



GEF-6 REQUEST FOR ONE-STEP MEDIUM-SIZED PROJECT APPROVAL

TYPE OF TRUST FUND: GEF TRUST FUND

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PART I: PROJECT IDENTIFICATION

Project Title:	Shepherding biodiversity back into South Africa's Productive Landscapes		
Country(ies):	South Africa	GEF Project ID:1	9382
GEF Agency(ies):	UNEP	GEF Agency Project ID:	01333
Other Executing Partner(s):	Landmark Foundation Trust in collaboration with Department of Environmental Affairs	Submission Date:	April 12, 2016
GEF Focal Area(s):	Biodiversity	Project Duration (Months)	48 months
Integrated Approach Pilot	IAP-Cities <input type="checkbox"/> IAP-Commodities <input type="checkbox"/> IAP-Food Security <input type="checkbox"/>		
Name of Parent Program:	N/A	Agency Fee (\$)	96,686

A. FOCAL AREA STRATEGY FRAMEWORK AND PROGRAM²:

Focal Area Objectives/programs	Focal Area Outcomes	Trust Fund	(in \$)	
			GEF Project Financing	Co-financing
BD-4: Mainstream biodiversity conservation and sustainable use into production landscapes and seascapes and production sectors	Outcome 9.1 Increased area of production landscapes and seascapes that integrate conservation and sustainable use of biodiversity into management.	GEFTF	1,017,750	5,500,000
Total project costs			1,017,750	5,500,000

B. PROJECT FRAMEWORK

Project Objective: To foster biodiversity conservation on livestock farms, through a return to human shepherding and the development of a wildlife-friendly produce branding scheme, leading to Payment for Ecosystem Services as a tool in conservation and local economic development.

Project Components/ Programs	Financing Type ³	Project Outcomes	Project Outputs	Trust Fund	(in \$)	
					GEF Project Financing	Confirmed Co-financing
Component 1. Mainstreaming Biodiversity Conservation on livestock farms through biodiversity-friendly shepherding practices	TA	Outcome 1. Biodiversity-friendly shepherding practices are documented, tested and applied on large commercial farms through training of herders	Output 1.1. Conduct an evaluation of the actual environmental and economic impact of all methods of management of predation and damage-causing animals on livestock farms, both lethal (where livestock farmers continue to prefer this method), and non-lethal methods (where farmers wish to test these methods on their farms). Output 1.2. Biodiversity-friendly	GEFTF	429,477	3,750,000

¹ Project ID number will be assigned by GEFSEC and to be entered by Agency in subsequent document submissions.

² When completing Table A, refer to the excerpts on [GEF 6 Results Frameworks for GETF, LDCF and SCCF](#).

³ Financing type can be either investment or technical assistance.

			<p>shepherding practices are tested and applied on selected pilot livestock farms covering approximately 50 000 ha, resulting in the return of wildlife and improved biodiversity conservation and improved connectivity between existing protected areas and other adjacent non-protected sites of conservation importance.</p> <p>Output 1.3. BD-friendly shepherding associations are developed and operational at 5 farms covering approximately 30 000 ha, supporting wildlife conservation and providing the platform for demonstration, training and education activities as well as the basis for replication and upscaling of best practices at the national level. A further 5 farms (20 000 ha) participate in piloting shepherding programmes or surrogate measures.</p> <p>Output 1.4. A shepherding Academy is established and operational, with innovative curriculum developed, and partnerships developed with several other training/educational institutions in the country.</p> <p>Output 1.5. Production standards and templates for management that foster improved BD conservation on livestock farms are developed and widely promoted through the work of the Academy, the Landmark Foundation, government entities and their broad network of partners.</p>			
<p>Component 2. Payment for Ecosystem Services (PES) schemes linked to wildlife-friendly and socially responsible labeling of farm products</p>	TA	<p>Outcome 2. Wildlife-friendly and socially responsible labeling of farm products provides the basis for the establishment of payment for Ecosystem Service (PES) schemes that support local development and BD conservation</p>	<p>Output 2.1. A Brand scheme standards (see annex 14) and Brand membership (see annex 13) structures are developed and operationalised, building on ongoing work by the Landmark Foundation and partners</p> <p>Output 2.2. A Payment for Ecosystem Services (PES) scheme is developed and tested, linking to the Brand partnership (the sellers of Ecosystem Services [ES] products) and the wider public (buyers of ES products), and resulting in direct and measurable benefits to biodiversity</p>	GEF TF	272,000	850,000

			conservation on livestock farms Output 2.3 Identification and analysis of direct and measurable benefits to biodiversity conservation on livestock farms			
Component 3. Wildlife protection on production landscapes promoted, biodiversity monitoring and impact assessments conducted and knowledge management enhanced	TA	Outcome 3. Wildlife protection and compliance by brand scheme participants is promoted on farms, biodiversity monitoring programme is developed and implemented and awareness on BD friendly shepherding methods created.	Output 3.1. Wildlife protection and compliance by brand scheme participants is encouraged through financial incentives (premium on their produce) and financial disincentives resulting from non-compliance through the audited, certified and accredited Fair Game brand membership scheme are effected. Output 3.2. An effective Biodiversity monitoring programme is developed and implemented, to assess changes in the status of biodiversity in the participating livestock farms and the overall targeted rangeland ecosystems. Output 3.3. An evaluation of the actual environmental and economic impact of all methods of management of predation and damage-causing animals on livestock farms, both lethal (where livestock farmers continue to prefer this method), and non-lethal methods (where farmers wish to test these methods on their farms). Output 3.4. Results are independently evaluated and lessons learnt are published and widely disseminated, mainly targeting farmers as well as decision/policymakers	GEF TF	223,750	900,000
Subtotal					925,227	5,500,000
Project Management Cost (PMC) ⁴					92, 523	
Total GEF Project Financing					1,017,750	5,500,000

For multi-trust fund projects, provide the total amount of PMC in Table B, and indicate the split of PMC among the different trust funds here: (N/A)

C. SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE

Please include confirmed co-financing letters for the project with this form.

⁴ For GEF Project Financing up to \$2 million, PMC could be up to 10% of the subtotal; above \$2 million, PMC could be up to 5% of the subtotal. PMC should be charged proportionately to focal areas based on focal area project financing amount in Table D below.

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
NGO	Landmark Foundation	In-kind	100,000
NGO	Landmark Foundation	Cash	100,000
Private Sector	Woolworths	Cash	100,000
Private Sector	Tamarisk Trust (philanthropist) confirmation via Moore Stephens	Cash	4,600,000
Nat. Government	Green Fund via Development Bank of South Africa (DBSA)	Cash	500,000
GEF Agency	UNEP	In-kind	100,000
Total Co-financing			5,500,000

D. GEF/LDCF/SCCF RESOURCES REQUESTED BY AGENCY(IES), TRUST FUND, COUNTRY(IES), FOCAL AREA AND PROGRAMMING OF FUNDS

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	(in \$)		
					GEF Project Financing (a)	Agency Fee (b) ^{b)}	Total (c)=a+b
UNEP	GEF TF	South Africa	Biodiversity		1,017,750	96,686	1,114,436
Total GEF Resources					1,017,750	96,686	1,114,436

a) Refer to the [Fee Policy for GEF Partner Agencies](#).

E. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS⁵

Provide the expected project targets as appropriate.

Corporate Results	Replenishment Targets	Project Targets
1. Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society	Improved management of landscapes and seascapes covering 300 million hectares	50, 000 <i>hectares</i>
2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	<i>hectares</i>
3. Promotion of collective management of transboundary water systems and implementation of the full range of policy, legal, and institutional reforms and investments contributing to sustainable use and maintenance of ecosystem services	Water-food-ecosystems security and conjunctive management of surface and groundwater in at least 10 freshwater basins;	<i>Number of freshwater basins</i>
	20% of globally over-exploited fisheries (by volume) moved to more sustainable levels	<i>Percent of fisheries, by volume</i>
4. Support to transformational shifts towards a low-emission and resilient development path	750 million tons of CO _{2e} mitigated (include both direct and indirect)	<i>metric tons</i>
5. Increase in phase-out, disposal and reduction of releases of POPs, ODS,	Disposal of 80,000 tons of POPs (PCB, obsolete pesticides)	<i>metric tons</i>

⁵ Provide those indicator values in this table to the extent applicable to your proposed project. Progress in programming against these targets for the projects per the *Corporate Results Framework* in the [GEF-6 Programming Directions](#), will be aggregated and reported during mid-term and at the conclusion of the replenishment period. There is no need to complete this table for climate adaptation projects financed solely through LDCF and/or SCCF.

mercury and other chemicals of global concern	Reduction of 1000 tons of Mercury	<i>metric tons</i>
	Phase-out of 303.44 tons of ODP (HCFC)	<i>ODP tons</i>
6. Enhance capacity of countries to implement MEAs (multilateral environmental agreements) and mainstream into national and sub-national policy, planning financial and legal frameworks	Development and sectoral planning frameworks integrate measurable targets drawn from the MEAs in at least 10 countries	<i>Number of Countries:</i>
	Functional environmental information systems are established to support decision-making in at least 10 countries	<i>Number of Countries:</i>

F. DOES THE PROJECT INCLUDE A “NON-GRANT” INSTRUMENT? NO

(If [non-grant instruments](#) are used, provide an indicative calendar of expected reflows to your Agency and to the GEF/LDCF/SCCF Trust Fund) in Annex B. N/A

G. PROJECT PREPARATION GRANT (PPG)⁶

Is Project Preparation Grant requested? Yes No If no, skip item G.

