



Three Natural Resource-Based Beneficiation Models to Demonstrate Opportunities to Diversify & Optimise Benefits from Legalameetse Nature Reserve

The Legalameetse Nature Reserve [LNR] covers an area of 18 700 ha & is located in the Mopani Region of Limpopo Province, South Africa.

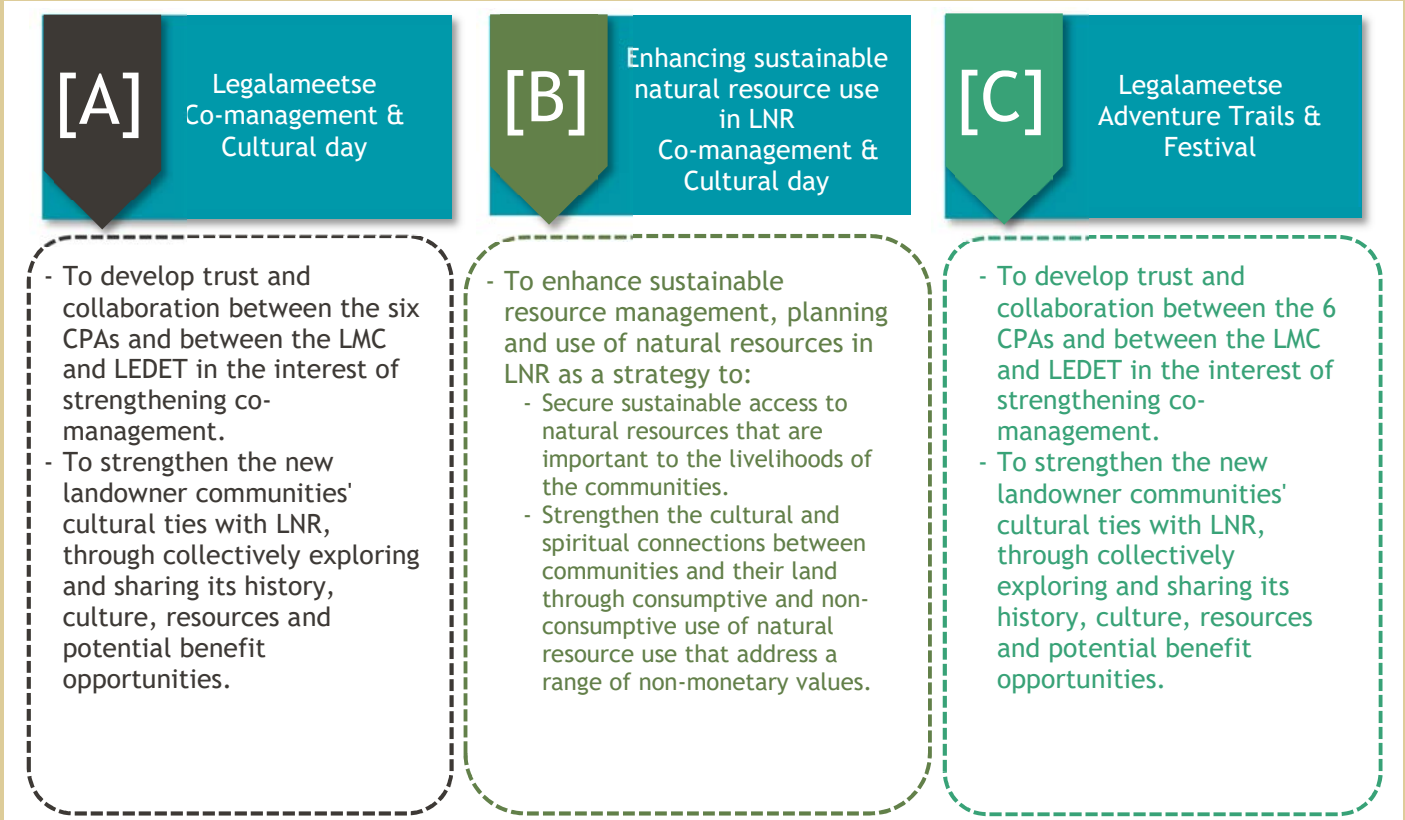
LNR was formally proclaimed as a nature reserve on 9 March 1984 in terms of Section 3(1) of the Nature Conservation in Black Areas Proclamation, 1978. It currently falls under the legal protection of the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003) (NEM:PAA), in terms of Section 12 thereof.

Land claims were submitted by six communities (namely Balloon, Paris, Cyprus, Madeira, Madutula and Mamashiane.) on LNR in terms of Section 10 of the Restitution of Land Rights Act, 1994 (Act No. 22 of 1994). The interests of these communities are represented by their respective Common Property Associations (CPAs), established as the landholding institutions under the Communal Property Associations Act, 1996 (Act No. 28 of 1996).

The National Environmental Management: Protected Areas Act (No.57 of 2003) provides for the co-management of a protected area following the settlement of land claims. It specifies co-management to involve the new owners and a state appointed management authority. A co-management agreement for LNR provides for co-management by the Legalameetse Management Committee (comprising the six CPAs) and the Limpopo Department of Economic Development, Environment and Tourism (LEDET), for the purposes of tourism, nature conservation and socio-economic development.

Overview of the Beneficiation Models

Natural resource-based benefication models have been developed to demonstrate potential opportunities to diversify and optimise benefits from LNR for the landowner communities, ranging from non-monetary benefits to financial opportunities. The benefication models aim to address livelihood needs and re-connect the communities to their environment, while contributing to biodiversity conservation. The following benefication models were developed to demonstrate opportunities across this range:



The focus is on natural resource-based benefication within the context of the LNR, which is a formally proclaimed protected area. The benefication models therefore take into consideration the fact that benefication opportunities are informed by the legal framework for the management of proclaimed protected areas and strategic management requirements.

Process & approach to developing the Benefication Models

The selection and development of the natural resource-based benefication models were based on a participatory process with the Legalameetse Management Committee (LMC) and community youth representatives. The benefication models address needs and aspirations expressed by the LMC, and align with the protected area status and conservation objectives of LNR.

The participatory process was undertaken:

- as a social learning process, in collaboration with AWARD, to capacitate and empower the LMC in identifying and planning natural resource-based benefication; and
- to cover a range of approaches to address diverse natural resource-based benefication opportunities in LNR.

The benefication models respond specifically to the following issues highlighted by the LMC:

- The objectives of the LMC and the challenges they are experiencing in terms of participating in co-management of LNR;
- The need to generate benefits from LNR for the landowners.

These issues, together with insights gained through numerous LMC workshops and from a situational assessment, informed the development of the three natural resource-based benefication models.

What is biodiversity?

