokuqalisa uhlelo kuzoba ukusingatha, ukuphatha, kanye nokulinganisa umthelela wesibonelelo sikahulumeni kwabahlomulayo. Kuqashwe umhlinzeki wesevisi ukuthi aphathe isikhwama futhi imisebenzi elandelayo isiqediwe:

* + - * Ukusungula iQembu Lokweluleka Ngezobuchwepheshe (TAG) ukuze liqondise futhi lisize ekunqumeni izimo eziyisisekelo ezindaweni zokufunda ezikhethiwe, ububanzi bezibonelelo, ababambiqhaza okumele baqondiswe kuzo futhi bahlulele izicelo zesibonelelo sikahulumeni ezitholwa kubabambiqhaza abaqondisiwe.
      * Yenza ukuhlolwa okuyisisekelo kwezindawo ezithola isibonelelo sikahulumeni eMpumalanga naseNtshonalanga Kapa. Ucwaningo oluyisisekelo lunikeze ukucaciseleka kokuthi i ) indawo etholakalayo yokulima, ii) amalungiselelo obunikazi bomhlaba, iii) Ukuhlaziywa kwabathintekayo okuhlosiwe, iv) amandla omhlaba, kanye

v) nezingozi zemvelo nezenhlalo.

* + - * Yenza imihlahlandlela yokusebenzisa isibonelelo
      * Bamba indawo yesibonelelo

Umhlinzeki wesevisi uzokwethula ucingo lwesibili lweziphakamiso 1zezinhlangano (noma abantu) ezingenzi nzuzo ngasekuqaleni kuka-2025 oluzohlanganisa:

* + - * + Ukulungiselela nokuqaliswa komkhankaso wokuqwashisa abahlomuli abahlosiwe mayelana nesibonelelo sikahulumeni
        + Cela iziphakamiso, ukukhethwa kwabahlomulayo (ngokucatshangelwa izici zokuvikela) kanye Nokukhishwa kwezimali
        + Ukuhlolwa komthelela wesikhungo ngokumelene nesisekelo

Isicelo seziphakamiso sizovulelwa ukuze kusekelwe le misebenzi elandelayo ngezibonelelo ezincane:

1Iqembu Elizibophezele (umhlinzeki wesevisi) kulokhu okukhiphayo lingashintsha ngesikhathi sesigaba sokunwetshwa kwephrojekthi kodwa lokhu ngeke kube nomthelela emisebenzini.

* + - * **Ukuqala nokwakhiwa kwamakhono** : ukwesekwa kwamaqembu okuvuna, ukuqeqeshwa ngezindlela ezisimeme, izinhlelo zokulwa nokuzingela ngokungemthetho, ukusekelwa ekusungulweni kwamabhizinisi.
      * **Ukwesekwa kokusungula ukulima** : ukusekela ukuguqukela ekulimeni, ukwenza ngcono izinqubo ezikhona, ukusekela izidingo zemakethe zokuthunyelwa kwamanye amazwe, ukulungiswa komhlaba, ukwesekwa kwebhizinisi nobuchwepheshe bokulima, ukwakhiwa kwamandla.
      * **Ukucutshungulwa** : ukusekela amandla okucubungula, ukwenza ubambiswano lube semthethweni, khuthaza ukusungula izinto ezintsha.
      * **Ukumaketha** : khulisa ukuqwashisa mayelana ne-honeybush eqhubekayo , izinqubo zokumaketha, ukukhushulwa kwamabhizinisi olwazi lwasendaweni nawendabuko.
    1. *Isisekelo*

## Indawo yephrojekthi

Ububanzi bephrojekthi yaseNtshonalanga naseMpumalanga Kapa ihlanganisa izindawo zokulinywa kanye nokuvuna zasendle kwe *-Cyclopia spp.* (i -honeybush ). Izindawo zephrojekthi ezikhethelwe ukutshalwa kwe -honeybush yilezi ezilandelayo:

* **waseGenadendal eNtshonalanga Kapa** : iwela kuMasipala Wasekhaya waseTheewaterskloof (TLM), ohlanganisa iRiviersonderend , Greyton , Genadendal , Caledon, Villiersdorp , Botrivier , Grabouw amadolobha nezindawo zokuhlala, kanye nendawo yasemakhaya ebanzi kuMasipala Wesifunda sase-Overberg. I-Genadendal iyisiteshi semishini esidala kunazo zonke eNingizimu Afrika futhi indawo iyikhaya labantu ababalelwa ku-8,000. I-Genadendal ekuqaleni yasungulwa ngenhloso yokushumayela amaKhoikhoi, abanye babo abagcina sebezinzile endaweni ngemva kokuxoshwa kweKapa ngabahlali baseDutch. Namuhla iGenadendal , enabantu bayo ababhalisiwe abangu-3,500, iyidolobhana elikude, elingathuthukisiwe, nelicekeleke phansi.

## George and Oudsthoorn , Western Cape :

* + **UGeorge uwela** kuMasipala Wendawo wase-George (GLM) kuMasipala Wesifunda sase-Garden Route esifundazweni saseWestern Cape. IGeorge iyidolobha lesibili ngobukhulu eSifundazweni saseNtshonalanga Kapa eNingizimu Afrika elinabantu abacishe babe ngu-300,000 ngo-2022 (GLM, 2023). I-GLM ihlanganisa i-Haarlem, i-Avontuur , i-Misgund , i-Louterwater , i - Krakeelrivier , i-Ravinia, ne- Kareedouw . Amaqembu abantu base-Haarlem ahlanganisa ama-94.1% abebala, ama-4.2% abamnyama base-Afrika, 0.9% abamhlophe, kanye namaqembu 'amanye' angu-0.8% (Izibalo zaseNingizimu Afrika 2011). Amanye amalokishi aseSifundazweni SaseMpumalanga Kapa engxenyeni yeLangkloof futhi wonke angaphansi kukaMasipala Wasekhaya waseKou- Kamma (KLM). Amaqembu ezakhamuzi e-KLM ahlanganisa amaKhaladi angama-61.4%, ama-31% abamnyama base-Afrika, ama-7.5% abamhlophe, kanye namaNdiya/Ama-Asia angu-0.1% ( IDP Kamasipala Wendawo yase-Kou- Kamma , 2020). IGeorge iyisikhungo sokuphatha nezohwebo kanye nesihlalo sikaMasipala Wesifunda sase-Garden Route. Imizila Emikhulu ihlanganisa u-N9 oya eGraaf Reinette , u-N12 oxhuma e -

Oudtshoorn , e-Beaufort West futhi oxhuma ku-N1, kanye no-R62 eLangkloof - ohlanganisa indawo yasemakhaya empumalanga ( Gqeberha ) kanye no-N2, 'okuyindlela yasogwini' ehlanganisa iKapa neGqeberha . Isikhumulo sezindiza saseGeorge sisebenzela iNingizimu Kapa kanye neLittle Karoo, okuhlanganisa namadolobha angomakhelwane iMossel Bay, Oudtshoorn , Knysna kanye nePlettenberg Bay. Indawo yedolobha laseGeorge iyisikhungo samadolobha esiyinhloko se-GLM, ehlalisa u-84% wabantu bomasipala. I-Wilderness, i- Uniondale kanye ne-Haarlem yizona ezihlala iningi labantu basemadolobheni abasele, kuyilapho u-9% wabantu basemakhaya. Isibalo sabantu basezindaweni zasemakhaya sehle ngo-4% ngonyaka phakathi kuka-2011 no- 2016. Kubantu basemadolobheni sebebonke, amaKhaladi angama-49.5%, ama-29.3% ngabaMnyama base-Afrika, ama-20.9% ngabaMhlophe, kanti u- 0.3% ngamaNdiya/ama-Asia. Abantu abangaphezu kwengxenye eyodwa kwezintathu (65.4%) bakhuluma isiBhunu njengolimi lwabo lwasekhaya, kanti u-26.9% ukhuluma isiXhosa, u-6.9% ukhuluma isiNgisi, kanti u-0.9% ukhuluma ezinye izilimi ( StatsSA , 2016).

* + - * + **I-Oudtshoorn** iwela kuMasipala Wendawo wase -Greater Oudsthoorn (GOLM) esiFundazweni saseNtshonalanga Kapa. I-Oudtshoorn iyidolobha elincane futhi inabantu abacishe babe ngama-71,000 ngo-2024, enochungechunge lwenani lezintshe elichumayo. Indawo lapho i-Oudtshoorn ikhona khona ekuqaleni kwakuhlala amaBushmen, njengoba kufakazelwa yimidwebo eminingi yamadwala etholakala emigedeni kuzo zonke izintaba ezizungezile zaseSwartberg . Endaweni yase -Oudtshoorn , amaKhaladi amele u-76.1% wabantu bonke, kulandele abamhlophe ngama-8.9% kanye ne-Afrika emnyama ngama-8.0%. Iqembu labantu baseNdiya noma base-Asia bayidlanzana, elibalelwa ku-0.3% kuphela womphakathi kamasipala (GOLM, 2023).
* Indawo **yaseTsitsikamma eduze** kwaseStormsrivier eMpumalanga Kapa : Indawo yaseTsitsikamma yephrojekthi ingaphansi kukaMasipala Wendawo wase-Kou- Kamma (KKLM) eMpumalanga Kapa. I-KKLM ayinawo amadolobha noma amadolobha amakhulu kodwa inqwaba yezindawo zokuhlala eziyimizana nemizana. Izindawo zokuhlala eziphambili e-KKLM yiClarkson, Joubertina , Kareedouw , Krakeel River, Louterwater , Misgund , Nompumelelo, Sanddrif , Storms River, kanye neWoodlands. Lezi zindawo zokuhlala zihlukaniswe ngamawadi ayisi-6 okhetho futhi aphethwe umkhandlu onamalungu ayi-12. NgokweCensus 2011, i-KKLM yayinesibalo sabantu abalinganiselwa ku-40 663, u-59,8% wabo ngamakhaladi, u-30,6% abamnyama base- Afrika, u-8,2% abamhlophe, kanti u-0,3% ngamaNdiya/Ama-Asia. IsiBhunu siwulimi olukhulunywa kakhulu kuMasipala, njengoba singu-73,5%, silandelwa isiXhosa ngama- 19,9%. Bayi-2,5% kuphela abantu abakhuluma isiNgisi njengolimi lwabo lokuqala. Isilinganiso sobukhulu bendlu bekungabantu abangu-3,6 umuzi ngamunye. Imizi engaphezu kwezingxenye ezimbili kwezintathu (68,3%) ikwazi ukuthola amanzi ngamapayipi ngaphakathi kwendawo yokuhlala/esikhungweni, u-21,4% ithola amanzi amponjwana emagcekeni ayo, kanti i-4,6% kuphela yemizi ebingakwazi ukuthola amanzi amponjwayo. Indawo kaMasipala waseKoukamma imenyezelwe njengendawo entula amanzi ikakhulukazi indawo yaseLangkloof . Lesi sitatimende siqiniswa ukushoda kwamanzi aluhlaza okwejwayelekile okwenzeka kumasistimu ahlukahlukene