PPG AMOUNT REQUESTED BY AGENCY(IES), TRUST FUND, COUNTRY(IES) AND THE PROGRAMMING OF FUNDS*

GEF Agency	Trust Fund	Country/ Regional/Global	Focal Area	Programming of Funds	(in \$)		
					PPG (a)	Agency Fee ⁷ (b)	Total c = a + b
UNEP	GEF TF	South Africa	Biodiversity		50,000	4,750	54,750
Total PPG Amount					50,000	4,750	54,750

⁶ PPG of up to \$50,000 is reimbursable to the country upon approval of the MSP.

⁷ PPG fee percentage follows the percentage of the Agency fee over the GEF Project Financing amount requested.

PART II: PROJECT JUSTIFICATION

1. Project Description.

The project focuses on the conservation and restoration of the top trophic levels (i.e. top and meso predators) in the targeted rangeland ecosystems, thus positively effecting an improved conservation of the entire trophic pyramid, and mitigating the negative and cascading effects of removing the influence of natural predation from the productive landscapes. The project will strategically focus its initial work through various ecotones across the Western, Northern and Eastern Cape Provinces of South Africa (SA), incorporating biodiversity hotspot areas of Fynbos (Cape Floristic Region), Succulent- and Nama-Karoo, Grassland and Thicket biomes. This focus in the early implementation phases of this pilot project is to ensure that project results can be later replicated and scaled up throughout the SA region and beyond.

The project is focused in the arid zones of South Africa. While the specific study sites are located in strategic areas between key protected areas, care has been taken to ensure that good representation of the biomes of the region are captured in the pilot sites – for future replication and up-scaling (Figure 1). As such the Cape Floristic Region, succulent Karoo, Nama Karoo, subtropical thicket biome and grasslands are represented in the project domain. The project areas are contained in a region within the central southern region of the arid region of South Africa wherein good representation of the above different biomes is evident, and represented by an area circumscribed by the following towns: Beaufort West, Graaff Reinet, Colesberg, Willowmore, and Riversdale. The protected areas incorporated in this broad area are: Camdeboo National Park, Mountain Zebra National Park, Karoo National Park, Addo National Park, Tankwa Karoo National Park and Baviaanskloof Nature Reserve, Swartberg Nature Reserve, Kammanasie Nature Reserve, and Garcia Nature Reserves (the latter four being provincial nature reserves and part of the Cape Floristic Region World Heritage Site).

The project targets to work in 10 farms/economic units where land-holding in the various areas is estimated to be about 5,000ha per unit with an assumption of effectively working on at least 50,000ha. The project target areas and demonstration farms are deliberately chosen within and around the wider regions that contain areas of recognised biological importance and surrounding existing private conservation areas and Protected Areas (PAs). There are several reasons for this:

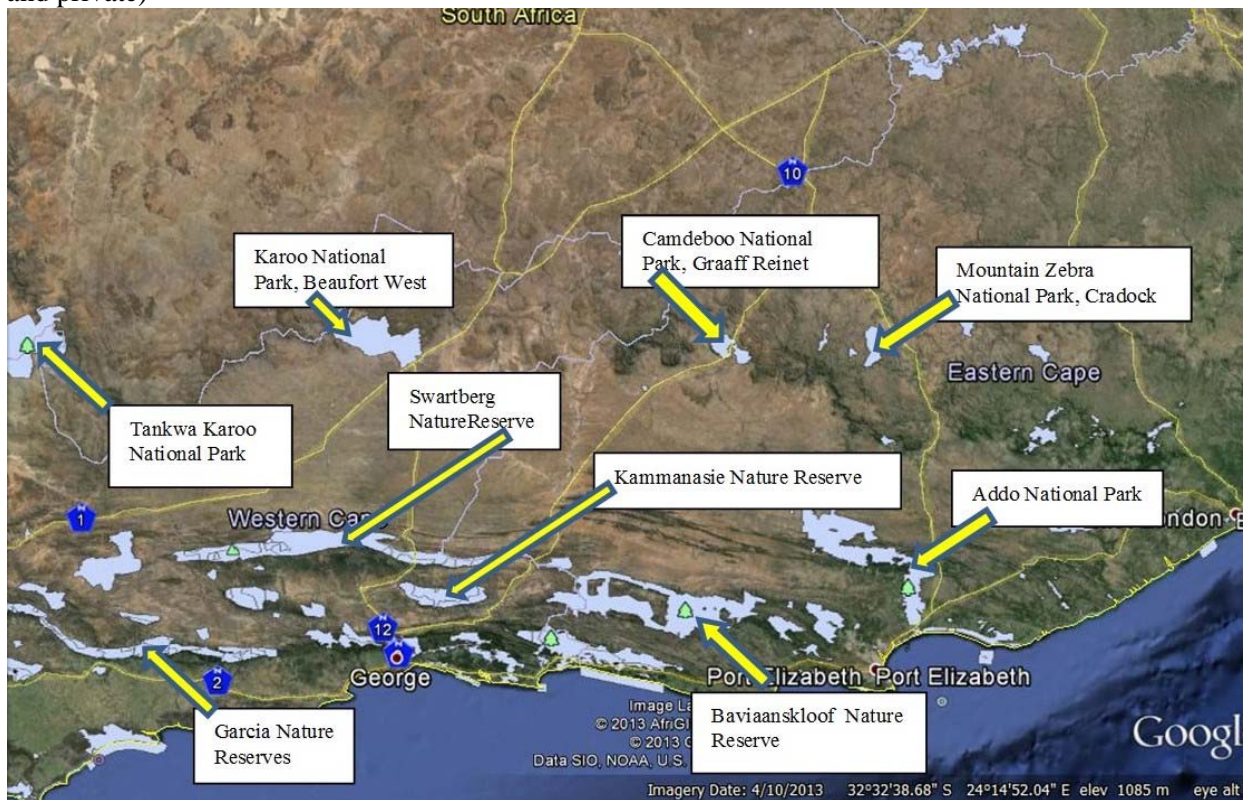
(i) Private and public funded efforts for the conservation of biodiversity are already taking place within and near these existing PAs. The project intervention will be synergistic with these efforts and will provide ideal opportunities for the expansion of conservation efforts, through the (re)establishment of wildlife corridors on production livestock farms and thus resulting in improved genetic connectivity between PAs (and improved status of biodiversity both on and off protected areas);

(ii) Protected Areas are often (wrongly) blamed for being the cause/source of predation on livestock by wild predators. On the contrary, the GEF project will strive to demonstrate that synergistic efforts between PAs and the farmers in surrounding production landscapes can result (a) in significant added value for farm products originating from 'Fair Game'(ethically branded produce) farms, (b) improved biodiversity conservation through better connectivity and production, and (c) more local 'green' employment opportunities. This approach, thus mainstreaming BD conservation in production landscapes surrounding PAs, can be the key to sustain both PAs and the surrounding rural economy; and

(iii) Shepherding has been on a declining trend in all these commercial livestock farming regions for many decades, resulting in loss of local employment opportunities. This project will attempt to reverse this trend. The envisaged alternative will therefore mainly focus on removing capacity barriers to facilitate the uptake of more wildlife-friendly livestock farming practices. This approach will underpin the mainstreaming of biodiversity conservation practices on extensive areas of livestock farms. Key additional outcomes expected from this intervention will include development of training programmes

and testing the efficacy of several wildlife-friendly control methods. This will in turn generate: New national capacity and new management/training tools; Development of sound monitoring and evaluation tools to assess the efficacy of several predator-control/livestock management options, as the basis for adaptive management and early warning systems to keep damage to livestock within acceptable levels and support biodiversity conservation; Production of a wide range of peer-reviewed technical studies, as well as simple educational and illustrative materials, to support advocacy efforts and to underpin legislative and policy making processes at the national level; Support improved genetic connectivity between wildlife populations: wildlife corridors will be re-opened between protected areas as fewer individuals will be killed on surrounding farms, thus improving genetic flow between wildlife populations; and biodiversity stewardship will be promoted as the project demonstration farms will serve as the basis for an important conservation extension programme. This will underpin replication and up-scaling of project results across the Southern African region, and beyond. (The project contributes to UNEP PoW 2016-2017, EM, EAa, Output 2 (312))

Fig.1: Map of Project Area and preliminary selected sites, showing existing Protected Areas (public and private)



a) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed;

1.1 The Global environment problems, root causes and barriers:

Across the world, rangeland livestock production has battled natural predation in attempts to improve production. Globally and traditionally this has involved retaliatory and prophylactic killing/culling of predators, various

barrier methods, grazing practices and deterrent devices. Particularly the killing of predators and barriers (and mostly predator-proof fencing), together with grazing methods have had unintended, ecologically cascading and detrimental effects on predator assemblages and other species. In South Africa, particularly, the killing of predators, extensive predator-proof fencing of farmlands and extensive grazing methods have had detrimental impacts on predators and other faunal species, and ecological patterns and processes. This project will focus on using a return to human shepherding to try to reverse these detrimental trophic cascading effects, and with it, to mainstream biodiversity conservation and sustainable use on livestock production landscapes.