Biodiversity is the range of living organisms on Earth, including those in terrestrial and aquatic environments. Biological diversity, or biodiversity for short, is the variety of living things including plants and animals. Biodiversity is the foundation of a healthy environment on which all human well-being depends, and it provides a number of natural services that everyone needs, for example:

- Biological resources that we can consume (e.g. foods and fruits; medicinal resources; wood products for fuel and building materials)
- Social benefits (e.g. recreation and tourism; cultural values; research, education and monitoring)
- Water resources and clean air
- Fertile soils
- Recovery from unpredictable events such as fires, floods and droughts.

Biodiversity conservation is the protection of individual species, habitats and ecosystems, so that biological diversity is maintained.

Conservation importance of Legalameetse Nature Reserve

LNR is a valuable conservation area for a number of reasons, including:

- LNR contains areas classified as “irreplaceable” in terms of Critical Biodiversity Values
- It includes vulnerable, threatened and protected ecosystems
- LNR conserves significant biodiversity, such as:
 - 36 plant species of conservation concern (including critically endangered species)
 - 13 threatened reptile, amphibian, bird and mammal species
- It is located within a National Freshwater Ecosystem Priority Area (FEPA), an Upstream FEPA, a Phase 2 FEPA and a Fish Support Area
- It plays an important role in terms of ecological processes associated with hydrology and the unique dolomite and ridges and escarpments
- It is located in a centre of endemism
- It plays an important social support role in local and surrounding communities
- It has an extremely rich historical background and a diverse cultural heritage

Source: Five Year Strategic Plan for Legalameetse Nature Reserve - 2013 to 2017 (NCC Environmental Services)

Social cohesion concerns the bonds that unite, or bring people together, the willingness of members of a society to cooperate with each other in order to survive and prosper. The bonds of social cohesion are shared values, shared challenges and equal opportunities and are evident in five dimensions:

Belonging, Inclusion, Participation, Recognition & Legitimacy¹

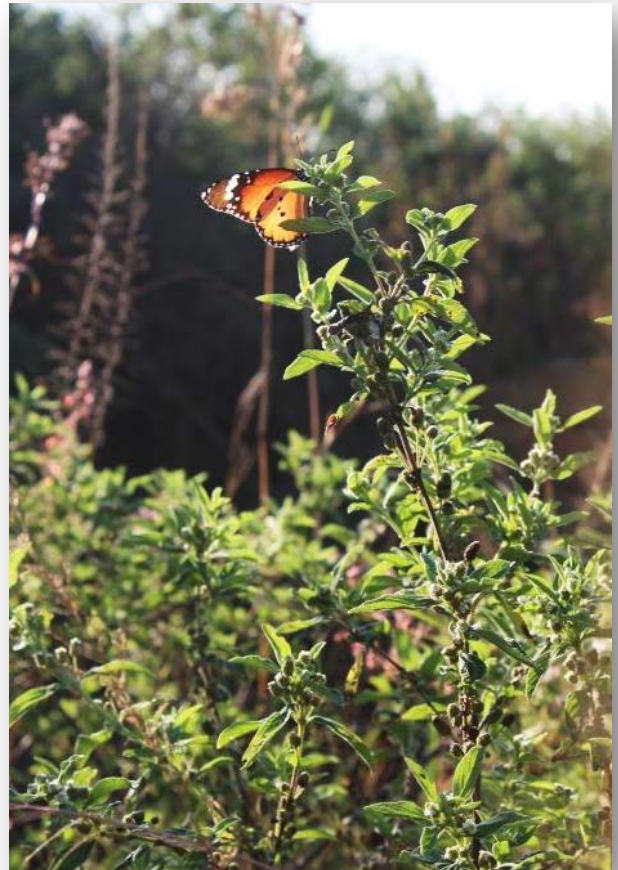
¹ Desai, A. (2015). An exploratory critique of the notion of social cohesion in contemporary SA. *Psychology in Society*, 49; Cloete, P. & Kotze, F. (2009). *Concept paper on social inclusion in local integrated development plans*. Pretoria: Department of Social Development.

The aim of this beneficiation model is to strengthen social cohesion and interpersonal trust between the landowner CPAs; and between the LMC and the Limpopo Department of Economic Development, Environment and Tourism (LEDET). It also aims to develop the connection between the landowner communities and the LNR.

The LMC has identified lack of trust and collaboration between the CPAs and with LEDET as key challenges to the co-management of LNR. Social cohesion and collaboration are fundamental to:

- Effective co-management;
- Realising the diversity of benefits that stem from LNR; and
- Equitable and sustainable sharing of these benefits.

The landowner communities have little knowledge of each other, and individuals are often not familiar with the Nature Reserve as families never had the opportunity to return after they were removed from the land. There is therefore very limited knowledge, other than among some of the elders, about the land, its many cultural and natural assets, and its history. This beneficiation model for a 'Co-management and Culture Day' aims to address these challenges.



The LMC together with members of the Legalameetse Youth Forum identified 'sense of community, sharing, connections with nature, sense of place and sense of identity' as important elements of well-being. This beneficiation model therefore aims to contribute towards strengthening the connections between the landowner communities and between the communities and LNR towards effective and sustainable co-management. The Legalameetse Co-management and Culture Day' is proposed as a series of one-day events hosted regularly (e.g. quarterly) by the LMC with the aim to provide an opportunity for the landowners to interact with one another within the Nature Reserve. The idea is to use social and educational activities to encourage people from different community groups to get to know one another, re-engage with their culture and to introduce the landowners to LNR.

It is in feeling connected to nature that we begin to appreciate its benefits and value, and in feeling connected to other people and our communities that we can work towards the equitable and sustainable sharing of these benefits.

The beneficiation model draws on the philosophy of ‘Ubuntu’, broadly meaning the creation of a sense of community / interconnectedness - a connection between all humanity; a culture of reciprocity, sharing and the responsibility of individuals to each other and the environment within which they live.



TYPES AND EXAMPLES OF ACTIVITIES PROPOSED BY THE LMC FOR THE LEKGALAMEETSE CO-MANAGEMENT AND CULTURAL DAY

TRADITIONAL GAMES

- Morabaraba
- Moruba
- Diketo
- Kgati
- Tsheretshere
- Warm/Swikiswiki
- Dibeke
- Chocho
- Serengshane
- Ready
- Tswioo
- Mosako

EDUCATIONAL ACTIVITIES

- Traditional quizzes (cultural laws, customs)
- Nkanonkano (story telling)
- Direto (praise)
- Thai (challenging questions)
- Taboos (Dilla)
- Dika le Diema (idioms)

TRADITIONAL DANCES & MUSIC

- Sekgapa
- Lepeša
- Dipela
- Setšolo (Lekope)
- Mogobo and Mankobo
- Le Tshipa songs
- Xipelane
- Motsonkolo

Also compose new songs about Lekgalameestse Nature Reserve, conservation and co-management as a reflection of the new times

The LMC identified the Legalameetse Co-management and Cultural Day to a priority activity that they want to implement in the short term. They unanimously agreed that they wanted to start preparing for the event as soon as possible.