e -Koukamma futhi ikakhulukazi e -Langkloof . Ngaphandle kokushoda kwemvula kule ndawo, lesi simo sibhebhethekiswa nawukuncintisana nabalimi bezolimo abasebenzisa amanzi ukunisela. Iningi lengqalasizinda yamanzi ekhona ayinakekelwa ngokwanele ngenxa yomthamo wabasebenzi bezobuchwepheshe obuncane kanye nesimo sokuguga sengqalasizinda kanye namathuluzi alinganiselwe okuhweba. Ukusalela emuva kwenze kwaba nzima ukuhlinzeka ngezinsiza zokuthuthwa kwendle ezindaweni ezingenayo ingqalasizinda yezokuthuthwa kwendle ikakhulukazi ezindaweni zasemakhaya eziminyene nasemijondolo. Iningi lengqalasizinda yendle ekhona ayinakekelwa ngokwanele futhi kwingqalasizinda eminingi ayisebenzi kahle/iyawa, okunomthelela omubi kwikhwalithi yokuchithwa kwamanzi angcolile emifuleni. Iningi lemizi (87,1%) ibikwazi ukuthola ugesi wokukhanyisa (i-Kou- Kamma yeminyaka eyi-15 ye-IDP, 2016).

* **yaseJoubertina eMpumalanga Kapa** . I-KKLM iyindawo empofu kakhulu ebika ukuntuleka kwemisebenzi okuphezulu kanye namazinga aphansi okufunda nokubhala. Izindawo zokuhlala zihlakazekile futhi ziqhelelene, lokho kubangela izinselelo ekuthuthukisweni kwengqalasizinda kanye nezidingongqangi ezifana namanzi, indle, ugesi nokuthuthwa kwendle. IStorms River iyisikhungo sokuqala sezokuvakasha ngaphakathi kumasipala. Ibhande elisogwini lihlanganisa indawo eyaziwa kakhulu yaseTsitsikamma . Indawo yaseLangkloof izungezwe izintaba zaseTsitsikamma . Indawo engasogwini igqame ngomnotho ohlukahlukene futhi okhula ngokushesha, inani labantu elikhula ngokushesha elixhumene namathuba ezomnotho, ukutholakala kwamanzi amahle, kanye nengcebo yezindawo zokungcebeleka kanye namahlathi endabuko. Imikhakha Eyinhloko Yezomnotho Ezokuvakasha Nezolimo (Kou- Kamma LM, 2017).

Izindawo zephrojekthi ezikhethiwe zimbozwe kumephu yokusatshalaliswa kwendawo ye-

*Cyclopia spp ehlukile* ( honeybush ) emfanekisweni ongezansi.

A map of the western cape

Description automatically generated

## Umfanekiso 3 -5: Izindawo zephrojekthi ezimbozwe phezu kokusatshalaliswa kwendawo kwe- *Cyclopia* spp ( honeybush ) (Kuthathwe ku-: DFFE, 2023)

* + - * **Isimo senhlalo-mnotho**

1. spectrum yezimo zenhlalo-mnotho iyasebenza. Amalungu omphakathi wamaKhoi ajwayelekile ampofu futhi asebenza njengezisebenzi emapulazini amakhulu. Abanikazi bamapulazi amakhulu banezinga eliphezulu lokuphila, kuyilapho abanikazi bezindawo ezincane beziphilisa ngokufanele.

Umnotho kaMasipala wase-Oudtshoorn uncike kakhulu emithonjeni yawo yemvelo eyisisekelo. Isibonelo, ubungqabavu bomnotho wezolimo (futhi ngempela wonke umnotho kamasipala) buxhumene nokutholakala kwamanzi kanye nempilo yezinhlelo ezihambisana nemvelo ezivikela uhlelo lwemifula kamasipala. Imboni yezintshe endaweni kamasipala wase- Oudtshoorn ingenye yezinkulu ezimakethe zomhlaba ngakho-ke inochungechunge lwenani lendawo oluthuthuke kahle. Ngakho-ke, ukulima okuxubile nokulungisa inyama kuphakathi kwabaqashi abakhulu endaweni kamasipala, abanemisebenzi esemthethweni eyi-1,197 kanye nengama-924, ngokulandelana, kodwa umqashi oyedwa omkhulu endaweni kamasipala usengabaphathi bomphakathi (imisebenzi eyi-1,820). Kunamahhovisi kahulumeni amaningi ahlinzeka ngokuqashwa endaweni kamasipala okuhlanganisa uMasipala wase-Oudtshoorn, uMasipala wesiFunda iGarden Route, uMnyango wezokuThuthukiswa koMphakathi, uMnyango wezoLimo, uMnyango wezaseKhaya, uMnyango wezabaSebenzi, inkantolo kamantshi kanye neposi, phakathi kokunye. . Ukusebenza ngendlela engafanele kwemboni yezolimo kuholele ekutheni ezinye izigatshana zidale amathuba emisebenzi kanti ezinye zilahle imisebenzi. Isibonelo, ukuqashwa kwabalimi abaxubile kanye nabalimi bezitshalo abangahlali isikhathi eside kwanda ngenkathi labo abasebenza ekukhiqizeni izilwane kanye nemisebenzi yokuxhasa ezolimo balahlekelwa imisebenzi. Kodwa-ke, ukulahleka kwemisebenzi okubaluleke kakhulu kwabhalwa kubasebenzi bezitolo kanye nalabo abasebenza ezindaweni zokuhlala zesikhashana, okugcizelela kokubili ukubaluleka kokuvakasha emisebenzini yasendaweni kanye nokululama kancane kwezokuvakasha endaweni. Abasebenzi endaweni kamasipala wase-Oudtshoorn iningi labo banamakhono amancane (30.9%) futhi abanamakhono aphansi (27.9%) .(GOLM IDP, 2023).

Isigodi saseLangkloof siyindawo enkulu yokulima enezithelo ezivuthulukile enwebeka amakhilomitha amaningi eduze nomgwaqo u-R62 naphakathi kwezintaba zaseTsitsikamma kanye neKouga lapho kumila khona isihlahla soju sasendle . Abaningi umphakathi amalungu babe kube ukuvuna honeybush izizukulwane ngezizukulwane futhi kukhona ngokuhlukile nolwazi mayelana i isitshalo kanye ne indawo yezintaba . Abaningi bahlala emalokishini aseduze neLangkloof kanti abanye bahlala emapulazini, njengaseSonskyn E-Heuningbos , eThornham Heuningbos , Clarkson Heuningbos , kanye nenkampani Kuyasa Amamfengu . I- Honeybush iphinde ibe yinsiza ebalulekile kubalimi abaningi kanye namalungu omphakathi e- Langkloof nase-Kouga, njengoba ingagcini nje ngokuba nengxenye enkulu yeholo labo kodwa futhi ibonakala njengengxenye yobunikazi kanye nokuziphilisa (McGregor, 2017a). Ukuzingela ngokungemthetho kwesihlahla sezinyosi zasendle kanye nomlilo ongalawuleki kuyinkinga enkulu ebeka engcupheni ukusimama kwemboni ye-honeybush (McGregor, 2017b).

Amabhizinisi amancane kanye namabhizinisi asekelwe emphakathini embonini ye -Honeybush abhekana nezinselele eziningi ezihlobene nokufinyelela endaweni yokulima i-Honeybush , ubunzima ekutholeni amalungelo omhlaba noma amalungelo amanzi. Lesi simo, esihlanganiswe nezinye izici zezomnotho, senza abakhiqizi abancane babe sengozini

yokuguquguquka kwesidingo kanye nentengo ye- honeybush , okuthinta ukuzinza kweholo labo.

Ukuntuleka kwemisebenzi kunyukile kusukela ngo-2015 (13.1%) kuya ku-2021 okubangelwa kakhulu ukulahleka kwemisebenzi ngenxa yesomiso, ukucisha kwezimoto kanye nokuwohloka komnotho kulesi sikhathi. Inani labantu abangasebenzi kwezomnotho nalo linyukile lisuka ku- 2020 laya ku-2021 njengoba ukulahleka kwemisebenzi kanye nokungatholakali kwemisebenzi eyanele kuholele ekwandeni kwesibalo sabafuna umsebenzi abadangele. Ngeshwa, ukulahleka kwemisebenzi okuningi kuthinte abasebenzi abanamakhono aphansi nabangekho emthethweni abasengcupheni kakhulu yokuphila ngobumpofu ngezikhathi zokuwohloka komnotho (GLM IDP, 2023).

Inkinga ebucayi wubunzima bosomabhizinisi bokuthola imali eyanele ku -Honeybush iyodwa ngenxa yobukhona bayo bemakethe ye-niche kanye nokuba khona kwesizini yemali engenayo, okuba kubi kakhulu ngenxa yokuntula okuvamile kwebhizinisi, isipiliyoni, ukuqeqeshwa, namakhono okuphatha ibhizinisi ngempumelelo. Ukufinyelela izimakethe zamazwe ngamazwe kuyinkimbinkimbi futhi imakethe yasendaweni ayiqapheli i -Honeybush , ikhawulela ububanzi bokukhula kwezimakethe zasekhaya kanye namathuba okuthengisa. Ukwengeza, lawa mabhizinisi ajwayele ukulwa nezindleko eziphezulu nobunzima bezinqubo zokunikeza izitifiketi, njengohwebo lwemvelo noma olunobulungiswa, olufunwa kakhulu ngabathengi. Izinsiza zezimali ezinomkhawulo zikhawulela ikhono labo lokutshala imali kumasu okulima athuthukisiwe, izisetshenziswa zokucubungula, namasu okumaketha (Kruger, Swart & Associates, 2023).