Livestock farming is the most prominent land use in South Africa, and its traditional approaches have significantly changed over the last 50 years. The agricultural landscapes of South Africa are at the heart of an age-old conflict between livestock farmers and predation occurring on their rangelands. This is a global phenomenon, which in Africa is exacerbated by the co-existence of livestock with numerous species of wild predators and other wildlife that still live within or near farms and rangelands. Combined with the preceding two centuries of loss and degradation of biodiversity (and land cover as a result) and disruption of natural ecological processes across the country, land use change had a dire impact on the status of wildlife in productive agricultural areas and resultant land degradation. This impact is evident in all of the Southern African biomes, where agriculture has been the land use with the greatest impact on habitat change. In recent times, rangeland agriculture and livestock herding has moved towards more 'extensive' systems. Economies of scale and political and legal imperatives forced farmers to reduce labour costs and risks, and to acquire more and more extensive rangelands. With it shepherds were done away with and increased predator-proof fencing has been erected, as well as rotational grazing regimes, which have had cumulative negative ecological impacts.

This trend had a significant negative impact on the conservation of biodiversity and natural land cover in productive landscapes, as well as on the social and economic welfare of the marginalized and often migratory labour in the rural areas, not least on the economies of the farming enterprises themselves. The current reality of extensive farming has for example influenced the rural economies, with active depopulation of the rural areas and shanty towns emerging in all small towns, as labour moved off farms. This has had a negative impact on social relationships and has caused unemployment, crime and substance abuse, disease, de-skilling and migration to cities. (See also section 1.4)

Extensive livestock farming envisages a significantly reduced human interaction with livestock, with much less "hands-on" management, i.e. with livestock left to graze without much direct supervision by farmers. As a result, the past role of herders and their skills in shepherding livestock are being largely lost. Many negative consequences have resulted from these changed methods of livestock farming, not least the increased level of predation on livestock from wild predators (e.g. leopard, jackal, caracal, brown hyena, aardwolf) and poor grazing rotations affecting land cover. This in turn resulted in farmers increasingly adopting any available and cheapest methods to rapidly eradicate wild predators from their farms. This approach resulted in a wide range of negative environmental consequences, including a sharp decrease in the population of wildlife and particularly of wild predators within and around livestock farms across the country, as many species were lost as 'by-catch' in the process of predator control efforts.

However, interestingly, the degree of perceived depredation on livestock remains high and has increased according to farmers, concurrently with decline in wildlife. The perception of increased livestock predation is likely being overestimated by farmers, likely due to the very nature of current extensive farming methods, where there is much less control on livestock and veldt conditions.

Lethal predator control is a traditional method used to reduce livestock losses due to predators, and has been used to protect livestock for centuries. It is a controversial method and has resulted in the extermination of numerous large predators in Africa and across the globe (Stander, 1998; Ogada et al., 2003; Berger, 2006). Despite its application, predation on livestock still persists across the world, with studies showing that total livestock losses to predation range from 0.2 % to 5.1% annually (Graham et al., 2005; Berger, 2006; Wang & Macdonald, 2006). Similarly, in Africa, studies have reported losses between 0.4% to 5% of total livestock (Mizutani, 1993; Butler, 2000; Graham et al., 2005) though higher losses of 11.8% (van Niekerk, 2010) and 12.9% are reported by farmers in South Africa (Statistics South Africa, 2010). Agricultural bodies in SA report a nationwide impact on livestock farming due to predation of US\$ 171,000,000 annually (Van Niekerk et al., 2010). While this may be a disputed figure as it is based on opinion surveys and not on empirical data, it does emphasize the importance of this issue.

Lethal predator control is an expensive management practice, with farmers employing permanent trappers, hiring problem animal hunters, and utilizing a range of other lethal control methods with associated management costs. The removal of relatively small and adaptable carnivore species such as black-backed jackal (*Canis mesomelas*) and caracal (*Caracal caracal*) from farms has often been ineffective, even where intensive predator control takes place, the problem of livestock predation often remains or results are short lived (Pringle & Pringle, 1979; Conner et al., 1998; Berger, 2006). With the high costs associated to predation on livestock, farmers, at times with government support, have used large scale hunting, gin-traps, gun-traps, and poisons to mitigate losses.

As recently as 1991, bounty systems were still in place in South Africa for most terrestrial mammal species. The most payments were made on Rock hyrax (*Procavia capensis*), Black-backed jackal, Cape fox (*Vulpes chama*), African wild cat (*Felis libyca*), Caracal, and scavengers such as white necked ravens (*Corvus cryptoleucus*) (Hey, 1964; Stadler, 2006). Today permits to eradicate damage-causing animals such as predators are still available from state conservation organizations, with permits ranging from an off-take of up to 10 jackal and caracal per permit holder per day for 6 months, to an unlimited number of jackal and caracal removals per day.

Despite these measures, predation still remains a problem in the livestock farming sector with some authors indicating that losses are increasing (Avenant & du Plessis, 2008). Apart from not curbing predation, lethal methods have been found to be indiscriminate, killing non-target species (Beasom, 1974; Knowlton et al., 1999). Research on one farm near Victoria East in the Eastern Cape over five months recorded 12 non-target species for every 1 jackal or caracal caught (Haw. A. 2010. Unpublished data). These non-target species are a natural food source for predators and their increased availability and presence alone may reduce livestock predation (Goodrich & Buskirk, 1995; Knowlton et al., 1999; Avenant & du Plessis, 2008).

In addition to removing prey species, removing territorial predators results in an influx of subordinates which results in increased population and thus potentially increases predation (Knowlton et al., 1999). Furthermore, the use of poisons has secondary effects and has been identified to cause decline in endangered species such as vultures (Bamford et al., 2007). Further problems associated with lethal controls are conditioning (Brand et al., 1995). Brand et al. (1995) reported that avoidance of gun-traps by jackal increased to such a degree that the technique was no longer effective at removing predators from the area. Little research and information is available on the measured impact of current production practices (inclusive of predator killings) on production landscapes. It is generally accepted that these practices have a major detrimental ecological impact.

Private landowners are the key to conserving biodiversity across large landscapes. With less than 20% of South African land surface under protection (and about 6% in statutory protection), it has become imperative that conservation initiatives focus on commercial farms. The challenge in South Africa is that protected areas are not necessarily rationally established and generally have come about through historically ad hoc actions. (In later

years, retrospective rational efforts have been applied to expand them for biodiversity objectives.) Much less than 10% of the country is represented in the formally protected area estate (closer to 6%) and is thus formally protected, the remainder is in private/communal land ownership. The challenge has been to effect biodiversity conservation land use actions on this private and communal estate. **THIS IS WHAT THIS PROJECT AIMS TO EFFECT:** Providing a template (brand standards) and mechanism (PES – Fair Game) to create and commercially incentivize biodiversity supportive production landscapes that enables the conservation of biodiversity patterns and processes on the private estates. We have strategically targeted working in areas lying between protected areas (not necessarily immediately adjacent, but in the general areas) so that these patterns and processes of biodiversity can be verifiably conserved even with production land uses still being operational. Thus these envisaged corridors are not statutory/proclaimed corridors or even formal protected areas, but voluntary biodiversity friendly land uses (working with the farmers) that allows for biodiversity patterns and process conservation through these corridor areas.

The project will develop the mechanisms (various shepherding techniques and tools) to enable farmers to forgo prophylactic and retaliatory killings of predators and the inevitable by-catch impacts on other species and ecological processes. The project will also develop a means of payment for the beneficial ecological service of predation (and the improvement of habitats for other species) through a wildlife friendly certified and audited brand of livestock products that will serve as a financial incentive to replicate and upscale the project beyond this project cycle. Monitoring and evaluation tools of the ecological benefits, as well as production and financial impacts of the project, is integrated into the project as a means of knowledge sharing and integrated into a learning hub that will be created through the project.

The shepherding techniques that this project will promote and develop will result in wildlife friendly habitat establishment on production landscapes. This in turn will promote the mainstreaming of biodiversity conservation on production landscapes.

b) the baseline scenario or any associated baseline projects,

1.2 The baseline scenario and associated projects:

Project Background: Worldwide a wide variety of non-lethal controls exist, such as kraaling during vulnerable periods, human shepherding, guarding animals, protective collars on livestock, or sense aversion devices such as alarms (Landry et al., 2005) and more ecologically sensitive planned grazing methods. There are indications that where these predator deterrents were used as part of livestock husbandry, losses due to predation decreased (Green et al., 1984; Cavalcanti & Knowlton, 1998; Knowlton et al., 1999; Butler, 2000; Andelt, 2004; Shivik, 2004; Berger, 2006).