An action planning process was therefore initiated with the LMC and youth forum representatives. The action planning process supports developing the details and logistics for hosting the event. This initially involved the LMC identifying and discussing the Who, What, When and How.

An action plan is a document that lists the things that need to be done to achieve a specific goal.



The LMC has identified some of the preliminary details including the event objectives, target audience and event date. They have also identified the key components that will need to be addressed in order to successfully host the event and they have started the process of developing the detailed activities under each of these components, as summarised in the table:

EVENT DESCRIPTION AND COORDINATING COMMITTEE	
Event Name of event	Legalameetse Co-management and Cultural Day To be decided
Date of event	September 2018
Location of event	Legalameetse Nature Reserve
Description of event & objectives	<p>Description: The event aims to provide social, cultural and educational activities that encourage interactions between members of the different land owner communities to build trust between people and strengthen social cohesion. It is intended that holding the ‘day’ within the LNR will encourage the landowners to come to the Nature Reserve to begin to become familiar with their land and to start building a connection between themselves and the Nature Reserve. The ‘day’ aims to encourage the transfer of local and cultural knowledge from the elders within the communities to the youth.</p> <p>Objectives:</p> <ul style="list-style-type: none"> ■ Re-connect people with each other, their culture and the Nature Reserve ■ Promote working together ■ Build trust ■ Encourage people to understand the importance of LNR ■ Education and fun.
Target audience	<ul style="list-style-type: none"> ■ All of the Legalameetse Nature Reserve landowners ■ More than 500 individuals
Coordinating committee	<ul style="list-style-type: none"> ■ The Legalameetse Management Committee (LMC) ■ Sub-committees will be created and will include the Legalameetse Youth Forum
Main planning components	<ul style="list-style-type: none"> ■ Finances and funding ■ Catering and decoration ■ Logistics (e.g. event name and themes, invitations, booking of venue) ■ Transport ■ Activities to be held ■ Water and sanitation ■ Health and safety ■ Co-ordinating people on the day

WHAT/HOW (TASK)	BY WHO	BY WHEN
1 Activities to be held on the day <ul style="list-style-type: none"> i. Decide on a programme for the day ii. Decide on activities (indigenous games, traditional music and dance, educational) iii. Design and plan activities, establish instructions and rules iv. Identify activity facilitators (people who will set up and assist with the activities on the day) v. Make, bring, purchase materials needed for the activities 	LMC & sub-committee	<ul style="list-style-type: none"> i. April ii. April iii. July iv. August v. September
2 Finances and Funding <ul style="list-style-type: none"> i. Identify sources of funding (fundraisers, sponsors, grants) ii. Approach potential sponsors and apply for grants iii. Plan and hold fundraisers iv. Save collected funds in an appropriate bank account, record all money received, record all expenditures 	LMC & sub-committee	<ul style="list-style-type: none"> i. April ii. May iii. June iv. Continuous
3 Catering and Decoration <ul style="list-style-type: none"> i. Decide whether catering will be provided and if so whether it will be for free or for sale ii. If provided, agree on the menu and source and contract suitable caterers iii. If for sale, agree on vendors and invite/contract vendors iv. Decide what decorations are needed and suitable for the 'day', engage an event planner to assist with decoration, seating, tables and shade 	LMC & sub-committee	<ul style="list-style-type: none"> i. April ii. August iii. August iv. August
4 Water and Sanitation <ul style="list-style-type: none"> i. Decide how drinking water will be provided (people could bring their own bottles for filling from taps or tanks) ii. Organise water supply (e.g. taps/tanks/pipes etc.) iii. Toilets - work out how many toilets will be needed (additional portable toilets) iv. Organise portable toilets (sponsor/hire, arrange transport and collection of toilets) v. Identify individuals to monitor the toilets on the day (for blockages, toilet paper etc.) 	LMC & sub-committee	<ul style="list-style-type: none"> i. April ii. August iii. April iv. July v. August
5 Health and Safety <ul style="list-style-type: none"> i. Identify potential risks or hazards, work out what is needed to ensure health and safety ii. Arrange for emergency management services (EMS) for the day iii. Identify individuals to monitor health and safety hazards on the day iv. Work out a plan for communicating any emergencies on the day 	LMC & sub-committee	<ul style="list-style-type: none"> i. April ii. July iii. August iv. August
6 Transport <ul style="list-style-type: none"> i. Decide how transport will be provided (buses, taxis, private transporters etc.) and the funds needed ii. Secure funds for transport (engage with the finance sub-committee) iii. Arrange transport (buses, taxis, private transporters etc.) iv. Identify co-ordinators who will organise people at the transport pick-up and drop-off sites 	LMC & sub-committee	<ul style="list-style-type: none"> i. April ii. July iii. August iv. August
7 Co-ordinating people on the day <ul style="list-style-type: none"> i. Work out a site plan for the day of where the different activities will be held, where the toilets will be placed, where people will sit and how they will get from one place to the next ii. Identify individuals who will show people where to go on the day 	LMC & sub-committee	<ul style="list-style-type: none"> i. April ii. August

The action planning process highlighted that additional workshopping of each of these elements is needed to further explore the event details and take this conceptual action plan into implementation. Several members of the group indicated a desire to develop further knowledge on natural resources and ecosystem processes (eco-literacy).

Participatory process applied to develop the Beneficiation Models

The three natural resource-based beneficiation models were developed through a participatory process with the Lekgalameetse Management Committee (LMC) and youth representatives.



A series of six workshops were held with the LMC over the course of 11 months to explore and develop concepts for the beneficiation opportunities. A range of activities and materials were developed for each workshop, including posters to introduce conservation-based enterprises, a template for developing a business plan, a simulation game for building consequential thinking and decision-making skills, and various posters, brochures, slides shows and information sheets. A summary of the themes addressed in each of the six workshops is outlined below.