Iningi labantu abancishwe amathuba eLangkloof lihlala emalokishini kanye/noma ezindaweni zasemakhaya. Imiphakathi yamaKhaladi kanye neyabamnyama kubikwa ukuthi iphakathi kwabampofu kakhulu endaweni enamazinga aphansi emfundo nemali engenayo (George Local Municipality 2019; Kou- Kamma Local Municipality 2020) kanti ngo-2016, abantu abayi- 19,500 babehlala ebumpofu kulo lonke elase-Kou- Kamma Local. Umasipala (Kou- Kamma , 2017). Abanikazi bomhlaba abakhulu ezindaweni zase-Kou- Kamma esifundazweni saseMpumalanga Kapa ngabanikazi bomhlaba abazimele (85.05%), umbuso (13.20%), kanye nomasipala wendawo (1.59%), omunye womhlaba ongaphansi kwesonto laseMoravian (Kou- Kamma Local Municipality 2020). Umhlaba omningi usetshenziselwa ukulima ngenjongo yokuthengisa. Iningi lamaKhaladi nabamnyama endaweni yaseLangkloof bangabasebenzi basemapulazini. Kumasipala Wendawo yase-Kou- Kamma imikhakha yezomnotho ebhale inani elikhulu kakhulu lemisebenzi ngo-2016 bekuyimboni yezolimo enabantu abaqashwe abangu-

5 620 noma u-25.6% wabo bonke abantu abaqashwe kumasipala wendawo. Umkhakha wezohwebo onesamba sezi-4 250 (19.4%) uqashe isibalo sesibili sabantu abaningi uma kuqhathaniswa neminye imikhakha. Umkhakha wezimayini ona-2.94 (0.0%) uwumkhakha oqashe isibalo esincane sabantu kuMasipala Wendawo wase-Kou- Kamma , ulandelwa umkhakha kagesi onabantu abangama-98.1 (0.4%) abaqashiwe (Kou- Kamma , 2017). Umasipala Wendawo yase-Kou- Kamma ube nenani lezindlu zangasese ezishaywayo ezingu- 11,400 (88.89% yayo yonke imizi), 358 Ventilation Improved Pit (VIP) (2.80% yesamba sezindlu) kanye nama-393 (3.08% ayo yonke imizi) anezindlu zangasese zomgodi. Umasipala Wendawo yase-Kou- Kamma ubunemizi engu-8,210 (71.63%) enamanzi amponjwayo

ngaphakathi endlini, engu-1,110 (9.68%) imizi enamapayipi amanzi ngaphakathi egcekeni, kanti imindeni engu-1,770 (15.44%) ingenawo amanzi asemthethweni. UMasipala Wendawo wase-Kou- Kamma unemizi engu-189 (1.43%) enogesi wokukhanyisa kuphela, imizi engu- 12,000 (90.83%) inogesi wokukhanyisa nezinye, kanti engu-1,020 (7.74%) yayingawusebenzisi ugesi.

## Izimo ze-Biophysical

1. *Cyclopia* itholakala ezifundeni ze-Cape Floristic Region kuzo zonke izifundazwe zaseMpumalanga naseNtshonalanga Kapa eNingizimu Afrika futhi yaziwa kakhulu nge- honeybush ( Slabbert et al., 2019). I-Honeybush ikhula ezindaweni ezincane eningizimu- ntshonalanga naseningizimu-mpumalanga yeNingizimu Afrika lapho isimo sezulu sifana nesimo sezulu saseMedithera. Iningi lezindawo ezithela ama-honeybush ziwela endaweni enemvula engu-200-600 mm, lapho imvula igxila kakhulu ebusika kodwa iyenzeka unyaka wonke.

Izinhlobo eziningi ze - honeybush zitholakala ku- zasendle , kodwa abambalwa kuphela zisezindlini ezisabalele noma ezentengiso sebenzisa . Lezi ( McGregor , 2017) :

* + *I-Cyclopia i-intermedia* , eyaziwa ngokuthi ' i-bergtee ' (itiye lentaba), etholakala phakathi kwe -Gcqeberha ne- Langkloof , iwela ezindaweni ezidonsa amanzi asezintabeni ngokuvamile phakathi kwezindawo ezivikelekile ezisemthethweni. Lokhu kubandakanya i- Baviaanskloof Nature Reserve, i-Kammanassie Nature Reserve, i-Garden Route National Park, i-Formosa Provincial Nature Reserve, i- Gamkaberg Nature Reserve, i-Rooiberg Nature Reserve, i-Towerkop Nature Reserve, i- Anysberg Nature Reserve, i-Groot Swartberg Nature Reserve, kanye nezindawo zokunakekela imvelo ehlukahlukene ezitholakala. eduze kwaseJoubertina ;
  + *I-Cyclopia i-genistoides* , eyaziwa ngokuthi ' kustee ' (itiye lasogwini), etholakala kakhulu eNtshonalanga Kapa eduze kwaseYxerfontein nase-Darling oGwini oluseNtshonalanga, kodwa naseNingizimu Kapa uma ilinywa;
  + *I-Cyclopia i-maculata* , etshalwe endaweni yase-Outeniqua eduze kwaseGeorge;
  + *I-Cyclopia sessiliflora* , eyaziwa ngokuthi 'i-Heidelberg-tee', eqanjwe ngegama ledolobha i-Heidelberg lapho ikhula khona endaweni yezintaba;
  + *I-Cyclopia subternata ,* eyaziwa ngokuthi ' vleitee ' (i-marshland tea) noma i-' valleitee ' (itiye lesigodi); futhi
  + *I-Cyclopia longifolia ,* eyaziwa nangokuthi i-Van Stadenstee

A map of the coast

Description automatically generated

## Umfanekiso wesi-3 6: Ukusatshalaliswa ngokwendawo kwe -*-Cyclopia* spp evunwe zasendle ( honeybush ) (Umthombo: McGregor, 2017);

* + - **Isisekelo sokuqaliswa kwemisebenzi**

I-Honeybush , isitshalo esidabuka ezindaweni zokhokho bamaKhoiKhoi , yayisetshenziswa amaKhoiKhoi izizukulwane ngezizukulwane, besebenzisa izici zokwelapha kanye nezokupheka zetiye le-Honeybush futhi bedlulisa ukuhlakanipha kwabo ngamasiko omlomo. Ngo-2023, cishe u-70% wetiye le-honeybush livela ekuvuneni kwasendle, kanti ingxenye esele iyalinywa. Itiye elilinyiwe ngokuyinhloko lisuka eqenjini elikhethiwe labalimi abanamasimi achumayo e- honeybush , kanye namaphrojekthi ambalwa asekelwe emphakathini ezindaweni ezifana ne- Haarlem, i-Ericaville , i-Groendal , ne -Genadendal ( [Ukukhula Nokukhiqiza | Inhlangano](https://sahta.co.za/industry/growing-production/) [YaseNingizimu Afrika Ye-Honeybush Tea](https://sahta.co.za/industry/growing-production/) ) Imboni imatasatasa. ukubandakanya abalimi abancane nabasafufusa ekulinyweni kwe-honeybush ukuze bahlangabezane nesidingo esikhulayo ngenkathi kunciphisa ingcindezi ku -honeybush etshalwe endaweni. zasendle.

I-Honeybush ivunwa endle endaweni elinganiselwa ku-30,000 ha, kanti amahektha angama-

230 kuphela asetshenziselwa ukutshala i-Honeybush . Ukukhishwa kwetiye okugayiwe minyaka yonke kusuka kumathani angama-20 kuye kwangama-200 ngama- honeybush processors ayi-9. Imboni iqashe abavuni ababalelwa ku-150, cishe abantu abayi-100 ezingeni lokukhiqiza, kanye nabantu abangama-40 ezingeni lokucubungula. Imboni imelwe yiSouth African Honeybush Tea Association (SAHTA) (DFFE, 2023).

Ngo-2001, ngosizo oluvela ku-Agribusiness in Sustainable Natural African Plant Products (ASNAPP), i-NGO, kanye ne-ARC, umphakathi wase-Haarlem e- Langkloof wafuya i- honeybush endaweni engamahektha ayi-10 omhlaba womphakathi. Lesi sitshalo, esikhule saba amahektha angaba ngu-22, sekuphele iminyaka eyisikhombisa singasebenzi ngenxa yokungavikeleki kwezindawo zokuhlala, izingxabano phakathi nohlelo lokuthuthukiswa kwezindawo zasemakhaya olwenziwa yinyuvesi, ukucekelwa phansi kwempahla kanye nokuncika komphakathi ekungeneleleni ngaphandle uma kuqhathaniswa nabalimi abamhlophe abangomakhelwane abebengavunyelwe. uthole izinsiza kalula ukuze ubambe iqhaza emakethe egxile ekuthekelweni kwamanye amazwe ( Ndwandwe , 2023).

Umphakathi waseGenadendal ubulokhu uvuna futhi ulungisa uhlobo oluthile lwe- honeybush ebizwa ngokuthi i-Cyclopia maculata amashumi eminyaka. Babeyisebenzisa njengamakhambi ezifo eziningi, beyiphisa ibe itiye lokuqeda ukukhwehlela, imikhuhlane kanye nezinkinga zokuphefumula. Ukwengeza, bageza ku -Honeybush ukwelapha ukuqubuka nezifo zesikhumba, futhi njengenye indlela yokudla yezingane ezingakwazi ukudla ubisi. I-Honeybush iphinde yahlanganiswa emasikweni nemikhosi, ifanekisela ubumbano nokuzwana emiphakathini (DEA, 2014).