The most common non-lethal methods adopted in South Africa are LGDs (Livestock Guarding Dogs), alpacas and various types of livestock protective collars. These methods are essentially all herding surrogate measures and can be used with or without human herders, each of the latter with decreasing shepherding impact. LGDs have been used in many countries, including the USA, Canada, Australia, Namibia and South Africa, where their success in reducing livestock losses varied from 11-100% (Green et al., 1984; Coppinger et al., 1988; Smith et al., 2000; Rigg, 2001; Marker et al., 2005). In Namibia, Marker et al. (2005) reported 73% of farmers with LGDs seeing economic benefit and reduced livestock losses but there are no published results for South Africa despite the increased use of these animals. Alpacas were introduced after the effectiveness of llamas in South America for guarding livestock. Results of llama placement suggest that annual livestock losses due to predation decreased

from 21% to 7% when tested in America (Cavalcanti & Knowlton, 1998). South Africa now has a number of alpaca breeders in response to the perception of their guarding ability (South Africa Alpaca Society).

Livestock protection collars are produced to restrict predators biting livestock. Plastic collars (King collars, Larry King, Bedford, South Africa) and wire mesh collars (Dead Stop Collars, Klaas Louw, Loeriesfontein, South Africa) are most commonly used and while various ‘homemade’ spike collars and other adaptations are placed by some farmers, no quantitative measures of their success have been provided in literature. (A variety of methods will be utilized in the project, such as livestock protection collars that are placed on livestock. These collars are not tracking collars, but protection collars – they are fitted to livestock and not wildlife. Livestock protection collars are used to restrict predators biting livestock around the neck (usual site of kill bite). These are barrier aversion devices that prevent and mitigate depredation events).

However no review or comparison of the efficacy of such non-lethal predator control methods has been conducted in South Africa. The first such attempt at review was published through the efforts of the Landmark Foundation in 2014. Also, no investigations have been conducted on the use of human shepherding which this project will do in conjunction of these surrogate methods. The rapid uptake of these methods, despite the lack of evidence of their effectiveness, demonstrates the need of farmers to find a solution to the problem.

Landmark Foundation (www.landmarkfoundation.org.za) and Savory Institute (<http://www.savoryinstitute.com>) and African Centre for Holistic Management (<http://achmonline.squarespace.com>) are already engaged for over 20 years in studying and promoting wildlife-friendly livestock management methods, and plan to continue providing significant baseline investments and co-financing both in cash and in kind. The African Centre for Holistic Management and the Savory Institute have also already established such similar programmes of training shepherds in Zimbabwe (<http://www.savoryinstitute.com> and (<http://www.savoryinstitute.com>).

Private sector partners of the Landmark Foundation (LF) in the South African retail sector are supportive and have already expressed commitment contribute to the development and commercialization of the ethical ‘Fair Game’ brand to a total co-financing of this project of almost US\$6m.

Historically national government have contributed a net present value of US \$2 billion in fencing subsidies in the 1900s and the ‘predator bounty system’ contributed undocumented millions of dollars to the problem, and yet these measures have not demonstrated lasting benefits.

Currently the agricultural produce industry bodies (National Woolgrowers, Red Meat Producers Organization and South African Woolgrowers Association) estimate that annual loss to predation of their produce amounts to US\$140 million.

National government and provincial bodies have largely been disjointed in their responses to this problem, focusing on policies and regulation activities. Recently the Western Cape government has contributed about US\$50,000 to efforts aimed at addressing the issue. National government have committed to supporting this GEF project as part of it recent commitments to this issue. National retailers, Woolworths and Pick ‘n Pay, have historically donated in the region of US\$50 000 towards efforts to address the problem. For the purpose of this project Woolworths will co-finance this GEF project further with about US\$150,000.

This project will be the first concerted effort to address the problem in a manner that is socially, ecologically and economically integrated, with significant co-financing from government, civil society and the private sector. This is going to be the first major project on livestock-predator management in South Africa. So what is presented in the baseline project is the status quo, where production focus has been on “managing” predators, invariably through retaliatory and proactive culling and a few ad hoc interventions by the Landmark Foundation in limited

farm interventions piloting some herding surrogate interventions. This project intends to change this situation to focus management on livestock management instead and to prevent losses to livestock and biodiversity through a move away from lethal controls.

The **baseline project** has been ongoing for the last 14 years, although limited, through assessment of ad hoc interventions to move away from lethal predator control and assessment of the commercial and ecological impacts of this change and the status quo. Since 2002 Landmark Foundation staff has worked in the field of human-wildlife conflict and addressed the impact of commercial agriculture's traditional responses to the problem on production landscapes. These responses have incorporated practices such as fencing, lethal predator management and rotational grazing systems that have gravely and negatively impacted on biodiversity. The baseline project has developed several herding related, although ad hoc, interventions on farms and evaluated their efficacy. These interventions have been limited in scale and distribution due to resource constraints. The baseline project is thus a limited and sporadic effort to pilot the ecologically beneficial management interventions in an overwhelming paradigm of lethal predator control on livestock farms. The baseline project has interrogated the status quo in the agricultural industry that have resulted in not only significant job losses in the industry, but practices in commercial agriculture and lethal human wildlife-conflict mitigation that are ruinous on ecological patterns and processes and have negative impacts on biodiversity. This status in the industry has been exposed and documented. The baseline project has recorded the impact this has on certain species (most notably leopard as the last remaining to predator in the region) and in production impacts for farmers.

The baseline project has been able, in a limited fashion, to roll out mitigation alternatives and it observed the positive impact of herding techniques that have formed the basis of this current project proposal. The African Centre for Holistic Management (ACHM – an entity with which the project will collaborate) have practiced herding as a production tool for 20 years and this tool will be integrated into the project outputs.

This application to the GEF to support the Shepherding Back Biodiversity project is to enable the incremental rollout of interventions that could allow the industry and livestock farming to move to a more sustainable, ecologically supportive production footing, through herding and ultimately supported by a PES through a branding scheme, thus bring together disparate and isolated efforts to address the problem.

This GEF project is required to enable the Landmark Foundation to replicate the baseline project interventions and scale them up to a level where they have commercial relevance, applicability and support for more widespread uptake and implementation, and thus positive biodiversity impact on a landscape scale. Without this MSP the baseline project will not be able to pilot the scale and cohesive interventions proposed. The baseline project will remain, without GEF intervention, limited and sporadic effort without cohesive and measurable outcomes on a scale that will have restrained applicability in commercial agriculture.

The GEF support through this MSP will greatly facilitate the incremental rollout of commercial interventions, through herding (that is also a green jobs initiative), that will enable the platform to be created to build on the foundation of the baseline project that has demonstrated positive commercial and ecological benefit of herding and herding tools. This will be through the development of a learning site to not only train herders (for project and wider uptake) and promote the use of herding and herding tools to effect ecologically supportive commercial farming practices in the livestock industry, but also will assist the monitoring and evaluation of these methods, and finally to develop a PES (via a brand scheme) to sustain the rollout and eventual replication and up-scaling of the project. Additionally, the MSP will allow for lessons learnt to be disseminated to also assist the replication and up-scaling of the interventions supported by this project.

c) the proposed alternative scenario, GEF focal area⁸ strategies, with a brief description of expected outcomes and components of the project,

1.3 The GEF focal area strategies and the Aichi targets: the project’s consistency with the GEF biodiversity focal area strategy, objectives and programs, please also describe which [Aichi Target\(s\)](#) the project will directly contribute to

The project contributes to GEF **BD objective 4** on Mainstreaming biodiversity conservation and sustainable use into production landscapes and seascapes and production sectors and **Outcome 9.1** Increased area of production landscapes and seascapes that integrate conservation and sustainable use of biodiversity into management.

The project specifically contributes to the achievement of CBD Aichi targets n: 1,2,4,9,12 and 19 as summarized in the following table:

CBD Aichi 2020 Targets which the project will contribute to	How the project will support the achievement of each target – initial SMART indicators (to be further selected and refined at CEO submission)
Target 1 (awareness of biodiversity values)	Awareness of BD conservation values and sustainable use of rangeland habitats is increased at local, national and regional levels as well as globally through the livestock herding and production networks – level and number of citations and uptake of project communication products including publications, manuals and guidelines on the re-introduction of shepherding in SA
Target 2 (BD integrated in local and national poverty reduction strategies...)	Demonstrating of how BD conservation and poverty reduction are integrated in SLM in local level planning processes in the project target areas – and providing lesson for up-scaling a national level. Levels of BD-considerations included in target livestock farming areas
Target 4 (sustainable production)	Sustainable and BD-friendly livestock herding approaches demonstrated in the target areas, with link to the entire supply chain, i.e. including retailers – revenue levels linked to sustainable nature-based activities for local communities, private farm owners – market share gained by Fair Game branded products
Target 9 (IAS Management)	The project will contribute indirectly to the implementation of national/local plans for IAS management – trend in the status of IAS in the target farms as a result of the re-introduction of human shepherding
Target 12 (species extinctions)	The extinctions of IUCN red-listed and globally important species is prevented in the targeted livestock farms (ref list of species in Annex 3) – indicators species / populations conservation status and trends in the targeted farms
Target 19 (BD science improved)	The project will assess and document the impact of the re-introduction of shepherding in the targeted wildlife corridors on the connectivity among existing Protected Areas. Indicators will include the status of selected species in the combined areas of PA and surrounding productive landscapes

1.4 The proposed alternative scenario with description of expected outcomes and components

The Project Objective is to foster biodiversity conservation on livestock farms, through a return to human shepherding and the development of a wild-life friendly produce branding, leading to Payment for Ecosystem Services as a tool in conservation and local economic development. The project will also contribute to land regenerative actions and climate change mitigation through sequestration efforts of improved land cover through ecologically friendly grazing methods that operate in tandem to ecologically friendly damage animal management methods. This will complement ongoing efforts and promote a better understanding and application of ecological and ethically acceptable practices to mitigate the human-wildlife conflict. In addition, the project will contribute to reversing the trend of biodiversity loss and ecosystem degradation that is associated with the current use of indiscriminate lethal controls methods for wild predators. This will be achieved through the following main components

⁸ For biodiversity projects, in addition to explaining the project’s consistency with the biodiversity focal area strategy, objectives and programs, please also describe which [Aichi Target\(s\)](#) the project will directly contribute to achieving.