DATE	MAIN THEMES ADDRESSED IN WORKSHOP
April 2017	<ul style="list-style-type: none"> ■ Exploring the LMC objectives for benefits from LNR ■ Assessing LNR assets ■ Scoping of opportunities for and challenges to harnessing benefits from LNR
May 2017	<ul style="list-style-type: none"> ■ Introduction to the concepts <ul style="list-style-type: none"> - Biodiversity - Entrepreneurship and enterprise development - Conservation-based enterprises
August 2017	<ul style="list-style-type: none"> ■ Mapping the assets, and natural and cultural points of interest of LNR ■ An introduction to business planning <ul style="list-style-type: none"> - Activity to develop a preliminary business plan ■ Scoping of three potential beneficiation models
October 2017	<ul style="list-style-type: none"> ■ Business planning: guide to opportunities for applying for support (financial and mentorship) ■ Update on development of beneficiation models with detailed discussions on the adventure trails and festival idea ■ Activities to explore and discuss the importance of LNR and what can contribute to well-being <ul style="list-style-type: none"> - 'Mapping' benefits from LNR (e.g. bush tea plants, thatch grass, clean water, cultural benefits) - Identifying elements of well-being that are a priority for the landowner communities
January 2018	<ul style="list-style-type: none"> ■ Update on development of beneficiation models and discussions ■ Discussions around the importance of decision-making <ul style="list-style-type: none"> - Introduction and playing of CROSSROADS: A game of decisions and consequences (simulation game)
March 2018	<ul style="list-style-type: none"> ■ Review of relevant legislation and the LNR Strategic Plan and how this informs beneficiation opportunities that can be undertaken in LNR ■ Detailed discussions on the three beneficiation models <ul style="list-style-type: none"> - Co-management and Cultural Day - Sustainable Natural Resource Use - Legalameetse Trail Adventures Enterprise ■ Detailed discussions on the co-management and cultural day beneficiation model <ul style="list-style-type: none"> - Demonstration of cultural activities - Developing an action plan

[B]

Enhancing Sustainable Natural Resource Use in Legalameetse Nature Reserve

This beneficiation model aims to enhance sustainable management, planning and use of natural resources in LNR as a strategy to:

- Secure sustainable access to natural resources that are important to the livelihoods of the communities
- Strengthen the cultural and spiritual connection between communities and their land through consumptive and non-consumptive natural resource use that addresses a range of non-monetary values

Natural resource use in LNR is particularly important for the landowner communities, who gain benefits from a range of consumptive and non-consumptive uses of indigenous resources.

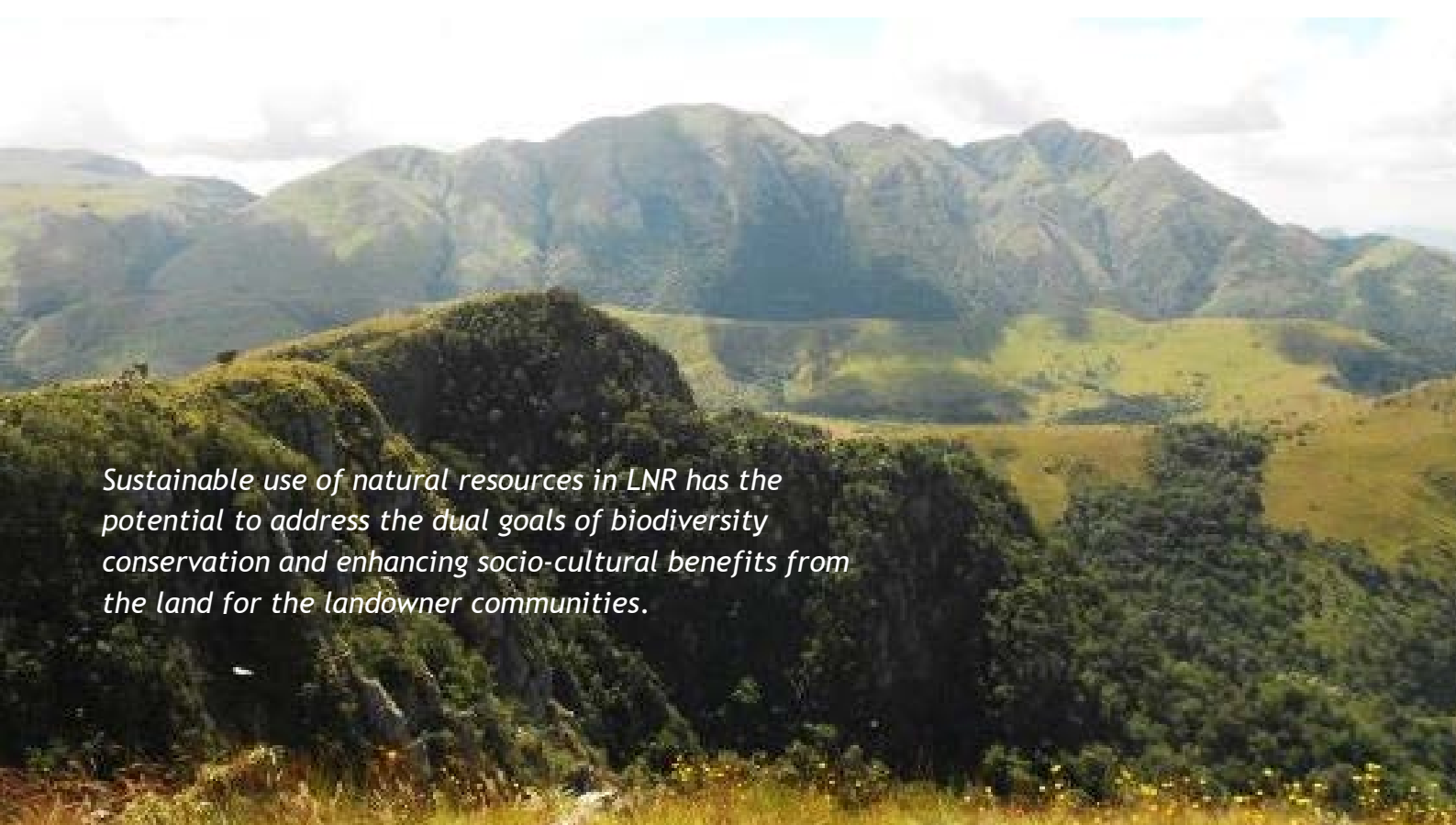
Some of the most important consumptive resource use includes: broom grass (also known as 'bush tea'), medicinal plants, wood, thatch grass, water, and grazing for livestock.

Harvesting of these resources is currently controlled through a permitting system implemented by LEDET. However some harvesting of plants and animals in LNR is undertaken illegally without permits.

In addition to the consumptive resource use, LNR's unique historical and cultural attributes also provide benefits from a socio-cultural perspective:

- Sacred sites for spiritual and religious practices
- Sites such as rivers and waterfalls used for traditional and cultural practices
- Recreational activities

Natural resource use is an important contributor to livelihoods and cultural well-being. It is therefore not only in the interests of biodiversity conservation, but also for the well-being of local communities the use of these resources is sustainably managed.



Sustainable use of natural resources in LNR has the potential to address the dual goals of biodiversity conservation and enhancing socio-cultural benefits from the land for the landowner communities.

Natural resource use needs to be controlled so that it does not degrade the ecological or biodiversity conservation imperatives of LNR

Management of sustainable use depends on integrated management planning and implementation by the key stakeholders i.e. LMC, LEDET and the resource users.

Monitoring and adaptive management must be implemented to inform resource use, continually improve management, and to reduce or mitigate any negative environmental impacts.

What is the value of natural resource use?