Imiphakathi yendawo ehileleke ekulimeni i-honeybush mincane futhi ihlakazekile phakathi kweGeorge ne -Oudtshoorn , phakathi naphakathi kwamapulazi amakhulu, njengepulazi lika- Herold Meander, elihweba njengeKaukou - igama lesiKhoiKhoi elisho 'ukuhlaba iva', ne- Driefontein Heuningbos ngaseMosselbay . I-Western Cape Honeybush Tea Cooperative (WCHTC) e- Oudtshoorn kwaba ibhalisiwe nge eziyisithupha amalungu ngo - 2016 njengemoto yokukhiqiza itiye nekheli i phezulu ukungasebenzi isilinganiso ngaphakathi i encane Umphakathi wase -Oudtshoorn esiFundeni sase - Edene . I-WCHTC isiqale i-trust ekhokhela imfundo ephakeme yezingane zabasebenzi bayo. I - WCHTC ingeye- I - Honeybush Tea Association futhi inethemba lokuthekelisa i i - honeybush kwabanye amazwe , kanye ngokuqinile emisiwe ngaphakathi i wendawo izimakethe kuhlanganise okudayisa izitolo , izindawo zokuhlala , izindawo zokudlela kanye nako eGarden Route yaseNtshonalanga Kapa .

uju lwasendle ayavunwa, ayenzeka emithambekeni yezintaba zaseKouga, Tsitsikamma , Outeniqua , Elandsberg , Grootwinterhoek , Kammanassie kanye neLangkloof . Kubukeka sengathi awekho amarekhodi okuvuna okusetshenziselwa ukuhweba endle ezingxenyeni ezisentshonalanga zohlu lokusatshalaliswa kweCyclopia, ngale kwebanga elingamakhilomitha ayi-100 entshonalanga ye-Uniondale. I -Langkloof kanye nezintaba ze-Kouga ezitholakala esifundazweni sase-Eastern Cape zingena ngaphakathi kweCape Floristic Region (CRF) enkulu, okuwuhlobo lwe-Mediterranean biome eyaziwa njengendawo ethandwa kakhulu emhlabeni jikelele yokuhlukahluka kwezimbali nokuhlukahluka ( Michau , 2021).

Indawo okuvunwa kuyo i-honeybush ikakhulukazi ingeyabantu. Cishe bangu 75 abanikazi bezimvume eMpumalanga Kapa abavuna izihlahla zoju zasendle , futhi cishe abalimi/abanikazi bomhlaba/abasebenzisi bomhlaba abangaba ngu-50 eNtshonalanga Kapa abavuna izihlahla zoju zasendle . Ziningi izindawo lapho i-honeybush ivela khona lapho ingavunwa khona, okuhlanganisa amapulazi aphethwe ngasese, iziqiwi ezizimele kanye nezindawo ezivikelwe ngokusemthethweni ngaphansi kokuphathwa kwe-ECPTA, i-Cape Nature kanye ne -SANParks (McGregor, 2017b).

Ukuhlasela nokuqothulwa okudingekayo kwezinhlobo zezitshalo zangaphandle, njenge-black wattle, akugcini nje ngokubeka usongo olukhulu ezinhlobonhlobo zemvelo kodwa futhi kubangela izindleko ezengeziwe kanye nomsebenzi. Izinqubo zokuvuna ezingekho emthethweni nezingasimamisi zisongela ukuphila kwesikhathi eside kwenani le-Honeybush zasendle , zibukela phansi imizamo yokongiwa kwemvelo kanye nokusimama kwemboni. Ukulinyelwa ngenjongo yokudayisa kwenzeka kakhulu esifundazweni saseNtshonalanga kanti ukuvuna zasendle kuvame kakhulu eMpumalanga Kapa.

Isidingo esikhulayo se- honeybush sidinga ukwanda kokukhiqizwa kwezolimo kanye nokusuka kude nempahla evunwa kakhulu yasendle. Nokho, ezinye izinhlobo zingatshalwa kuyilapho ezinye ziye zamelana nayo yonke imizamo yokulinywa futhi kumelwe zivunwe endle. Izitshalo zasendle zakhiwe 85% C. intermedia, 10% C. subternata kanye 5% ezinye izinhlobo ezivunwa zasendle. Isivuno esilinyiwe sakhiwe ngo-47% C. subternata , 43% C. longifolia kanye no-10%

C. genistoides . Ukuvuna ngokweqile kubangela ukwehla kwenani labantu abancane ikakhulukazi ezintabeni zase-Langkloof , Tsitsikamma nase-Kouga. Ukulahlekelwa indawo yokuhlala ezindaweni eziphansi ngenxa yokuthuthukiswa kwedolobha kanye nokutshalwa kwezitshalo, ukumuncwa kwamanzi, kanye nokuhlasela komtholo (black wattle) nakho kuyizinkathazo ezinkulu nge- *Cyclopia spp* .

* + 1. *Izingozi nomthelela wezenhlalo nezemvelo*

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| **Ingozi** | **Incazelo** | **I-UNDP SES** | **Umsebenzi wethula**  **ubungozi** | **Ububanzi** | **Isilinganiso** |
| **Ingcuphe 1-**  Ngiphatha kahle ama  -group ama - m rates  , okuhlanganisa nabesifazane, | **Umcimbi:** Isicelo sesiphakamiso singase sibangele imithelela engalingani noma ebandlululayo kubantu bamaKhoi, izinkampani eziphethwe ngabamnyama noma eziqhutshwayo kanye nabesifazane. | **Isimiso Ungashiyi Umuntu Ngemva** P.5, P.7,P.8,P.10  kanye no-P.11 | Cela isiphakamiso, zonke izindlela ezine | Zonke izindawo ezihlosiwe | Kuphakathi mina = 3  L = 3 |
|  | **Imbangela:** Ukungacatshangelwa okwanele kokuguquguquka kwezenhlalo kanye neqhaza lobulili ekwakhiweni kwesicelo sesiphakamiso, okuholela emikhawulweni kubantu bamaKhoi, abantu besifazane kanye nabantu abamnyama ukuba babambe iqhaza, ukufinyelela emathubeni kanye nezinzuzo, noma ukuphatha ukuvunwa kwe-honeybush noma imisebenzi yokulungiselela ukutshala ngempumelelo. |  |  |  |  |

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|  | **Umthelela:** Amabhizinisi aphethwe abantu abamnyama kanye namaqembu abesifazane angase abhekane nokungalingani okukhulayo kanye nokwehliswa kokusekelwa okuvela kumaphrojekthi ahlomula  ngezimali zezibonelelo ezincane. |  |  |  |  |
| **Ubungozi 2- Ingozi yokuzibandakanya kwebhizinisi eliholwa ngumphakathi elinganele** | **Umcimbi:** Ukungakhulumisani ngokwanele kwezinkampani eziholwa ngumphakathi , okuhlanganisa ukungafakwa kwamaKhoi, abesifazane kanye nabantu abamnyama ezinqumweni zephrojekthi ezibathintayo. | **Isimiso Ungashiyi Umuntu Ngemva** P.2 kanye no-P.13 | Cela isiphakamiso, zonke izindlela ezine | Zonke izindawo ezihlosiwe | Phezulu mina = 4  L = 5 |
|  | **Imbangela:** Ukuxoxisana ngendlela eyanele futhi okungenzeka ingafaneleki ukuze kutholwe imisebenzi efanelekile ngaphansi kokubizelwa kwesiphakamiso. |  |  |  |  |
|  | **Imithelela:**   * Ukuguguleka kokuthembana phakathi kwamabhizinisi omphakathi . * encishisiwe yezicelo ocingweni lwesiphakamiso. |  |  |  |  |

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| **Ubungozi 3- Ukukhathazeka noma izikhalo eziphakanyiswe abamukeli ababambiqhaza obizweni lwesiphakamiso olungasingathwanga ngendlela efanele.** | **Umcimbi:** Abahlanganyeli obizweni lwesiphakamiso noma abamukeli bezibonelelo babhekana nezinselele ekufuneni amalungelo ngokuphumelelayo, ukuveza ukukhathazeka, noma ukufaka izikhalazo.  **Isizathu:** Abahlanganyeli noma abamukeli bangase babhekane nezinkinga ze -b kanye nezici ezikhawulelayo ezihlanganisa:   * Ukuntula ulwazi lwezinqubo zokuphakamisa isikhalo * Izinselele zokungena. * Umehluko wolimi, amasiko, nokufunda. * Ukufinyelela okulinganiselwe noma ukujwayelana nobuchwepheshe obudingekayo.   **Imithelela:**   * Ukuguguleka kokuthembana nokusebenzisana. * Isizukulwane/ukwanda kwezingxabano | Isimiso Sokuziphendulela: P.14, P.15 | Cela isiphakamiso, zonke izindlela ezine | Zonke izindawo ezihlosiwe | Phezulu mina = 5  L = 5 |
| **Ubungozi 4 – Ukutshalwa**  **kwezinhlobo** | **Umcimbi:** Imithelela engemihle ezindaweni ezihlala kuzo, | **Izinga 1. Ukongiwa kwezinto eziphilayo**  **kanye ne-NRM** | Cela isiphakamiso,  indlela | Zonke izindawo  ezihlosiwe | Okukhulu mina =4 |

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| **zezilwane ngokwentengiso okuholela kumthelela ongemuhle endaweni yemvelo** | okuhlanganisa ukungenela kanye nokucekelwa phansi kwe-ecosystem **Imbangela:** Ukusekela ukutshalwa kwe- h oneybush ngaphakathi kwezindawo zomhlaba ezihlangene noma ezizimele eduze nezindawo zemvelo  **Imithelela:**   * Ukuphazanyiswa kwe- ecosystem kanye ne- biodiversity. * Ukuncipha kokuqina nempilo yezindawo zemvelo ezizungezile. | **eqhubekayo** , 1.1,  1.2, 1.3, 1.8 | yokusekela ukulima |  | L = 3 |
| **Ubungozi 5 - Ukuhweba kanye nokuvuna zasendle okuholela ekunciphiseni inani lezilwane ezisengozini kanye nokwanda kohwebo olungekho emthethweni.** | **Umcimbi:** Usongo ezilwaneni ezisengozini kanye nokwanda kohwebo olungekho emthethweni ngokuvunwa zasendle s~~z~~nokudayisa **Imbangela:** Ukulawulwa okunganele kanye nokulawulwa kokuvunwa kwasendle kwe -honeybush , okubhekwa njengokunciphayo ngokohlu olubomvu lwaseNingizimu Afrika  **Imithelela:** | **Izinga 1. Ukongiwa kwezinto eziphilayo kanye ne-NRM eqhubekayo** , 1.4,  1.5, 1.8, 1.13 | Cela isiphakamiso, izindlela zokusekela ukuvuna zasendle | Zonke izindawo ezihlosiwe | Okukhulu mina = 4  L = 3 |