Component 1: Mainstreaming Biodiversity Conservation on large commercial livestock farms through biodiversity-friendly shepherding practices:

The focus of this component 1 will be to reintroduce and redevelop shepherding as a profession, building on the traditional shepherding skills currently absent or being lost on farms. The component will support demonstration of a range of husbandry interventions in selected farms, and will contribute to building a new platform for job creation, skills development (and retention), as a basis for local economic development that supports biodiversity conservation and rural livelihoods.

It is true that the trend in commercial agriculture in South Africa is the reverse, with the current depopulation and attrition of jobs on livestock farms. The reason for this is not simply that better jobs are offered in urban areas as this seems to be an employer trend, as opposed to employee choice. This is driven by perceived punitive labour legislation, narrowing profit margins on commercial livestock farms, and probably only partly due to a trend in urbanization. This view is also supported by the widespread unemployment even in rural towns. The baseline project has already demonstrated improved productivity in the use of herding tools, let alone herding itself. The project proponents postulate that these tools, with shepherds, will provide not only better productivity and profits, but will enable herding to be elevated as job advancement and better incentives to go with it. Therein lies the ambition to reverse the trend of migration of labour off farms, and the reintroduction and elevation of the job of herding.

The old skill of animal herding is being lost and the practice of fencing and livestock rotation through camps at certain stocking rates have replaced herding as a management practice across commercial livestock farming areas. A study conducted by Landmark Foundation and published in a peer reviewed journal demonstrated that use of methods of animal husbandry that approximated herding (using animal herders and barrier mitigation tools) had distinct benefit in livestock production: “Dead or alive? Comparing costs and benefits of lethal and non-lethal human–wildlife conflict mitigation on livestock farms.” By J. S. McManus *, A. J. Dickman, D. Gaynor, B. H. Smuts and D. W. Macdonald.

The key assumption on which this project is based is that herding in its complete and full scale will provide production, financial and ecological benefits as demonstrated by the baseline project. The above study (McManus et al) was a before/after control, and this project will evaluate the efficacy of the herding interventions in a pair controlled scientific method, while developing the intervention, training (herding academy), M&E and the market mechanisms (brand scheme) to support the ethical producers.

This component will involve training and equipping shepherds with the skills and tools of effective shepherding through biodiversity friendly practices and it will be realized through the following outcomes:

Outcome 1: Biodiversity-friendly shepherding practices are documented, tested and applied on large commercial farms through training of herders

Output 1.1 Conduct an evaluation of the actual environmental and economic impact of all methods of management of predation and damage-causing animals on livestock farms, both lethal (where livestock farmers continue to prefer this method), and non-lethal methods (where farmers wish to test these methods on their farms).

This MSP is not a research effort, but is using the platform created by the pilot project and the herding academy, interventions developed and the market mechanisms to evaluate the outcomes as part of the lessons to be learnt from this project. The MSP is pioneering a method that outcomes of the research by Landmark Foundation has

demonstrated to be beneficial on an ad hoc scale. Widespread skepticism exist that ecologically sensitive methods promoted by the project can sustainably provide financial and ecological benefits in commercial livestock agriculture, never mind the envisaged financial benefits from better production and price premiums. Proceeding experience by Landmark Foundation has demonstrated ecological and financial benefits on select experimental sites and on ACHM learning sites in the baseline project.

This project is about the practical and up-scaled commercial roll out of the intervention (and validation of these outcomes) to enable the dissemination of lessons learnt into the commercial livestock farming sector. The evaluation intended by this project is the measurement and validation of the efficacy of the interventions proposed by this rollout of methods in commercial production.

Output 1.2. Biodiversity-friendly shepherding practices are tested and applied on selected pilot livestock farms covering approximately 50 000 ha, resulting in the return of wildlife and improved Biodiversity conservation and improved connectivity between existing Protected Areas and other adjacent non-protected sites of conservation importance. Under this outcome, the project will convert land-use practices to more conservation friendly actions.

Under this output, the project will take stock of all the experience in field of predator management and the application non-lethal management and support the latter application in combination with human shepherding. Different grazing management practices will also be combined with non-lethal management. These methods, facilitated through herding, of high impact, short duration, low frequency duration grazing mimic the natural grazing cycles of herbivores and have demonstrated land cover restoration effects and improved biodiversity in arid zones.

Output 1.3 BD-friendly Shepherding Associations are developed and operational at 5 farms covering approximately 30 000 ha, supporting wildlife conservation and providing the platform for demonstration, training and education activities as well as the basis for replication and upscaling of best practices at the national level. A further 5 farms (approximately 20 000ha) participate in piloting shepherding programmes or surrogate measures.

These Associations are expected to become operational in productive landscapes **in a selection from the following** regions/districts of: Colesburg, Graaff Reinet; Beaufort West, Willowmore and Riversdale, providing a template for potentially connecting a selection of the following PAs of Camdeboo National Park, Mountain Zebra National Park, Karoo National Park, Addo National Park, Tankwa Karoo National Park and Baviaanskloof Nature Reserve, Swartberg Nature Reserve, Kammanasie Nature Reserve, and Garcia Nature Reserves (the latter four being provincial nature reserves and part of the Cape Floristic Region World Heritage Site).

Herders will emanate from two pools of candidates: (a) Employed persons from commercial farms. These herders will be re-skilled/up-skilled in herding techniques to manage the production standards of the brand scheme. These candidates will effectively be exposed to in-service training and will benefit from skills development within their current employment. (b) The second group of herders will come from unemployed persons or those entering into the jobs market. The recruitment will focus on farm labourers that have lost their work on farms or school leavers looking for work on farms. The latter group will be focused on youth candidates. The persons will be trained in herding skills and techniques, and a variety of life skills and basic business management skills. With the placement in the jobs market they will be assisted to establish herding associations that can commercially sell their skills into the commercial farming sector to provide herding functions.

The associations will only be set up as the training of herders have taken place, and thus cannot be developed prior to project inception, and will emerge as the training academy takes effect. Membership will be conditional to the herders being trained through the herding academy.

Output 1.4 A Shepherding Academy is established and operational, with innovative curriculum developed, and partnerships developed with several other training/educational institutions in the country.

All bricks and mortar activities will be contributed by the project partner and co-financier Tamarisk Trust. There is no business model, except that the training curriculum and training schedule is developed with LF leading the initiative in partnership with the ACHM, where similar such efforts have been utilized over many years. The Shepherd training academy will be developed by Landmark Foundation (along the lines of the African Centre for Holistic Management & Savory Institute models), in collaboration with government entities (Department of Agriculture and Department of Environmental Affairs) and commercial farmers. Planned location is in the Beaufort West area. The Academy is expected to train approximately 10 students annually in the first 3 years of the pilot phase, to be doubled to 20 per annum thereafter. The low number initially is to allow for the development of the curriculum and methods of training, together with cultivating acceptance in the agricultural community. After the pilot phase this will be scaled up. The training programme will entail a number of holistic husbandry and human wildlife conflict mitigation techniques [livestock guarding dogs, alpacas, various protective sheep collars (Dead Stop, King Collars), aversion devices (E-shepherd and Skaapwagter systems)].

The African Center for Holistic Management and the Savory Institute system of high density, frequent rotation, planned grazing rotation system of veld management will be promoted, and these institutions will be encouraged to collaborate in the training and establishment of learning hubs. The development of professional capacity for the reintroduction of shepherding will be a key avenue to address biodiversity loss and habitat degradation, allowing the development of more hands-on management. Guidelines, assessments and lessons learned papers will also be developed to support improved extension services in the same direction, extending the impact on extensive areas of livestock farms. The detailed manual and textbooks developed for the training programmes will also become an authoritative guide for the replication and upscaling of such programmes at the national and regional level.

The academy will be developed and structured on a farm within the project operational area where a learning site and academy will be developed, as well as key components of the brand scheme. This shepherding academy, learning site and aspects of the brand scheme is largely being financed through the Timothy Allsop/Tamarisk Trust co-financing.

Output 1.5. Production standards and templates for management that foster improved BD conservation on livestock farms are developed and widely promoted through the work of the Academy, the Landmark Foundation, government entities and their broad network of partners.