'Subsistence', or non-commercial, resource use can refer to a complex set of values beyond simply consumptive use. Sustainable use of natural resources strengthens the connection between people and their land. The consumptive and non-consumptive use of natural resources creates value through a range of ways:

- Contributing to preserving practices that have been used by past generations through intergenerational transfer of knowledge, values and skills
- Contributing to social cohesion through sharing and distribution of harvests by households
- Supporting culturally important practices such as right of passage ceremonies and resources used during initiation schools
- Providing social, cultural, nutritional and sometimes even economic elements to the community

These benefits help to connect people to their environment in tangible and intangible ways that are difficult to measure. In feeling connected to nature and their environment, people begin to appreciate its benefits and value. Responsible management is therefore needed to ensure that the value of these resources is not lost.

Establishing the What, Why, Where, How & Who of Sustainable Resource Use in Legalameetse Nature Reserve

It is important that this planning and management builds on traditional sustainable practices and shows respect to local knowledge, best practices from other sites, and science, while aligning with the strategic management goals and objectives of LNR.

Planning and managing sustainable resource use needs to involve all stakeholders, including the LMC, resource harvesters and LEDET. The following process can be applied to develop collaborative partnerships, planning and management for responsible resource use. These are needed to ensure that the value of, and benefits from, natural resource use in LNR continue for current and future generations.

What

is sustainable
natural resource
use?

Develop a common understanding of what sustainable natural resource use is specifically in the LNR context. Stakeholders should collectively establish a common understanding of what sustainable natural resource use means and what it involves, including for example:

- Identify the resources used (consumptive and non-consumptive uses) and what the values of this use are
- Understand the need to control and regulate resource use
- Understand the benefits of practising sustainable natural resource use
- Identify the threats and challenges (direct and indirect) to sustainable resource use
- Recognise the impacts and consequences of unsustainable use

Why

practise
sustainable
natural resource
use?

A healthy environment provides opportunities for resource use that offers a range of benefits. Unsustainable resource use can however cause environmental degradation and the loss of these benefits, sometimes permanently. Poor harvesting techniques, poor fire management and invasive alien plants (for example) can erode the sustainability of resource use. Natural resources use therefore needs to be undertaken sustainably in order to:

- Prevent resource extinction - too frequent and too extensive harvesting can result in local extinction of individual species and damage to wild plant or animal populations.
- Maintain seed reserves and regeneration - sustainable use ensures that adequate seed reserves are maintained so that further seedlings are produced and there is regeneration of healthy populations.
- Maintain the health and vitality of the environment and species used - so that they can continue to support utilisation and generate benefits.
- Sustain benefits - secure meaningful benefits for current and future generations from the sustainable harvesting of natural resources in LNR.
- Align with the legal framework for the management of proclaimed protected areas and the strategic biodiversity conservation objectives for LNR.

Where

to practise sustainable natural resource use in LNR?

The Legalameetse 5-Year Strategic Management Plan defines five zones together with management guidelines and broad conservation and tourism infrastructural requirements designated for each use zone. The zones include:

- A] Natural
- B] Development - low intensity
- C] Development - high intensity
- D] Development - reserve administration
- E] Special protection / special management

The location of consumptive and non-consumptive resource use needs to be implemented according to these zones and in line with the associated management and conservation guidelines. The plan for the regulation and control of resource use therefore needs to take the following into consideration:

- Identify priority conservation (no-use) zones where no resource use will take place
 - Understand what conservation zones aim to achieve and why they are important (e.g. as corridors for migration, and as seed banks)
- Identify priority conservation (no-use) zones where only non-consumptive resource use will take place
- Identify sustainable use zones in LNR where consumptive and non-consumptive use can take place
 - Identify and map sustainable use areas for resource harvesting and establish why they are important
 - Identify how they will be monitored and how this will be used to inform management and adaptation of harvesting practices

How

to practise sustainable natural resource use?

There is a need to develop consensus among the stakeholders on the importance of planning, management and regulation of sustainable natural resource use. To be effective, this needs to include the following issues:

- Develop a sustainable natural resource use management plan for each species or area being used, and establish a system for controlling and regulating use in-line with monitoring outcomes and an adaptive management approach (e.g. access and use permits)
- Identify and agree on sustainable use practices, including for example:
 - Identify list of species to be harvested and their sustainable harvesting areas
 - Agree on harvesting methods, quantities, frequencies, seasons, etc. for each species
 - Identify thresholds, seasons and timing for non-consumptive use
 - Identify potential sustainability risks and threats
 - Identify approaches to manage and mitigate threats and risks to sustainable resource use
- Identify alternative sustainable natural resource use opportunities and sources to reduce pressure on 'high value' species.
- Develop and implement monitoring systems to track and evaluate impacts and consequences of resource use in LNR, and apply monitoring results to inform adaptive management and revisions to resource use management plan.

Who

needs to practise sustainable natural resource harvesting?

Management of sustainable use depends on integrated management planning and implementation by all the key stakeholders i.e. LMC, LEDET and the resource users themselves. Effective management therefore depends on strong collaborative partnership between these stakeholders. Effective management and control by these role players will require the following:

- Identify key role players for each resource use (consumptive and non-consumptive) and associated roles and responsibilities for achieving sustainable natural resource use management
- Identify existing capacity and strengths of role players to manage sustainable resource use effectively
- Develop capacity where needed to empower stakeholders to effectively implement sustainable resource use management
- Develop monitoring protocols and associated roles and responsibilities for effective implementation of the monitoring systems
- Identify who will benefit from sustainable natural resource use in LNR and establish criteria for equitable allocation of use rights / quotas where applicable
- Establish how benefits will be shared equitably among beneficiaries

Basic rules & guidelines for sustainable resource harvesting

[Source: Adapted from ABC's of sustainable harvesting - CapeNature: www.capenature.co.za/wp-content/uploads/2015/10/sustainable-use-of-natural-resources.pdf]

- Protect the natural habitat of harvested species
 - If the habitat of plant species that are being harvested is destroyed, the species and all the others that are found in that habitat will be lost
- Plan harvesting season
 - Ensure that the harvesting of plant resources takes place in a season that does not cause degradation of the plants
- Protect the seed banks of harvested species
 - Seeds are essential for rejuvenating plant populations and if not enough seeds remain after harvesting the populations cannot rejuvenate
- Establish the harvesting limits
 - Plants can sustain the harvesting of a certain amount of material. If the amount, intensity and frequency of harvesting exceeds these limits the plant population will degrade and the plants could disappear from the ecosystem
- Prevent erosion
 - Seed reserves are found in the top layer of soil and erosion of the layer will also erode the plant seed banks
- Protect the species and processes needed for pollinating the plant species being harvested
 - Insects such as butterflies, bees and ants are essential for pollinating the plants so that they produce new plants. These pollinator species must also be protected, for example from indiscriminate use of insecticides
- Control fire
 - Uncontrolled fires and poor fire management can result in the destruction of plants and seed banks. The timing/season, intensity and frequency of fires needs to be planned so that it does not negatively impact the plant populations
- Eradicate alien and invasive species (AIS)
 - AIS negatively affect natural habitats and the indigenous species in that habitat can be lost
- Establish corridors to connect conservation areas and areas in which harvesting takes place
 - Natural corridors are important for the movement of pollinators and seeds so that plant populations are continuously rejuvenated and remain healthy