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|  | * Ukufakwa engozini okwengeziwe kwalezi zinhlobo zezilwane. * Ukudlondlobala kwemisebenzi yokuhweba engekho emthethweni. |  |  |  |  |
| **Ubungozi 6 - Ukungaphathwa kahle kwamagugu amasiko ngenxa yokulinywa kwezentengiso** | **Umcimbi:** Ukubukela phansi ulwazi lwendabuko lokusetshenziswa kwesihlahla sezinyosi, okuhlanganisa nolwazi lwendabuko lwe-Khoi **Imbangela:**   * Ukuvuna zasendle ngezinhloso zokuhweba kanye nokutshala kungene ezindaweni nezinsiza zomphakathi ngaphandle kokubonisana kahle noma imvume yabantu bamaKhoi .   **Imithelela:**   * Ukungqubuzana kwamalungelo okusebenzisa kanye nezinsiza, kunciphisa ukufinyelela kwamaKhoi emithonjeni ebalulekile njengemithi yesintu. | **Izinga lesi-4: Amagugu Ezamasiko,** 4.5 | Cela isiphakamiso, zonke izindlela ezine | Zonke izindawo ezihlosiwe | Kuphakathi mina = 3  L = 3 |
| **Ubungozi 7 - Abantu abangama-Khoi bangase babe** | **Umcimbi:** Ukusetshenziswa kolwazi lwendabuko lwabantu bamaKhois' yizinkampani eziphethwe umphakathi | **Izinga lesi-6: Abantu Bomdabu** | Cela isiphakamiso, | Zonke izindawo ezihlosiwe | **Okukhulu**  mina = 4  L = 4 |

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| **nomthelela omubi ngokusetshenziswa kwemisebenzi, okuhlanganisa Imvume Yamahhala Yangaphambili Enolwazi (i-FPIC) engatholwanga ngendlela efanele.** | ngezinhloso zebhizinisi ngaphandle kwezivikelo ezanele umphumela wokwehluleka ukwenza ukubonisana ngokuhambisana nezivumelwano ze- Free, Prior, and Informed Consent (FPIC) emisebenzini ethinta amalungelo, imihlaba, izinsiza, kanye amasiko abantu abangamaKhoi .  **Imbangela:** Imiphumela engemihle engaba khona kubantu abangamaKhoi ehlobene nokuqaliswa kokubizelwa kwesiphakamiso.  **Imithelela:**   * Ukuphazamiseka kwezindawo zamaKhoi, ukufinyelela ezinsizeni, kanye nemikhuba yamasiko. * Ukuguguleka kwempilo yesintu   kanye namalungelo ezindawo. | 6.1, 6.2, 6.3, 6.4, 6.5  kanye no-6.7 | zonke izindlela ezine |  |  |
| **Ubungozi 8 - Ukungcoliswa okungenzeka kwe- ecosystem kanye nokusetshenziswa kwamandla**  **ekulimeni** | **Umcimbi:** Ukulimala okungaba khona kwemvelo okuhlobene nokutshala nokucubungula imisebenzi  **Imbangela:** Ukukhishwa kwezinto ezingcolisayo ngesikhathi kulinywa, kulungiselelwa futhi kucutshungulwa i | **Izinga lesi-8: Ukuvinjelwa Kokungcola kanye Nezinsizakusebenza** P8.1, 8.2, 8.5 kanye  8.6 | Shayela isiphakamiso, indlela yokusekela ukutshala nokucubungula i-  honeybush | Zonke izindawo ezihlosiwe | M oderate I=3  I=4 |

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| **nasekucubunguleni imisebenzi** | -Honeybush yizinhlangano ezithola isibonelelo sikahulumeni. Lokhu kungase kuhlanganise ukusetshenziswa kwezibulala- zinambuzane, ukulahlwa kwemfucuza, kanye nokusetshenziswa ngokweqile kwezinsiza kule misebenzi.  **Imithelela:**   * Ukungcoliswa komhlabathi, amanzi nomoya, okuholela ekulimaleni kwemvelo. * Ubungozi obungaba khona ezinhlobonhlobo zezinto eziphilayo zendawo kanye nemvelo. * Ukwenyuka kokuqedwa kwezinsiza kanye nokuncipha kokusimama kwemvelo ngenxa yokudalwa udoti kanye nokusetshenziswa ngokweqile kwamanzi namandla. |  |  |  |  |
| **Ubungozi 9 – Ukungahloniphi abasebenzi kanye nezimo**  **zokusebenza** | **Umcimbi:** Ukungathobeli izimo zokusebenza ezinobulungiswa kanye namazinga ezempilo nokuphepha emsebenzini kubasebenzi abahilelekile  ekulimeni , ekuvuneni zasendle, | **Izinga lesi-7: Izimo zomsebenzi nezimo zokusebenza** P.7.1, 7.2, 7.3, 7.4, 7.5, 7.6 | Shayela isiphakamiso, indlela yokusekela  ukutshala | Zonke izindawo ezihlosiwe | **Okukhulu**  mina = 4  L = 3 |

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| **yizinhlangano ezithola izibonelelo** | ekucubunguleni, ekukhangiseni nokunye ukwesekwa kwemisebenzi yokuthuthukisa i-value chain.  **Imbangela:** Ukungalandelwa ngokwanele kwemithetho yezabasebenzi kanye nezinqubomgomo zezindawo zokusebenza zokulungiselela imisebenzi yokulima nokucubungula ezinhlanganweni ezithola izimali zokwesekwa kwe-honeybush value chain.  **Imithelela:**   * Ukwephulwa kwemithetho neziqondiso zabasebenzi. * Ukwanda kwengozi yezingozi emsebenzini, ukuhlukunyezwa, nezimo zokusebenza ezingaphephile. * Izindlela zokukhokha ezingalungile noma ezingekho emthethweni, eziholela ekunganeliseki kwabasebenzi kanye nezinselele zomthetho ezingaba khona. |  | nokucubungula i- honeybush |  |  |

## Umphumela 2.4 Ukuqaliswa kwe-ABS ekulimeni kwe-Rooibos kuyaqiniswa, kuqinisekisa ubulungisa, ukulingana kanye nokusimama ebudlelwaneni obufanele phakathi kwabanikazi be-TK nezimboni.

* + 1. *Imisebenzi yokuphuma*

Itiye le-Rooibos lenziwa ngezinhlobo ze-Aspalathus, ezithengiswa kuleli nasemazweni angaphandle. Isihlahla i-A. linearis sifinyelela kumamitha ama-2 ukuphakama namahlamvu afana nenaliti afinyelela ku-15-60mm ubude anezimbali ezizimele zodwa noma eziminyene eziphuzi ekugcineni kwamagatsha (Govender, 2007). Lolu hlobo lutholakala endaweni enemvula yasebusika i-fynbos eningizimu ye-Afrika. Ukusatshalaliswa zasendle kwe-Rooibos kuwela kakhulu eNtshonalanga Kapa futhi kancane esiFundazweni saseNyakatho Kapa futhi kuhlanganisa indawo elinganiselwa ku-56,231 km2 . Ibhekwa njengelondolozwe kahle kuzo zonke izindawo ezisetshenziswa kakhulu . Ukukhiqizwa kwe-Rooibos ngezinhloso ezehlukene kuvame ukulinywa.

Itiye le-Rooibos seliyitiye le-herbal elidumile, kuleli nasemazweni omhlaba. Izinzuzo ze-anti- oxidant, anti-ukuguga kanye ne-eczema zetiye zibe nomthelela ekukhuleni kwayo isithunzi (DEA 2014). Njengamanje itiye i-Rooibos ithunyelwa emazweni angaphezu kwama-37, iJalimane, i-Netherlands, i-UK, i-Japan, ne-USA imele ama-86% emakethe yokuthekelisa (ngo- 2010) (Street and Prinsloo, 2013). Imboni ye-Rooibos inenani elilinganiselwa ezigidini ezingama-R500 ngonyaka, idala cishe ,amathuba emisebenzi ayizi-8 000 kubasebenzi basemapulazini kuphela (DAFF 2015). Ngo-2014, amathani ayi-12,500 e-Rooibos akhiqizwa eNingizimu Afrika, lapho amathani angu-4500- 5500 adliwa kuleli kanti amanye athunyelwa kwamanye amazwe (SARC Fact Sheet). Abasebenzi abaningi ezingeni lasemapulazini bathola iholo elincane lika-R2 ,778.83 ngenyanga (noma u-R128.26 ngosuku) (Kaiser and Associates 2017).

Ngo-2014, i-rooibos yathola isimo sokubonisa indawo, umkhiqizo wokuqala waseNingizimu Afrika ongenabo utshwala okhethwe kanjalo. Ngenxa yalokho, itiye le-rooibos kuphela elivela endaweni ekhonjiwe (izintaba zaseCederberg eNingizimu Afrika zingabizwa ngokusemthethweni ngokuthi i-rooibos (Schroeder et al., 2020). Abantu baseSan kanye namaKhoiKhoi baye baqashelwa njengabaphethe i-TK ehlobene ne-rooibos yendabuko yezinto eziphilayo isisetshenziswa (i-DEA, 2014). imboni yasayina isivumelwano se-Industrial ABS nabanikazi be-TK, okungabantu abangamaKhoiKhoi namaSan ngo-2019. Isivumelwano Sokwabelana Ngezimboni Ngokubanzi Kwemboni ye-Rooibos sivele ohlelweni olude futhi oluvame ukuba nzima lokubona abanikazi be-TK. ye-rooibos, izingxoxo ezibanzi, nokufinyelela ukuvumelana ngesakhiwo samanje, isakhiwo kanye nobukhulu be-rooibos ABS Isivumelwano Inqubo yaqala kakhulu ngo-2010, lapho uMkhandlu WaseNingizimu Afrika usungula izinyathelo zokubekela imboni ye-rooibos inselelo ngokusebenzisa kwabo ulwazi lwendabuko mayelana ne-rooibos Lesi isivumelwano sokuqala sokwabelana ngenzuzo emhlabeni esihlanganisa yonke imboni , okuqinisekisa ukuthi wonke amanani e-rooibos adayiswayo anikela ekwabelaneni ngenzuzo.