Generally extensive livestock farms in South Africa operate without detailed management plans. Many of these operations are ad hoc in their management practices, leading to a great deal of livestock morbidity and mortality. This is often wrongly blamed on predation. This project will address that by developing management plans in generic template format for the region that will assist and help producers to adapt such plans to their own unique situations, yet to be compliant with the required production standards of the Brand (see under Component 2). This intervention will enable enforcement of the standards promoted by the project and help to meet the biodiversity conservation, animal welfare and husbandry best practices and social responsibility standards. These templates will spell out the management issues that are conducive to biodiversity conservation, standards and methods to be

employed with getting the farms complaint with the desired standards. These plans will assist in getting sound ecological benefits on these farms.

Component 2: Payment for Ecosystem Services (PES) schemes linked to wildlife-friendly and socially responsible labeling of farm products.

The development of a payment for ecosystem services (PES) scheme will also provide a financial incentive for its sustainable and long-term implementation. Wildlife protection and compliance with the brand standards will be encouraged and positively effected in all participating farms: an audited, certified and accredited Fair Game brand membership (see annexes 13 and 14) will in fact also entail financial disincentives resulting from non-compliance.

The design of the PES in this project is in a very “flat structure” with the aim of bringing the consumer close to the producer that affects the ecosystem service of predation. (PES projects have traditionally – in South Africa at least – been consultant driven projects that had convoluted mechanisms between payer and earner. This project intends to have a consumer pay for the service of predation through meat produce and the benefit accruing to the farmer/producer that enables this process on his productive farm.) Thus, the scheme has a set of production standards, a validation/audit system and a distribution system.

(The project design of this pilot scheme can be developed in the project time frames and with the resources applied for as its design is simple – production standards, registration with meats standards authority, compliance checks (via brand secretariat) and certification, market partner and incentive. The buyers have not entered into pre-sales agreements although a retail partner (Woolworths) has committed to developing wildlife ethical brand of rangeland meats. Presales agreements with smaller retail outlets will be developed as soon at project initiation us underway, and supply volumes can be committed to. The resources allocated is sufficient to achieve this.)

Active extension support to participant producers will also be provided through the shepherds, the monitoring and evaluation teams and the project staff. This component will be achieved through the following outcomes:

Outcome 2. Wildlife-friendly and socially responsible labeling of farm products provides the basis for the establishment of PES schemes that support local development and BD conservation.

The initiative will create and develop the brand standards and register them – a great amount of work on this is already complete. Producers will be encouraged to become members of the brand through compliance with these standards (annex 13 & 14) and beneficitation of improved prices on the value-adding brand. As such the membership is voluntary. It is envisaged the brand will become a membership based entity (of producers) who will be audited by 3rd parties and verified by a 4th party, and certified by the Brand secretariat. The authority will be based on this transparent audit scheme. As such the Brand will become its own “authority” and will be an entity much like the Forestry Stewardship Council (FSC). It is hoped with scaling up and replication that it can develop into similar status. This project will be a pilot to the eventual scheme and be focused on a few producers.

While project approval has been negotiated over many years with GEF, the Fair Game brand standards have been in development. This needs completion with project stakeholders after project inception. Then it needs registration with the South African Meat Industry Corporation – SAMIC (a statutory organization governing meat standards). Once registered, it can be sold to the public and through retail outlets. The brand scheme will target national sales and not international sales (South Africa is a nett meat importer), as such the standards are governed by SAMIC. This will be a national brand governed by national standard registration. SAMIC thus certifies the

standards with their own appointed auditors. The International Organization for Standardization has developed ISO 14020 and ISO 14024 to establish principles and procedures for environmental labels and declarations that certifiers and eco-labelers should follow. In particular, these standards relate to the avoidance of financial conflicts of interest, the use of sound scientific methods and accepted test procedures, and openness and transparency in the setting of standards. During project implementation these international standardized processes and registrations will be pursued in developing the brand scheme.

Output 2.1. A Brand scheme, standards (see annexure 14) and Brand membership structures (see annexure 13) are developed and operationalised, building on ongoing work by the Landmark Foundation and partners.

It is recognized that PES projects, as traditionally conceived and developed, are more complex and consultant driven. This initiative is developed precisely to counter these complexities. The scheme is simple and the resources in this application are sufficient to develop the brand scheme in its pilot format as envisaged in this project that will be the basis of the PES. The consumer and producer are separated only by a validation, logistics and retail interfaces.

The brand scheme has had a great deal of pre-development to date, inclusive of draft production standards. The final registration of these with the statutory body (South African Meat Industry Corporation – SAMIC) will be developed on project approval of the GEF project, and the logistics and presales then initiated as the quantities that would qualify can be determined. The only tricky and risky component about this project is exerting any influence on the logistics and marketing of the retail partner, Woolworths. An alternate in micro-distribution is being planned as a backup outside of the MSP. The proponents feel that this component of the project is pioneering and an important market leader in rolling out the effort. The PES services is structured in a novel manner to encompass a pilot roll out that can be scaled up upon proven success.

The branding scheme, code named Fair Game™ as Trade Mark (TM) [see annex 14], to be established by this project, is to promote agricultural production practices that will promote biodiversity conservation, animal husbandry and welfare best practice, and social responsibility and labour best practice on production landscapes. This will be done through the development of a brand of agricultural produce (lamb, mutton, beef, and animal fibers – wool and mohair) that will be an ethical brand, and demand financial premiums that will incentivize more producers to follow these production standards, and in turn result on wildlife being conserved on production landscapes. The Fair Game brand is intended to assist in the conservation of indigenous biodiversity and ethical production practices, and to reward those producers participating in these efforts. The meat and animal fiber brand will specifically aim to do so in rangeland areas where natural habitats are intact, near intact and/or restorable. As such, feedlot and exclusive pasture-reared animals will not be eligible for the brand as such farms generally have greatly diminished biodiversity and ethical care concerns. The meat and animal fiber brand of Fair Game will focus on several legal, social and environmental best practice standards, but most specifically the conservation of the biodiversity patterns and processes on productive agricultural landscapes for which producers will be verified as to their compliance. The production standards comprise of Precondition standards, Qualifying standards and Continual improvement standards (Biodiversity conservation standards, Animal welfare standards, Animal husbandry standards, Social responsibility and labour standards) [see annex 14 for details on the branding scheme]

Output 2.2 A Payment for Ecosystem Services (PES) scheme is developed and tested, linking to the Brand partnership (the sellers of Ecosystem Services [ES] products) and the wider public (buyers of ES products), and resulting in direct and measurable benefits to biodiversity conservation on livestock farms.

The development of a value-adding wildlife-friendly brand (code named Fair Game™) of agricultural produce will economically support this new paradigm of livestock management. Producers of farm products will be certified by incorporating biodiversity management standards (annex 14), and in so doing the project will foster the inclusion of productive landscapes into wider protected area networks.

Output 2.3 Identification and analysis of direct and measurable benefits to biodiversity conservation on livestock farms

Detailed biophysical parameters will be identified and assessed with each field management treatment and controlled against sites where the treatments are not done. This will enable an evaluation of the relative biodiversity benefits and performance of different management treatments. This will evaluate the relative benefits of each management intervention in terms of biodiversity, agricultural production and financial performance of the enterprise.

Component 3: Wildlife protection on production landscapes promoted, biodiversity monitoring and impact assessments conducted and knowledge management enhanced.

The purpose of this component is to improve the conservation status of threatened wildlife basing on flagship species listed in Table 1. (The project will only monitor carnivores listed in this table.)

This component will focus on working with shepherds to promote wildlife protection on farms and will also aim at designing and implementing BD monitoring programmes for impact assessment and knowledge management using a selection of flagship species.

The impact of shepherding practices on biodiversity is not yet fully understood nor quantified, and (as with wolf research in Yellowstone), conservationists are only just beginning to understand the impact of predator control on the entire trophic pyramid. This component will help evaluate the efficacy and impact of the various management control methods (lethal and non-lethal) in terms of their impact on biodiversity, livestock production and financial return to landowners. The findings will provide authorities, conservationists and agriculturalists with the basis to make informed decisions on land management, and principally to mainstream biodiversity concerns into decision making and land-use and agricultural policies.

This component will support a credible assessment of the environmental and economic impact of the main available control methods, thus also helping to address the likely wrong perception that wild predators are the main cause of the loss of livestock. The current practices of lethal control of predators in the livestock industry is a practice that has been commonly employed for generations in the industry. What is clear is that it has not been effective for production nor beneficial to biodiversity. Very little research or even evaluation of the efficacy of these methods have been undertaken. The impact on many species has been profound, and has resulted in some localized extinctions of species from the direct and by-catch effects of these lethal control methods. (For example, leopard is today absent from large portions of its former range).

This component will address main existing knowledge gaps, and will support education and outreach functions and information dissemination.

Outcome 3: Wildlife protection and compliance by brand scheme participants is promoted on farms, biodiversity monitoring programme is developed and implemented and awareness on BD friendly shepherding methods created.