Examples of the value of natural resource use

Contribution that the traditional broom trade makes towards helping poor women cope with adversity

There is an extensive local and regional market for traditional handcrafted twig and grass brooms. The main species used for the twig and grass brooms are the shrub *Athrixia phyllicoides* and the grass *Festuca costata*. These species occur in grasslands and wooded grasslands at higher altitudes in the region, including LNR. These traditional brooms are among the most extensively traded natural products in the country. They are bought for their practical and cultural values, such as marriage gifts, “protectors” against lightning, and implements for the application of traditional protective medicines around the homestead.

This market also creates an opportunity that makes an important contribution to livelihood security for a significant number of poor households in the region who harvest the grass and twig materials from the wild to make the brooms. The resource harvesters are typically economically vulnerable middle-aged to elderly women with poor levels of education and few assets. The revenue earned is mainly used by the harvesters to meet several basic needs, and educate their children.

Source: Shackleton, S. and B. Campbell (2007) *The Traditional Broom Trade in Bushbuckridge, South Africa: Helping Poor Women Cope with Adversity*. *Economic Botany*, 61(3):256-268

Biocultural Diversity Conservation

Biocultural diversity is emerging as a dynamic, integrative approach to understanding the links between nature and culture, and the interrelationships between humans and the environment. Cultural beliefs, values, knowledge systems, practices and languages all manifest a close relationship between humans and the environment in traditional and rural communities worldwide. This indicates that in order to maintain biodiversity we also need to sustain cultural diversity. Similarly, in order to sustain cultural diversity we also need to maintain biodiversity.

The contribution that biodiversity makes to cultural and utilitarian values is evidenced by its untiring use for cultural practices by communities across South Africa. A study into the significance of non-timber forest product utilization and cultural practices in rural and urban households illustrated that, of the 96 plant species used regularly by households, 85% were used for cultural purposes. The study also highlighted that even wealthy households in both rural and urban communities continue to use natural resources for cultural purposes. Natural resource use for cultural purposes transcends both economic status and the rural-urban divide. An example of these cultural uses is the construction and maintenance of cultural artefacts such as kraals, where ritual sacrifices are performed. These ritual sacrifices represent the most important and effective form of communication with the ancestral spirits.

Source: *Biocultural Diversity Conservation: A Global Sourcebook* Luisa Maffi and Ellen Woodley. 2010. Earthscan, London.

Contribution of woodland products to rural livelihoods in the north-east of Limpopo Province

The contribution that natural resources harvested from nature make to rural livelihoods as a source of energy, food and a means of generating income is widely recognised. The following examples were highlighted during a survey of households in north-east Limpopo:

- **Fuelwood** - 80% percent of the households surveyed use fuelwood as the primary source of energy for cooking and space heating. Fuelwood is harvested by women and girls for household use. Some households also sell fuelwood to generate income.
- **Household utensils** - The wood of *Colophospermum mopane*, *Diospyros mespiliformis*, *Combretum apiculatum*, *Acacia nigrescens*, *Sclerocarya birrea*, *Terminalia sericea*, *Combretum imberbe* and *Dichrostachys cinerea* is widely used for making household utensils such as mortars, pestles, spoons, plates, walking sticks for the elderly, decorations, and hand hoes used for ploughing. A mortar and a pestle are traditionally used for pounding maize, peanuts and in the preparation of medicine from medicinal plants.
- **Medicinal supply** - Medicinal plants are harvested frequently by households themselves for self-treatment, and by traditional healers and herbalist for treating illness and selling in the urban market. It is evident that a very significant percentage of people in South Africa depend to a greater or lesser extent on medicinal plants for health care.
- **Edible mushrooms** - Edible mushrooms are considered a delicacy and an important contribution to household nutrition. Mushrooms typically grow on dead organic matter and can be found in grasslands, woodlands and forests.
- **Thatching grass** - Thatch grasses are harvested annually to thatch houses, traditional structures such as huts and granaries. Thatching grasses are mostly harvested in the dry season by women and girls. There is currently a high demand for thatching grass, even for thatching modern structures, such as restaurants and guest houses. Grass species most commonly harvested for thatching include *Hyparrhenia filipendula* (Fine thatching grass), *Hyperhenia hirta* (Common thatch grass), *Hyperthelia dissoluta* (Yellow thatching grass), *Themeda triandra* (Red grass) and *Heteropogon contortus* (Spear grass).
- **Wild fruits** - Many wild fruits are eaten and traded. A typical example is the fruit of *Sclerokarya birrea* (Marula) which is eaten fresh or processed to make traditional Marula beer. Marula beer forms an integral part of local culture and spirituality, and the drinking of Marula beer is both a social and cultural activity in most rural areas.

Source: Makhado, R., G. Von Maltitz, M. Potgieter and D. Wessels (2009) Contribution Of Woodland Products To Rural Livelihoods In The Northeast Of Limpopo Province, South Africa South African Geographical Journal 91 (1) 46 - 53.



ECOLOGICAL, SOCIAL AND FINANCIAL SUSTAINABILITY

A natural resource-based beneficiation initiative is one that provides benefits to people now and into the future while simultaneously contributing to the management and conservation of natural resources. Success is measured in the ecological and social returns of the initiative, and where the aim is to secure monetary benefits, then also by the profitability of the initiative. The triple bottom line approach is a framework that integrates these three dimensions of sustainability: social, environmental and financial.

The Triple Bottom Line Approach

An accounting framework that incorporates three dimensions of performance: ecological, social and financial

Ecological	Social	Financial
<p>Adopt sustainable ecological practices</p> <p>Generate benefits linked to pro-conservation actions</p> <p>Example measures:</p> <ul style="list-style-type: none"> ■ Water quality and quantity ■ Land transformation ■ Waste management ■ Erosion, sedimentation ■ Alien plant infestation ■ Excessive nutrients ■ Electricity consumption 	<p>Apply fair labour practices and equitable benefit-sharing</p> <p>Generate benefits linked to social needs (well-being)</p> <p>Example measures:</p> <ul style="list-style-type: none"> ■ Unemployment rate ■ Median household income ■ Relative poverty ■ Education levels ■ Average commute time ■ Violent crimes per capita ■ Health-adjusted life expectancy 	<p>Adopt efficiency and reduced cost practices</p> <p>Distribution of benefits to many rather than a few</p> <p>Example measures:</p> <ul style="list-style-type: none"> ■ Revenue ■ Expansion ■ Job growth ■ Income

Source: Adapted from Slaper and Hall (2011) and Humke et al. (2012)

Introduction to Business Planning

A Business Plan approach to planning natural resource-based beneficiation initiatives

The final decision to implement a natural resource-based beneficiation model, particularly monetary benefit-based models, should be grounded on a comprehensive business plan and feasibility study (although a business planning framework is also useful in planning non-monetary benefit models). In the participatory process with the LMC and youth representatives, a business plan framework was introduced. The business plan structure was used to work through various elements of the 'Legalameetse Trail Adventures' enterprise idea with the LMC and youth representatives. In keeping with the process run with the LMC and youth group, this beneficiation model is presented in the form of a preliminary business plan for the Legalameetse Trail Adventures Enterprise.