Isivumelwano sokwabelana ngenzuzo sibandakanya intela yemali efakwa ekuqaleni kochungechunge lwenani, okuyilevy yonyaka engu-1.5 % yenani lesango lepulazi (lokho okukhokhelwa abacubungula nge-rooibos engalungiswanga) eyabelwa isikhwama esiphethwe uhulumeni (i-Schroeder et al., 2020). I-Annual Levy ikhokhwa ku-Bioprospecting Trust Fund, esungulwe ngokuhambisana nezinhlinzeko zeSigaba 85 soMthetho Wokuphathwa Kwemvelo

Kazwelonke: Umthetho Wezinto Ezinhlobonhlobo, futhi ilawulwa ngokuhambisana nezinhlinzeko zoMthethonqubo wama-40 weMithethonqubo Yokuhlolwa Kwezinto Eziphilayo, Ukufinyelela kanye Nokwabelana Ngenzuzo. ISivumelwano kanye neMithethonqubo ihlinzekela ukusatshalaliswa kwamalevi kumathrasti afanele asungulwe ukuze kuzuze amaSan kanye namaKhoi.

Umphumela 2.4 uhlobene nokuqiniswa kokuqaliswa kwe-ABS ekulimeni kwe-Rooibos, ukuqinisekisa ubulungisa, ukulingana kanye nokusimama ebudlelwaneni obufanele phakathi kwabanikazi be-TK nezimboni ngokusebenzisa imisebenzi elandelayo:

* Phenya futhi uthuthukise indlela efanelekile yokwabelana ngenzuzo ye-TK ebamba ngempumelelo insiza yerenti evela kumalungelo e-TK - leyo ndlela yokwabelana ngenzuzo idinga ukusebenza kahle, ibe sobala, inciphise ubungozi bezentengiselwano futhi yandise izinzuzo ze-TK, futhi izodinga ukumodela kwezezimali nezomnotho kanye nokubikezela. ;
* Phenya futhi uthuthukise izindlela zokwabelana ngenzuzo ye-TK okungeyona eyemali ezingase zisekele imiphakathi enamalungelo ngokunikela ngeminikelo nangezindlela ezihambisanayo zomkhakha ozimele.
* Yakha futhi uphakamise uhlaka olufanele nolulula lokubusa kanye nokufakwa kwezikhungo ukuze kuqaliswe futhi kuqashwe indlela yokwabelana ngenzuzo ye-TK
* Rekhoda izinqubo zamanje zokuxoxisana ze-SARC njengesibonelo socwaningo ngenhloso yokwakhiwa "kwepulani" yeminye imikhiqizo kanye nezivumelwano ze-TK.
* Ukusabalalisa imiphumela yocwaningo lwecala njengesibonelo kubabambiqhaza be-ABS eNingizimu Afrika nangale kwayo.
  + 1. *Isisekelo*

## Indawo yephrojekthi

Indawo yephrojekthi kanye nendawo enomthelela (imithelela eqondile, engaqondile, kanye nenqwabelanayo) igxile ezindaweni lapho i-Aspalathus Linearis (rooibos) ikhula khona futhi itshalwa emapulazini okuhweba, ezindaweni ezincane kanye nomhlaba womphakathi. Amaqembu amabili abahlomuli ahlonziwe:

* + - * + Umkhandlu wamaSan waseNingizimu Afrika, ohlanganisa imiphakathi yamaKhomani , amaXun , amaKhwe , namaXam
        + UMkhandlu wamaKhoiSan , ohlanganisa amaqembu amahlanu omlando wamaKhoi namaSan ahlolwe embikweni osemthethweni kahulumeni, okungukuthi iGriqua, iNama, iCape Khoi, neKoranna .

A map with blue points on it

Description automatically generated

Umfanekiso 3 ‑ 6: Indawo yomphakathi wase-Wupperthal kanye ne -Heiveld Cooperative

**IWupperthal** iyidolobha elincane elisezintabeni zaseCederberg elinabantu ababalelwa ku- 7,400. Yasungulwa ngo-1830 yizithunywa zevangeli ezimbili zaseJalimane. Idolobhana lisahlala lodwa, futhi lifinyeleleka ngomgwaqo owubhuqu osuka eClanwilliam phezu kwePakhuis Pass . Izinsiza zomphakathi zihlanganisa isonto laseMoravian, isitolo, ikamelo letiye, iposi, isikole esinamahostela amabili, nehholo lomphakathi. Imindeni eminingi emphakathini ikhuluma isiBhunu kanye nolimi lwabo lwesigodi lwamaSan. I -Wupperthal Original Rooibos Cooperative inezimpande zayo ku -Wupperthal Association, ebitshala futhi imaketha ngokuhlanganyela i-rooibos endaweni kusukela ngo-1998. I-Cooperative yasungulwa ngo-2009 yiqembu lamalungu angama-53 futhi kusukela ngaleso sikhathi isikhule yaba amalungu angama-93, angu-39. ngabesifazane. Amalungu e -Wupperthal Original Rooibos Cooperative, akhule i-rooibos izizukulwane ngezizukulwane, athole kokubili isitifiketi se-organic kanye ne-Fairtrade (ngo-2010) nge-rooibos yawo (GATC, 2016).

**Imiphakathi yase -Heiveld** e- Suid I-Bokkeveld ihlala ihlakazeke kuyo yonke indawo enamadwala endaweni enemvula yasebusika ewugwadule (ithola phakathi kuka-150 no-300 mm ngonyaka). Besebenzisa ulwazi lwabo lwendabuko, laba balimi abasafufusa bakhiqiza itiye le-rooibos (endle nalinywayo) kanye nezitshalo zokuziphilisa futhi baqhuba ukwalusa ngemfuyo emincane. Laba balimi abasafufusa besifunda bavamise ukusebenza isikhathi esiphakathi kwenyanga eyodwa nesithupha beluse izilimo zabo kanye nemfuyo yabo emhlabeni abangabanikazi, abawuqashise noma abawusebenzisa ngokwesintu. Esinye isikhathi sabo sokusebenza basichitha njengezisebenzi zonyaka emapulazini angomakhelwane noma ezindaweni ezikude. Indawo inomhlaba olimekayo olinganiselwe kanti abalimi abancane banezinye izindlela ezimbalwa zokuziphilisa ngemali encane kanye nokulima izitshalo. Sekuya ngokuba nzima ukutshala izitshalo nokuziphilisa, ngenxa yesomiso nesimo sezulu esingalindelekile. I- Heiveld Cooperative, ibhizinisi eliphethwe ilungu elisekelwe ezimisweni ze-agroecological, yasungulwa ngo-2001 inamalungu angu-14 futhi kusukela lapho ikhule yaba ngamalungu angu-66 ngo-2020 ( Malgas , 2022). I- Heiveld Cooperative ihlinzeka ngetiye le-rooibos elilinyiwe nelivunwe zasendle ezimakethe ze-niche fairtrade kanye ne- organic eYurophu, eNyakatho Melika, e-Australasia naseNingizimu Afrika. Ngokuhambisana namazinga omhlaba, i- Heiveld isungule izindlela zangaphakathi zokuqinisekisa ukukhiqizwa

kwetiye le-rooibos elitshaliwe, ukuvunwa okusimeme kwe-rooibos ekhula zasendle kanye nokwamukelwa kwezinqubo zokulima eziqinisekisa ukongiwa kwezinhlobonhlobo zezinto eziphilayo, inhlabathi namanzi. Ngo-2004, i-Heiveld yathola isitifiketi sayo se-organic kanye ne- Fairtrade. Ngonyaka wezi-2014, i-Heiveld yathumela kwamanye amazwe i-rooibos ebiza izigidi ezi-4,5 zamaRandi (engaba ku-400,000 USD ngaleso sikhathi) kwathi ngo-2015 yathumela kwamanye amazwe i-rooibos enenani eliyizigidi ezi-R5 emazweni aseNyakatho yomhlaba.

## Izimo zenhlalo-mnotho

I-Rooibos iyalinywa kakhulu ngakho-ke ikhiqizwa abalimi abakhulu (iningi labo okungabamhlophe) kanye nabalimi abasafufusa (iningi labo abebala). Inani labalimi be- Rooibos (bobabili abalimi abakhulu nabancane) lilinganiselwa phakathi kuka-250 - 300 abakhiqizi be-rooibos (pers. Comm: Werner Nieuwoudt) nakuba abanye belinganisele izinombolo kumikhiqizo engu-500 (Schroeder et al., 2021). Ingxenye enkulu yalezi zinsimu ze- rooibos iphethwe abalimi abamhlophe, abanezinga eliphezulu lemfundo futhi bathola imali. Iningi labakhiqizi be-rooibos abancane abalinganiselwa ku-210 basezindaweni ezinezintaba zaseNtshonalanga Kapa, bakhiqiza i-rooibos yabo endaweni engaba amahektha ayi-1.8, okuyizingxenye ezincane kakhulu uma kuqhathaniswa nabalimi abakhulu. Laba balimi abancane be-Rooibos banezinga eliphansi kakhulu lemfundo kanye nokufinyelela okulinganiselwe kwezimali (Dept Agriculture, Forestry and Fisheries, 2012).

Abasebenzisi bomhlaba abasengozini encane esifundeni se-fynbos bavame ukuncika emithonjeni yasendle ye-fynbos ukuze baziphilise, bathole imali engenayo ngokuthengiswa kwe-fynbos biomass evunwe zasendle noma ekutshalweni kwe-rooibos emaphaselaneni amancane omhlaba. Cishe abakhiqizi abancane abayi-150 endaweni yaseWupperthal kanye nabakhiqizi abancane abangama-60 e-Heiveld bahlelwe baba imifelandawonye yetiye futhi babalelwa cishe amalungu ayi-100 abambe iqhaza ekukhiqizweni kwe-rooibos. Ngayinye yale mifelandawonye inamasheya angaba ngu-30% endaweni yokupakisha i-rooibos eseKapa, eNingizimu Afrika. Imboni ye-Rooibos ihlinzeka ngamathuba omsebenzi kubantu abangaphezu kuka-5,000, ngaleyo ndlela ibe neqhaza elikhulu ekukhuleni komnotho waseNingizimu Afrika (SARC, 2020).