Output 3.1: Wildlife protection and compliance by brand scheme participants is encouraged and positively affected in all participating farms through financial incentives (premium on their produce) and financial disincentives resulting from non-compliance through the audited, certified and accredited Fair Game brand membership scheme are effected. The project team of Landmark Foundation will coordinate the audits and compliance of participating farmers to the wildlife friendly production standards of the brand scheme.

Members of the Brand will be guided in applicable legislation and gain a financial incentive for compliance in it and the best practice standards of the Brand. Disincentives will result in premiums being forfeited and legal non-compliance reported to authorities.

Audited brand scheme participants' adherence to production standards of the scheme will enforce compliance. This will relate to only those participants and qualifying producers of the brand scheme wherein the auditing of the brand will result in financial incentives and disincentives – thus the compliance enforcement. The resources allocated are sufficient to achieve this on the scale envisaged. This will be audited by third party audit entity and overseen by the project team.

Output 3.2: An effective Biodiversity monitoring programme is developed and implemented, to assess changes in the status of biodiversity in participating livestock farms and the overall targeted rangeland ecosystems.

(Note: Academic evaluation will continue beyond the project cycle and it is anticipated that a 10 year biodiversity impact assessment will continue post project cycle on biodiversity parameters, to accommodate the delayed biological impacts that may not present in the 4 year cycle of the project timeframe. The biodiversity gains or losses are likely to only present after the project cycle and, to be realistic, targets for biodiversity need to be modest in the project cycle.)

This biodiversity monitoring methods (developed with university partners) will be focused on the learning site particularly and select other participant farmer sites and will be conducted by project team using exclusion and inclusion plots, transect species counts, fixed point photography (inclusive of camera-trapping and biodiversity index analysis) and aerial remote sensing which will be accessed through university partners.

The project team will conduct this on the targeted 50 000 ha of the project domain with the co-financing from the Green Fund as detailed. Collaborating universities will support the project through student placements.

Table 1: summary list of selected flagship species and their conservation status in the projected study area

Conservation status	Mammals	Birds
Critically endangered	Riverine Rabbit	
Endangered	Bontebok	Ludwig's Bustard, Cape Parrot, Bearded Vulture
Vulnerable	Black-footed Cat, Blue Duiker, Cape Mountain Zebra, Pangolin	Denham's Bustard, Blue Crane, Grey Crowned Crane, Martial Eagle, Tawny Eagle, Southern Ground-Hornbill, Cape Vulture, Lappet-faced Vulture
Near Threatened	Leopard	
Least Concern	Black Wildebeest, Spotted Hyena, Brown Hyena, Serval, Aardvark, Bat-eared Fox, Cape Grysbok, Cape Fox, Klipspringer, Nyala, Blesbok, Gemsbok, Grey Rhebok, Cape Buffalo, Bushbuck	Kori Bustard, White-backed Vulture

Output 3.3: An evaluation of the actual environmental and economic impact of all methods of management of predation and damage-causing animals on livestock farms, both lethal (where livestock farmers continue to prefer this method), and non-lethal methods (where farmers wish to test these methods on their farms).

The outcome will promote and investigate the ecological, production and financial efficacy of both lethal and non-lethal control methods of livestock production. The testing of non-lethal predator and human-wildlife conflict mitigations will, for the first time allow for ecological, production and financial evaluations of the contrasting methods in pair controls scenarios across a range of habitats, and in so doing inform the industry.

Recent studies conducted by the Landmark Foundation (referenced in: MacDonald et al, 2010, in the Biology and Conservation of Wild Felids, through a retrospective analysis of exiting data, showed that farmers switching from indiscriminate lethal control methods to other non-lethal methods, obtain a remarkable improvement on livestock production (not considering the positive effects on biodiversity). Many of the promoted mitigation tools are surrogate methods of shepherding, involving barrier, deterrent or aversion tactics of discouraging predation. The results indicated an improvement of production of livestock, as demonstrated by reduced losses of livestock to predation of 12%, to a just more than 3%. These results were across the board and were surprising. This provides the initial basis for the project to further assess the impact of a range of control methods, and the re-introduction of human shepherds will be the key to supporting the implementation of non-lethal methods successfully, and specifically to evaluate the impact these methods have on biodiversity as well.

Tentatively 24 mammalian species and 15 avian species (Table 1 above) have been identified as species for BD monitoring in the extended plan to monitor the sites throughout the project cycle (inclusive of the years beyond the MSP cycle). Annex 12 gives a longer list with details of why each species has been selected. This list will, however, be reviewed during the project inception period and will be confirmed during the course of project implementation.

Species to be specifically monitored as part of this GEF will be reduced to **only carnivore species** in the list above. Background data on these species will be obtained from the South African National Biodiversity Institute (SANBI) baseline red list species data, especially the Red Data lists of 2004 that is updated by SANBI at regular intervals – there is a current update underway. This will be conducted by the project team and particularly with the co-financing from the Green Fund as detailed, in collaboration with the university partners.

Output 3.4: Results are independently evaluated and lessons learnt are published and widely disseminated, mainly targeting farmers as well as decision/policymakers.

Independent assessments on the successes and failures of the various approaches to be tested will be conducted to monitor biodiversity trends and flows of ecosystem services as a result of both the adoption of wildlife-friendly shepherding. The M&E programme will also document and evaluate the impact of the “Fair Game” branding and PES scheme, looking at changes in production costs, returns on investment, revenue streams and marketing results, against changes in biodiversity status at targeted farms. The assessments and changes will be tracked through the interventions and the revenue accounting will focus on financial income as well as human capital accounting.

The lessons learnt will be captured in reports and analysis for further shepherding training and farmer extension functions. Published findings and lessons learned from the research will provide the basis for education and training programs (ref. component 1), and will be widely disseminated.

The project will be guided by the science and facts. The project is based on three legs of efficiency measures in production/financial and biological criteria. While it true that the data may determine cost effective and even biodiversity efficient methods that align with conventional lethal controls (though the latter is most unlikely based on emerging scientific consensus), the data has to speak for itself. There will remain the issue of societal social and ethical acceptability, which is an aspect making the project relevant regardless of the data outcomes. The project will continue to promote the methods, and through PES, that support biodiversity conservation as evidenced by the data. As such it will be directed and adapted to be supported by the objective data.

Learning networks will be established and led by the monitoring and evaluation teams. Several university groups will be involved as well as organized farmer groups in the region, through the establishment of learning networks amongst participants in the Fair Game scheme, and in connection with existing regional formal agricultural training and extension structures.

d) incremental/ additional cost reasoning and expected contributions from the baseline, the GEFTE, LDCF/SCCF and co-financing;

1.5 The incremental / additional cost reasoning and expected contributions from the baseline

Baseline Scenario (Business As Usual – ref. also to section A.1.2)	GEF Incremental Contribution (what the GEF project will contribute)	Key Outcomes expected with the Alternative Scenario (BAU+GEF Increment)
<p>Component 1. Mainstreaming Biodiversity Conservation on livestock farms: The current and non-sustainable use of lethal predator control methods continues, underpinning the negative trend of biodiversity loss and associated loss of genetic connectivity for wildlife surviving in landscapes around and between PAs.</p> <p>The observed loss of local skills and capacity for human shepherding continues and wildlife-friendly and non-lethal control methods can't be economically applied without it.</p> <p>The initial studies conducted by LF and partners continue, however at low level and without sufficient resources for capacity development, pilot application in livestock farms, M&E and subsequent replication and upscaling</p>	<p>The benefits of human shepherding and non-lethal control methods are demonstrated at pilot farms and impact is assessed by peer-reviewed studies and M&E program (component 3).</p> <p>The Shepherding Academy is established in partnership with existing institutes, to support rural 'green jobs' and wildlife conservation. Local capacity and new training and educational programmes/materials/guidelines are developed. Local shepherds' cooperatives are established.</p> <p>The above results will also provide the basis for improved awareness and advocacy efforts by LF and partners.</p>	<p>The (re-)introduction of human shepherding supports a gradual return of wildlife on livestock farms, with associated improved status of biodiversity and improved connectivity, through the effective re-opening of biodiversity corridors in productive landscapes around and between PAs.</p> <p>The local capacity and tools developed will underpin a paradigm shift in extensive livestock farming. This will support improved BD conservation and connectivity between PAs, moving towards more environmentally sustainable and socially equitable economic development models in the targeted rural areas.</p>
<p>Component 2. PES schemes linked to wildlife-friendly and socially responsible labeling of farm products: the lack of adequate branding, certification and marketing schemes as economic incentives for wildlife-friendly products results in the continuation of current</p>	<p>A branding, certification and marketing scheme for value-adding 'Fair Game' is developed and tested for participating livestock farms (based on the concept of payment for ecosystem services). Guidelines and training materials are developed to help farmers join the</p>	<p>The availability of (a) economic incentives (i.e. higher sale prices for 'fair game' branded farm products), and (b) a better understanding and effective methods and tools to support more wildlife-friendly methods, results</p>

trends of biodiversity and connectivity loss.	scheme (ref. also component 1). The economic and environmental impact of the PES scheme is studied and independently assessed (component 3).	in the return of wildlife on livestock farms, with improved status of biodiversity and improved connectivity between PAs.
Component 3. Knowledge Management and Monitoring & Evaluation: the actual impact of available lethal and not lethal control methods (on both biodiversity and farm economics) is not adequately studied nor fully understood – lack of knowledge results in continuation of status quo	Evaluations are designed and implemented as part of the GEF project M&E component, to assess the impact of various non-lethal methods and of the ‘fair game’ approach at pilot farms. Results are published and widely disseminated to support the replication and upscaling of positive lessons learned.	As above: a better understanding of available wildlife-friendly methods, results in the return of wildlife on livestock farms, with improved status of biodiversity and improved connectivity between PAs.

e) global environmental benefits (GEFTF), and adaptation benefits (LDCE/SCCF); and

1.6 Global environmental benefits (GEFTF) and/or adaptation benefits (LDCE/SCCF);

Pastoralism is a universal issue: although pastoralists in developed and developing countries face different challenges in terms of access to social and fiscal services, they share many common environmental and economic challenges and opportunities.” (UNEP & IUCN, 2013: Sustainable Pastoralism and the Post 2015 Agenda, www.unep.org/post2015)

Predation is seen the world over as a cost to livestock producers. The retributive and preventive strategies employed to deal with this threat to livelihoods has borne a heavy cost on the ecological systems, particularly the top trophic ecosystems function of predation and subsequent negative trophic cascading impacts. This project will, for the first time, enable methods (through herding) and a payment for ecosystem services (through an ethical brand) provide a means to have value added to this ecological function of predation.