What is a Business Plan?

It is a statement of the enterprise you intend to establish, and your goals and objectives. The business plan describes the opportunity and how the enterprise will generate benefits, how it will operate, how it will be managed and what the likely costs of establishing and operating the enterprise will be. Developing a business plan is a process that makes you think through your idea in a structured way to determine whether it is viable. The business plan helps communicate the enterprise idea to obtain external support.

Components of a Business Plan

1. Identity

- Describe your business.
- Who are you, what do you do?
- Are you a group of people, or a single owner?

2. Opportunity

- What is the business opportunity?
- Why do your customers need the product/service?

3. Product or service

- Describe your enterprise idea.
- What are you selling?
- How will you make money?
- What is your strategy - 'cheapest', best quality, unique?

4. Biodiversity

- How does it support (help) biodiversity?
- How will you ensure the business doesn't have a negative impact on biodiversity and the environment?

5. Market analysis

- Who will buy it?
- How many buyers are there?
- Where are the buyers from?
- What/who is the competition?
- How will your product/service be better?
- What do other businesses charge?

6. Design

- What size will your enterprise be?
- How many goods sold/people serviced?
- What area of land will you need?
- How will you lay out your facilities?

7. Operations

- How will you provide the product?
- What materials and technology are needed?
- Where will your enterprise be?
- Do you need lots of land, or to be in town?
- Where will you get your supplies and/or resources?

8. Management & organisation

- Who will manage the business?
- Will you hire people? How many?
- What skills are required?
- Will you need partners? Who?
- What will be their role?

9. Marketing plan

- How will you attract customers?
- How will you advertise (let people know what you are selling)?

10. Revenue

- What will be the main source of income?
- What will you charge per product/ service/ person?
- How will you manage the money (bank account, cash)?
- How will you split the profits?
- Who is responsible for any losses?

11. Expenses

- What will be the main expenses?
- When will you incur these expenses (before opening, daily operations)?

12. Further considerations

- Do you need any permits/licences (for example, for using water, for building infrastructure)?
- What information and advice do you need? Who can provide it?
- What do you need to do to get started?

[C]

Legalameetse Trail Adventures

This beneficiation model aims to demonstrate opportunities to generate financial benefits including jobs and monetary benefits that address the livelihood needs of the new landowner communities

Enterprise vision

Legalameetse Trail Adventures will be a community-owned enterprise operating within the LNR hosting an adventure trail and cultural festival and offering guided trail activities through the Reserve.

The vision of the enterprise is to secure:

- Meaningful and sustained benefits derived for the owner communities
- Protection and promotion of the Nature Reserve's outstanding scenic qualities
- Preservation of the unique historical and cultural attributes of LNR
- Conservation of the biodiversity and ecosystem health of LNR.



Enterprise products: Adventure trails & festival

1. A trail adventure event to be held annually in conjunction with a family-friendly festival, including:

- Multiple options such as walking, running and mountain biking over different distances
- Events suitable for children
- Food and entertainment for the participants and their supporters
- Cultural music, dancing, storytelling
- Retail of traditional foods, art and crafts.

2. Guided trails offered through LNR linking points of natural (biodiversity and landscape) and cultural interest

- Themed trails will be offered (e.g. focusing on birds, butterflies, flora, historical and cultural elements, and physical adventure)
- Visitors can also use the trails without a guide.

The aim of the adventure trail and festival event is to attract new visitors to LNR and showcase the natural and cultural assets of the Nature Reserve. Guided trails provide activities for visitors encouraging longer stays at the Nature Reserve.

Livelihood & conservation outcomes

- The sustainable nature-based tourism enterprise will contribute to revenue and employment opportunities for the land owner communities while promoting conservation of the biodiversity and ecosystem health of the Nature Reserve.
- The enterprise will increase the revenue proceeds from LNR - through increased visitor numbers and length of stay - and therefore increase the financial benefits to the six owner communities.
- By not impacting the land in a significant way, the ecosystem health (e.g. clean water and air) and biodiversity (e.g. rare butterflies and ancient yellowwood trees), and therefore the broader benefits of LNR, are conserved.
- This enterprise also supports the conservation and showcasing of the Nature Reserve's unique cultural, historical and archaeological attributes.

Outline of the Preliminary Business Plan for the Legalameetse Trail Adventures

This is a summary of the “Lekgalameetse Trail Adventures: A Preliminary Business Plan” which is described in more detail in a supplementary document¹. At this stage, it is not a comprehensive business plan, but rather aims to guide further assessments and actions.

1. Identity

Legalameetse Trail Adventures will be a community-owned enterprise operating within the LNR hosting an adventure trail and cultural festival and offering guided trail activities through LNR.

2. Opportunity

LNR provides an attractive setting for visitors. There are basic products and services that tourists expect when visiting a destination. Visitors need a place to sleep, eat and feel safe. At LNR, the anchor attraction (the Reserve) and some accommodation is provided. However, accommodation alone is not enough to encourage visitors to stay in a destination for very long. Tourists need interesting things to see and do. Legalameetse Trail Adventures will address this gap by broadening the activities on offer to visitors through a range of trail-based adventures including an annual festival event.

3. Product description

The enterprise will host an annual adventure trails and festival event and offer guided trail adventures within LNR. It is envisaged that the event will provide multiple recreation opportunities for a range of people including domestic tourists, adventure seekers, school groups, international travellers, and sport enthusiasts.

4. Biodiversity conservation

Legalameetse Trail Adventures will contribute to preserving the biodiversity and ecosystem health of LNR and support the vision for LNR set out in the strategic plan, by:

- Employing best practices in the development and operation of the adventure trails and festival event, including the monitoring of potential ecosystem and biodiversity impacts
- Recognising the value of LNR's unique natural, historical, cultural and archaeological attributes
- Generating increased financial benefits for the landowner communities and management of LNR
- Providing economic alternatives to other potentially destructive activities within the Nature Reserve.