I-spectrum yezimo zenhlalo-mnotho iyasebenza. Amalungu omphakathi amaKhoi namaSan ngokuvamile ampofu futhi asebenza njengezisebenzi emapulazini okuhweba. Abanikazi bamapulazi okuhweba banezinga eliphezulu lokuphila, kuyilapho abanikazi bezindawo ezincane bephila impilo ehloniphekile.

* Abantu bomphakathi **wase-Wupperthal** bathembele kwezolimo ezizinzayo (ikakhulukazi i-rooibos) noma ukufuya ukuze baziphilise. Izindawo ezisezintabeni ezizungeze leli dolobhana zinedlelo lezimbuzi. I-CWP, okuwuhlelo lukazwelonke okuhloswe ngalo ukuhlinzeka ngenethi yokuphepha kubantu abasebenzayo, iqashe abantu ababalelwa ku-47 kuphela. Idolobhana futhi lithembele efektri yezicathulo yomlando ekhiqiza "velskoene". Isitshalo semali esibaluleke kakhulu i-rooibos. Abantu baseWupperthal sebeneminyaka engaphezu kuka-200 belima i-rooibos, begcina amasiko okutshalwa kwe-Wupperthal Rooibos izizukulwane ngezizukulwane. Kwasayinwa Isivumelwano Semboni Yonkana Sokufinyelela Nokwabelana Ngenzuzo mayelana ne-rooibos noMkhandlu WamaSan kanye NoMkhandlu WamaKhoiSan. Yomibili le Mikhandlu yakha ama-trust azophatha izimali. Imiphakathi yase-Suid Bokkeveld ihlala ihlakazekile endaweni enamadwala endaweni enemvula yasebusika ewugwadule (ethola phakathi kuka-150 no-300 mm ngonyaka). Besebenzisa ulwazi lwabo lwendabuko, laba balimi abasafufusa bakhiqiza itiye le-rooibos (endle nalinywayo) kanye nezitshalo zokuziphilisa futhi baqhuba ukwalusa ngemfuyo emincane. Laba balimi abasafufusa besifunda bavamise ukusebenza isikhathi esiphakathi kwenyanga eyodwa nesithupha beluse izilimo zabo kanye nemfuyo yabo

emhlabeni abangabanikazi, abawuqashise noma abawusebenzisa ngokwesintu. Esinye isikhathi sabo sokusebenza basichitha njengezisebenzi zonyaka emapulazini angomakhelwane noma ezindaweni ezikude. Indawo inomhlaba olimekayo olinganiselwe kanti abalimi abancane banezinye izindlela ezimbalwa zokuziphilisa ngemali encane kanye nokulima izitshalo. Sekuya ngokuba nzima ukutshala izitshalo nokuziphilisa, ngenxa yesomiso nesimo sezulu esingalindelekile.

* I- **Heiveld Cooperative** ihlinzeka ngetiye le-rooibos elilinyiwe nelivunwe zasendle ezimakethe ze-niche fairtrade kanye ne-organic eYurophu, eNyakatho Melika, e- Australasia naseNingizimu Afrika. Ngokuhambisana namazinga omhlaba, i-Heiveld isungule izindlela zangaphakathi zokuqinisekisa ukukhiqizwa kwetiye le-rooibos elitshaliwe, ukuvunwa okusimeme kwe-rooibos ekhula zasendle kanye nokwamukelwa kwezinqubo zokulima eziqinisekisa ukongiwa kwezinhlobonhlobo zezinto eziphilayo, inhlabathi namanzi. Ngo-2004, i-Heiveld yathola isitifiketi sayo se-organic kanye ne- Fairtrade. Ngonyaka wezi-2014, i-Heiveld yathumela kwamanye amazwe i-rooibos ebiza ZARizigidi ezi-4,5 (engaba ngu US-400,000 ngaleso sikhathi) kwathi ngo-2015 yathumela ama-rooibos enani eliyizigidi ezi-R5 emazweni aseNyakatho yomhlaba. Ekuqaleni kwawo-2000 i-Heiveld Cooperative -kanye ne-Wupperthal Rooibos Tea Association, izinhlangano ezimbili zabalimi abasafufusa - ezihlanganisa ikakhulukazi abalimi be-oloured, zasungulwa. I-rooibos evunwa zasendle manje isithengiswa njengemikhiqizo ezimele yodwa noma njengemikhiqizo ehlanganisiwe, enemikhiqizo ekhethiwe (isb. i-Heiveld Rooibos) enesitifiketi se-organic kanye/noma i- fairwartrade, njenge-Fairtrade ne-FairWild. Imikhiqizo ye-organic kanye ne-fairtrade ikwazile uku-oda inani lentengo ephezulu ngemikhiqizo efanayo evela kubakhiqizi abakhulu. Ingxenye yeprimiyamu ngokuvamile yatshalwa kabusha ekuthuthukiseni amathuba ebhizinisi nokuqhuba izinhlelo zokuqeqesha zamalungu emifelandawonye. Ukuvunwa zasendle kwe-rooibos, nokho, kusalokhu kunqunyelwe emakethe yokuthekelisa kuphela ngamanani amancane, futhi njengemikhiqizo esezingeni eliphakeme.

Ukuqwashisa okukhulayo emhlabeni jikelele ngezinzuzo zezempilo ze-rooibos kanye nokuguquguquka kwayo emikhiqizweni ehlukahlukene kuyaqhubeka nokuqhuba isidingo sayo kulezi zimakethe ezibalulekile. Isidingo sama-rooibos kulindeleke ukuthi sikhule, siqhutshwa ukwanda kwentshisekelo yabathengi emikhiqizweni yezempilo nokuphila kahle. Imboni futhi ihlola izimakethe ezintsha kanye nokuqanjwa kabusha kwemikhiqizo ukuze kuqhubeke ukukhula. Sekukonke, imakethe ye-rooibos yezohwebo iyashintshashintsha futhi iyaqhubeka nokukhula, iqhutshwa izinzuzo zayo zezempilo, ukuguquguquka, kanye nokwanda kwesidingo emhlabeni jikelele. Imboni ye-rooibos inamandla amakhulu okusetshenziselwa ukusetshenziswa kwayo ekukhuliseni umnotho 'womkhiqizo wemvelo'. Lo mthombo okhona ungahlinzeka ngesithako esibalulekile ekuthuthukisweni komnotho, ube neqhaza ekusungulweni kwamabhizinisi amasha namanoveli, ukudala amathuba emisebenzi, kanye nokweseka ukuthuthukiswa kwezindawo zasemakhaya.

## Umongo we-Biophysical

Ukusatshalaliswa kwendawo ye-Aspalathus ~~L~~linearis (rooibos) kuboniswa esithombeni esingezansi:

A map of a region

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**Umfanekiso 3–6 : Ukusatshalaliswa kwendawo ye- *Aspalathus Linearis* (rooibos) (Kuthathwe ku: Joubert & De Beer, 2011)**

Isitshalo se-rooibos sitholakala esifundeni se-fynbos esinemvula yasebusika eningizimu yeNingizimu Afrika, sisuka esifundeni saseCederberg eNtshonalanga Kapa siye ezindaweni ezimbalwa eningizimu-ntshonalanga yeNyakatho Kapa (isb., i-Suid Bokkeveld kanye ne-Noord Bokkeveld Plateau eduze nedolobha laseNieuwoudtville). Njengoba lolu hlobo lukhula ezindaweni eziphakeme kuphela ( , amamitha angu-200 kuya ku-1 000 ngaphezu kolwandle), lujwayelene kakhulu nezimo zendawo eziyingqayizivele endaweni ewugwadule futhi eshisayo, ehlobo elomile kanye nobusika obupholile, obumanzi. Amaqabunga amancane esitshalo anendawo elinganiselwe yokunciphisa ukulahlekelwa umswakama ezinsukwini ezishisayo. Isitshalo sidinga imvula yasebusika ukuze ukukhula okusebenzayo kwesitshalo kuqale ekuqaleni kwehlobo, futhi kwande maphakathi nehlobo. Umswakamo, ukutholakala kwamanzi, izinga lokushisa lomoya, i-engeli yethambeka lapho isitshalo sitholakala khona, ukuthungwa kwenhlabathi kanye ne-latitude kudlala indima ebalulekile emjikelezweni wokuphila wesitshalo (Rooibos Council, 2020). I-Wild rooibos ihlukaniswe kabanzi, ngokusekelwe esu layo lokusinda emlilweni, laba amaqembu amabili ayinhloko abahlaseli kabusha kanye ne-resprouters futhi iboniswe ukuthi iyahlukahluka ku-morphology, biochemistry, i-ecology kanye nofuzo (Brooks et al., 2021).

Ukushintsha kwesimo sezulu kusongela ukuphila kwesikhathi esizayo kwemboni kanye nayo yonke imboni ye-rooibos (12) – ngokuncipha kwesivuno okungase kukhuphule amanani futhi kubangele ukwehla kwesidingo. Ukushintsha kwesimo sezulu kubeka yonke imboni engcupheni, okuzoba nomthelela ezimpilweni zabanikazi be-TK.