5. Market analysis

The analysis of the tourism market highlights several opportunities:

- Expected growth in the tourism sector in South Africa
- A demand for products and services attractive to the 'Visiting friends and relatives'² tourist segment
- An opportunity to grow the tour guide sector and related services in Limpopo
- A demand for a wider variety of tourism products around 'anchor' attractions such as nature reserves
- An emerging market for adventure-based tourism products and activities.

Legalameetse Trail Adventures is well placed to respond to these market demands by offering family friendly adventure activities centred around natural and cultural attractions.

6. Design

The design of the Legalameetse Trail Adventures will take a phased approach, starting with a single annual trail festival event and a few themed trails activities. The idea is to promote LNR and create a solid reputation of the enterprise, while building the experience of the enterprise in providing trail adventure activities and events. The trail options, activities and events can then be expanded in future. For example, orienteering / treasure hunting / geo-caching options will be explored at a later stage. Trails, activities and events suitable for school groups and educational purposes offer further areas for expansion. The enterprise itself may grow in experience to the point where it could expand into offering festival events and trail activity design and management services to other areas (outside of LNR).

7. Operations

Legalameetse Trail Adventures will operate from the LNR. The enterprise will offer its services and products to visitors in two ways. Legalameetse Trail Adventures will **organise and host an annual trail festival** which will offer multiple trail-based events (e.g. running, cycling). Visitors will be charged for the different events (various packages will be offered) and for access to the festival. Camping accommodation will also be offered for the festival weekend. Safety officers will be hired to monitor the events and the festival. Festival activities will be family friendly (no loud music and no bars) and will be regulated by event officers.

Legalameetse Trail Adventures will **offer guiding services and information materials** (e.g. field-books/pamphlets, fact sheets and trail maps) based on the trail network within LNR. Themed trails will also be offered (e.g. focusing on birds, butterflies, flora, historical and cultural elements and physical adventure). Visitors will be charged for guiding services. An administration officer will take bookings, schedule the guided trails, collect payment (and provide a receipt to the guests) and inform the various guides of when they need to be available and for which trails.

8. Management & organisation

A manager would oversee daily operations including the management of staff, trail activities, festival planning and facilities, product promotion and monitoring. The manager will be supported by an administration officer. Certified guides will be needed. The character, knowledge and professionalism of guides are critical to developing and maintaining the reputation of Legalameetse Trail Adventures. Additional staff will be needed during the festival (e.g. event marshals, safety officers).

An appropriate structure of the organization needs to be determined. This could take the form of a co-operative or a possibly a non-profit type structure. The organisation structure needs to be suitable to how the LMC plan to share or re-invest the returns (revenue sharing model adopted) and the terms of the co-management agreement.

9. Marketing plan

The trail festival is a primary promotional strategy for Legalameetse Trail Adventures. The festival is an opportunity to attract new visitors to LNR and showcase the natural and cultural attractions of LNR to a broader market. Advertising of the festival and guided trails will be pursued through several channels such as the LNR webpages (e.g. Limpopo Tourism), trail running and mountain biking clubs, local tourist information centres and within LNR itself (e.g. brochures in the rooms and the check-in office, signboard at the entrance gate).

10. Revenue

There will be two ways in which revenue is generated (1) revenue from entrance to the trail festival and events and (2) revenue from providing guiding services. The festival also provides additional entrepreneurial opportunities such as retail opportunities (traditional foods, arts and crafts) and a need for support services (e.g., transport, entertainment - traditional storytelling and dance, catering).

Simple estimates of gross revenue potential from the trail festival, based on entrance fees and attendance numbers of similar events, indicate a once-off taking in the region of R235 000, assuming approximately 1 300 people attend the festival. Further details and assumptions are provided in the supplementary document.

11. Expenses

For the trail festival, the main expense categories are likely to be event organisation, camping facilities, water and sanitation provision and support staff (e.g. health and safety, event marshals). Sponsorship is one option for covering these expenses. Training, skills development and guide certification are main expenses associated with the overall enterprise. Operating costs are a further expense (e.g. salaries and overhead costs). Water and electricity use and trail maintenance costs will need to be negotiated between the LMC and LEDET.

¹ INR (2018). *Legalameetse Trail Adventures: A Preliminary Business Plan*. RESILIM O Sub-grant. See back page for contact details for further information.

² *Visiting Friends and Relatives* is a form of travel where either (or both) the purpose of the trip or the type of accommodation involves visiting friends and / or relatives.

LNR beneficiation models: Going forward

There are several aspects that need further consideration in taking the models forward:

- The **feasibility** of the initiatives needs to be assessed in more detail. This is particularly relevant to the Legalameetse Trail Adventures Enterprise model, but all the models will incur set-up and operation costs and an investigation of what the likely costs will be is needed. The feasibility assessment would need to assess whether, and how, the initiative could be (i) ecologically sustainable, (ii) equitable (fair socio-economic beneficiation), and (iii) financially viable (in the case of a “commercial” operation - generating monetary benefits; in the case of non-monetary benefits - how costs will be covered).
- For the Legalameetse Trail Adventures Enterprise initiative, an appropriate **ownership structure** (legal entity) needs further investigation. This could take the form of a co-operative whereby decision-making and ownership power rest in the hands of the members and an executive board, or a non-profit type structure, whereby surplus that is generated is re-invested in the organisation. This would be suitable if Legalameetse Trail Adventures forms one component of a broader organization representing the landowner communities. The enterprise could partner with others for support, while retaining sole ownership. The arrangements for how the enterprise operates with LNR would need to be established, based on the co-management agreement and through discussion between the LMC and LEDET. These issues are not yet clear and would need to be further explored and considered for the other two beneficiation initiatives as well.
- For each of the beneficiation initiatives, agreement between LEDET (the State) and the landowners regarding the **sharing of revenue and responsibilities** would need to be established (or taken into account in the co-management agreement). This should cover who will be part of the initiative, who will be responsible for what, their relationship to each other, and who will benefit in which way. These decisions should be determined through transparent, participatory processes with the landowners and LEDET, and decisions need to be documented (i.e. in the co-management agreement).
- In further developing the beneficiation models and in preparation for implementation, **additional capacity development** with the land owner communities is needed. A priority area of capacity development is **eco-literacy** (an understanding of natural systems). This could be linked with further knowledge building around the legislation governing the management of a protected area (for example the LNR strategic plan).
- The **specialist skills, training and qualifications/certifications required** for each initiative needs to be ascertained. In preparing for implementation, it would be useful to establish a database of existing skills, experience and qualifications within the landowner communities. This would assist in gathering together the different skills needed for each initiative and to identify skills/knowledge gaps. Further training, qualified staff and technical advice and support may be required.



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This document is intended to provide information for those considering natural resource-based beneficiation opportunities in LNR, with particular focus on AWARD in support of their activities with the Legalameetse Management Committee in LNR as part of the RESILIM O Project.