* + 1. *Imithelela Yenhlalo Nemvelo*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Ingozi** | **Incazelo** | **I-UNDP SES** | **Umsebenzi wethula**  **ubungozi** | **Ububanzi** | **Isilinganiso** |
| **Ubungozi 1-** | **Umcimbi:** Izingxoxo nge-ABS | **Isimiso** | * Phenya futhi uthuthukise indlela efanelekile yokwabelana ngenzuzo ye-TK ebamba ngempumelelo insiza yerenti evela kumalungelo e-TK   - leyo ndlela yokwabelana ngenzuzo idinga ukusebenza kahle, ibe sobala, inciphise ubungozi bezentengiselwano futhi yandise izinzuzo ze-TK, futhi izodinga ukumodela kwezezimali nezomnotho kanye nokubikezela. ;   * Phenya futhi uthuthukise izindlela zokwabelana ngenzuzo ye-TK okungeyona eyemali ezingase zisekele | Zonke | Kuphakathi |
| Impacts elinganayo | zingase zibangele imithelela | **Ungashiyi** | izindawo | mina = 3 |
| ye - ABS | engalingani noma ebandlululayo | **Umuntu Ngemva** | ezihlosiwe | L = 3 |
| emiqhudelwaneni | kubantu baseSan namaKhoi, abantu | P.5, P.7,P.8,P.10 |  |  |
| engafaneleki , | abamnyama, abesifazane kanye | kanye no-P.11 |  |  |
| kuhlanganisa | namanye amaqembu asengozini. |  |  |  |
| nabesifazane |  |  |  |  |
|  | **Imbangela:** Ukucatshangelwa |  |  |  |
|  | okunganele kokuguquguquka |  |  |  |
|  | komphakathi kanye nezindima zobulili |  |  |  |
|  | ekufinyeleleni nasekucutshungulweni |  |  |  |
|  | kwe -Roiboos ezingxoxweni ze-ABS. |  |  |  |
|  | **Umthelela:** Abantu baseSan |  |  |  |
|  | namaKhoi, abantu abamnyama, |  |  |  |
|  | abesifazane kanye namanye |  |  |  |
|  | amaqembu asengozini akukho noma |  |  |  |
|  | ukufinyelela okulinganiselwe |  |  |  |
|  | eRoiboos . |  |  |  |

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|  |  |  | imiphakathi enamalungelo ngokunikela ngeminikelo nangezindlela ezihambisanayo zomkhakha ozimele.   * Yakha futhi uphakamise uhlaka olufanele nolulula lokubusa kanye nokufakwa kwezikhungo ukuze kuqaliswe futhi kuqashwe indlela yokwabelana ngenzuzo ye-TK |  |  |
| **Ubungozi 2- Ingozi** | **Umcimbi:** Izingxoxo ze-ABS ze-Ro | **Isimiso** | * Phenya futhi uthuthukise indlela efanelekile yokwabelana ngenzuzo ye-TK ebamba ngempumelelo insiza yerenti evela kumalungelo e-TK   - leyo ndlela yokwabelana ngenzuzo idinga  ukusebenza kahle, | Zonke | Phezulu |
| **yokubonisana** | oibos ~~o~~azibandakanyi wonke | **Ungashiyi** | izindawo | mina = 4 |
| **okunganele**  **ezingxoxweni ze-** | amaqembu ababambiqhaza athintwa  yi-ABS. | **Umuntu Ngemva**  P.2 kanye no-P.13 | ezihlosiwe | L = 5 |
| **ABS** |  |  |  |  |
|  | **Imbangela:** Ukunganeli kwemephu |  |  |  |
|  | nokufinyelela kubabambiqhaza ku- |  |  |  |
|  | ABS ye-R ooibo ~~o~~s. |  |  |  |
|  | **Umthelela:** Bonke ababambiqhaza, |  |  |  |
|  | okuhlanganisa intsha, abesifazane |  |  |  |

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| --- | --- | --- | --- | --- | --- |
|  | kanye namaqembu abantu abampofu noma abangafundile, imibono ayibonakali ku-ABS okuholela ekufinyeleleni okulinganiselwe ezinzuzweni ze-R oOibo ~~o~~zezimali nezingezona zemali. |  | ibe sobala, inciphise ubungozi bezentengiselwano futhi yandise izinzuzo ze-TK, futhi izodinga ukumodela kwezezimali nezomnotho kanye nokubikezela. ;   * Phenya futhi uthuthukise izindlela zokwabelana ngenzuzo ye-TK okungeyona eyemali ezingase zisekele imiphakathi enamalungelo ngokunikela ngeminikelo nangezindlela ezihambisanayo zomkhakha ozimele. * Yakha futhi uphakamise uhlaka olufanele nolulula lokubusa kanye nokufakwa kwezikhungo ukuze kuqaliswe |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  | futhi kuqashwe indlela yokwabelana ngenzuzo ye-TK |  |  |
| **Ubungozi 3- Ukukhathazeka noma izikhalo eziphakanyiswe ababambiqhaza ababambe iqhaza ezingxoxweni ze- ABS**  **ezingaphathwanga ngendlela efanele.** | **Umcimbi:** Ababambiqhaza ababamba iqhaza ezingxoxweni ze- ABS ze-Ro oibo ~~o~~babhekana nezinselele ekufuneni amalungelo ngempumelelo, ukuveza ukukhathazeka, noma ukufaka izikhalazo.  **Isizathu:** Abahlanganyeli noma abamukeli bangase babhekane nezinkinga ze -b kanye nezici ezikhawulelayo ezihlanganisa:   * Ukuntula ulwazi lwezinqubo zokuphakamisa isikhalo * Izinselele zokungena. * Umehluko wolimi, amasiko, nokufunda. * Ukufinyelela okulinganiselwe noma ukujwayelana nobuchwepheshe obudingekayo.   **Imithelela:** | Isimiso Sokuziphendulela: P.14, P.15 | Konke | Zonke izindawo ezihlosiwe | Phezulu mina = 5  L = 5 |

|  |  |  |  |  |  |
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|  | * Ukuguguleka kokuthembana nokusebenzisana. * Isizukulwane/ukwanda kwezingxabano |  |  |  |  |
| **Ubungozi 5 - Ukungaphathwa kahle kwamagugu amasiko ezingxoxweni ze- ABS** | **Umcimbi:** Ukubukela phansi ulwazi lwendabuko lokusetshenziswa nokucutshungulwa kwe-R ooibo ~~o~~s ngabelaphi bendabuko, kuhlanganise namaSan namaKhoi  **Imbangela: Ukuntuleka kwephrothokholi yokurekhoda nokusebenzisa ulwazi lwendabuko lwe-ABS ku** -R ooibo ~~o~~s ngesikhathi sokubonisana nemiphakathi kanye nabamele uMkhandlu wamaSan namaKhoi  **Imithelela:**   * Ukufundisa ukufinyelela ku-Ro oibo ~~o~~kubelaphi bendabuko * Ukufinyelela okungalungile emihlomulo yabelaphi bendabuko, okuhlanganisa amaSan namaKhoi **,** ngaphansi kwe-ABS | **Izinga lesi-4: Amagugu Ezamasiko,** 4.5 | * Phenya futhi uthuthukise indlela efanelekile yokwabelana ngenzuzo ye-TK ebamba ngempumelelo insiza yerenti evela kumalungelo e-TK   - leyo ndlela yokwabelana ngenzuzo idinga ukusebenza kahle, ibe sobala, inciphise ubungozi bezentengiselwano futhi yandise izinzuzo ze-TK, futhi izodinga ukumodela kwezezimali nezomnotho kanye nokubikezela. ;   * Phenya futhi uthuthukise izindlela zokwabelana ngenzuzo ye-TK |  | Kuphakathi mina = 3  L = 3 |

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|  |  |  | okungeyona eyemali ezingase zisekele imiphakathi enamalungelo ngokunikela ngeminikelo nangezindlela ezihambisanayo zomkhakha ozimele.   * Yakha futhi uphakamise uhlaka olufanele nolulula lokubusa kanye nokufakwa kwezikhungo ukuze kuqaliswe futhi kuqashwe indlela yokwabelana ngenzuzo ye-TK |  |  |
| **Ubungozi 11 – Abantu Bomdabu (okuhlanganisa namaKhoi namaSan) bangase babe nomthelela omubi ngokusetshenziswa kwemisebenzi, okuhlanganisa** | **Umcimbi:** Ukusetshenziswa kolwazi lwendabuko kanye nokuqaliswa kwezivumelwano zokuFinyelela kanye Nokwabelana Ngenzuzo (ABS) akubheki imithelela engemihle kubantu boMdabu (okuhlanganisa namaKhoi namaSan)  **Imbangela:** Ukwehluleka ukwenza ukubonisana ngokuhambisana | **Izinga lesi-6: Abantu Bomdabu** 6.1,  6.2, 6.3, 6.4, 6.5  kanye no-6.7 | * Phenya futhi uthuthukise indlela efanelekile yokwabelana ngenzuzo ye-TK ebamba ngempumelelo insiza yerenti evela kumalungelo e-TK   - leyo ndlela |  | Okukhulu mina = 4  L = 4 |

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| **Imvume Yamahhala Yangaphambili Yokwaziswa (i- FPIC)**  **engatholwanga ngendlela efanele.** | nemigomo yemvume yamahhala, yangaphambili, kanye nenolwazi (FPIC) mayelana nemisebenzi ethinta amalungelo, imihlaba, izinsiza, kanye nemikhuba yamasiko ama-Khoi nama-San ku-ABS yokulima e- Rooibos (Okukhipha 2.4).  **Imithelela:**   * Ukuphazamiseka kwezindawo zamaKhoi namaSan, ukufinyelela ezinsizeni, kanye nemikhuba yamasiko. * Ukuguguleka kwempilo yesintu kanye namalungelo ezindawo. * Izingxabano ezingaba khona kanye nokuncipha kokuthembana emisebenzini yephrojekthi . |  | yokwabelana ngenzuzo idinga ukusebenza kahle, ibe sobala, inciphise ubungozi bezentengiselwano futhi yandise izinzuzo ze-TK, futhi izodinga ukumodela kwezezimali nezomnotho kanye nokubikezela. ;   * Phenya futhi uthuthukise izindlela zokwabelana ngenzuzo ye-TK okungeyona eyemali ezingase zisekele imiphakathi enamalungelo ngokunikela ngeminikelo nangezindlela ezihambisanayo zomkhakha ozimele. * Yakha futhi uphakamise uhlaka olufanele nolulula lokubusa kanye |  |  |

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|  |  |  | nokufakwa kwezikhungo ukuze kuqaliswe futhi kuqashwe indlela yokwabelana ngenzuzo ye-TK |  |  |

# Ababambe iqhaza

## Isifinyezo Sohlelo Lokubandakanya Ababambe iqhaza

Izobuyekezwa

## Isifinyezo sohlelo lokubonisana nge-ESIA kanye ne-ESMP

Izobuyekezwa ngokusekelwe ku-SEP

# Iziphetho nezincomo