This project will contribute to the re-development and enhancement of livestock farming, initially on the vast expanses of commercial livestock agriculture which has not been immune to creeping degradation of more traditional pastoralist communities. The project will be focused on demonstrating the vital role that livestock industry can play in “green economy” development, ecological restoration effects, and through market mechanisms to pilot payment for ecosystems services. The project, if successful, will have wide-ranging replication and up-scaling potential into both commercial and nomadic pastoralist sectors.

Using herders or methodologies to mimic the function of herders, this project will demonstrate how the grazing and “mobility of livestock (and wildlife) is essential for the health of dryland ecosystems: for carbon sequestration, watershed protection, and biodiversity conservation. Whilst patterns and extent of herd mobility can be very diverse, it is evident that some form of mobility is essential for pastoralism and for sustainable rangelands management.

6) innovation, sustainability and potential for scaling up.

1.7 Innovativeness, sustainability and potential for scaling up:

Innovativeness:

The project will support innovative approaches that combine a system of indigenous knowledge that has been discarded by modern agriculture, with several modern tools, like GPS, mobile phones, guarding animals (dogs and alpacas), physical barrier methods (fencing and barrier collars) to foster a return to shepherding.

The key innovation is the modern application of age-old knowledge to commercial farming, whereby the solution does not lie in new technology, but in enhancing knowledge that has been discarded and needs re-application in combination with better technology that is now available.

The 'Fair Game' branding will also represent a new venture in South Africa, introducing a new set of environmentally friendly products to the market, and providing new ways of creating 'green jobs' in impoverished rural areas.

The project will also promote innovative application of the concepts outlined in The Economics of Ecosystems and Biodiversity (TEEB): South Africa has set out a compelling vision for economic growth that seeks to address poverty, unemployment and inequality. A key part of this new 'Growth Path' is reducing unemployment by creating secure and sustainable jobs. As such, the application of TEEB concepts to rangelands management can help by revealing the potential economic and employment opportunities from investing in 'green' nature-based solutions, ecological infrastructure and biodiversity business.

Understanding of the impact of top tropic level degradation on ecosystems: this is only recently gaining popularity in the scientific community and ecologists are just beginning to understand the trophic cascade effects resulting from the disruption of top trophic levels. The innovative approach of this project will be to focus on a better understanding and management of the top trophic levels in ecosystems, to underpin more viable and ecologically sensitive land management practices.

Sustainability:

PES scheme and Fair Trade branding/certification will provide the basis for the development of a financially rewarding and sustainable farm business model. It is expected that the venture can become economically viable and self-sustaining during or shortly after the GEF project duration. Membership Fees for the Brand will enable sustainability for the project beyond the grant funded period. Membership fees will be based on a pro-rata rate of a combination of livestock numbers and enterprise turnover (assessed through sales of the preceding 2 years). This is to make it fair to smaller and bigger producers. Membership fees will be used on running the secretariat that will be responsible for administration and promotion of the brand. The audit fees will cover the cost of yearly audits. Further income will be obtained for training of herders. Additional income from consulting fees with respect to specific farm extension services being provided

The capacity development and monitoring elements of the project will also be sustained after the project lifetime, through the establishment of partnership with existing training and academic institutes that will benefit from the GEF support and continue training and awareness programmes post-project, as part of their vision, mission and training curriculum.

Up-scaling and Replication:

Innovative shepherding approaches and 'fair game' branding will be applied in selected pilot livestock farms (component 1). The experience and data generated at these farms will be thoroughly documented and its impact independently assessed. This in turn will provide the platform to demonstrate the economic and environment benefits of the 'fair game' approach. Educational, training and awareness materials will also be developed, underpinning the advocacy efforts by LF and partners. This approach will provide the foundation to promote the uptake, replication and up-scaling of such new approaches within the rest of South Africa, the SA region and globally. The project is designed to be locally situated and operated from rural towns and, should it be successful,

it can be replicated in each rural town through a collaborative co-operative structure. This coordination would also allow for up-scaling of the PES component through marketing and developing of reliable markets, and eventually supplying large retail outlets with the value-adding products of this initiative, thus providing a better income for 'fair game' farmers.

2. Child Project? If this is a child project under a program, describe how the components contribute to the overall program impact. N/A

3. Stakeholders. Will project design include the participation of relevant stakeholders from civil society organizations (yes /no) and indigenous peoples (yes /no)? If yes, elaborate on how the key stakeholders engagement is incorporated in the preparation and implementation of the project.

3. Stakeholders

The Department of Environmental Affairs will be the lead government agency in the steering structures of the project, with the aim of influencing policy and information dissemination.

Wildlife Management and Livestock Production units of Pretoria University's Onderstepoort Veterinary Faculty will be the main academic partner, who will oversee the research and monitoring and evaluation components, and subsequent peer reviewed publication of outcomes. (Other universities will be invited to be involved in this academic supervision.) Grootfontein Agricultural College, Middelburg, Eastern Cape will be approached to partner in setting up project field trials and monitoring

South African National Parks Board (SANParks), Eastern Cape Parks and Tourism Agency and CapeNature, as the current managing agents of protected areas in the project site, will be invited to serve on the steering structures and their extension staff will be used as strategic advisors in the project planning and implementation. The Eastern Cape Department of Economic Development and Environmental Affairs will also serve on the steering structure.

Hantam Education Trust will be engaged to identify and source school leavers to enter the herding academy. It is an educational trust that develops learnerships for school leavers.

Compassion in World Farming will be engaged to partner in developing the oversight to animal welfare and husbandry standards. Organised agriculture (National Woolgrowers Association, South African Mohair Growers Association, Red Meat Producers Organisation) will be invited to serve on the steering structures to ensure information dissemination.

A group of progressive farmers, ecologists and agricultural specialists will serve on a smaller advisory and mentoring team that will guide the project implementation.

The Savory Institute and the African Centre for Holistic Management will be contracted to assist with the herder education and training.

Landmark Foundation will manage and lead this project implementation as project executant.

The specific farm sites have not been identified and commitments secured. Part of the projects is to develop the biodiversity monitoring tools that is to identify the sites (and therefore the farmers) in the early part of the project activities. Getting the commitments of the farmers is thus premature at this stage of the project. It is not possible

to get commitment letters from all particular farmers as the individual participation would only be confirmed and identified with the inception meeting and initial project activities after commencement, when the layout of the control trials are finalized. Their level of commitment could be confirmed during the project inception workshop at the start of the project and with the development of the Brand Scheme and trial layout. This will take the form of a supplier agreements and access agreements. The commitment of the Tamarisk Trust incorporates already 22% of the planned target area to be achieved, and is thus the anchor commitment which is secured and in place. All three learning sites have committed.

4. Gender Equality and Women's Empowerment. Are gender equality and women's empowerment taken into account (yes /no)? If yes, elaborate how it will be mainstreamed into project implementation and monitoring, taking into account the differences, needs, roles and priorities of women and men.

4. Gender Consideration.

The gender representation in the livestock agricultural industry in South Africa is male dominated. This is a historical and intractable bias dating back generations, if not centuries, and is compounded by cultural access and ownership of resources, not least represented in land ownership rights and inheritance practices. Furthermore, the new ownership of land holdings represents the biased male dominated control of the economic strings of power and resources. Much of the physicality of the labour on livestock farms does bias male labour selection. That is a reality that cannot be easily addressed. This project cannot hope to reverse those patterns.

On a management level, the project management unit will attempt to achieve greater gender equity in make-up.

However, the project will strive to address the promotion of youth employment by training herders from a cohort of school leavers and to assist in developing herding association, and related life and business skills. Particular life skills in business development, disease prevention and gender rights issues will be addressed in the curriculum.

In addition, the Government of South Africa and UNEP recognize the important role played by women in regions affected by environmental degradation, particularly in rural areas, and the importance of ensuring the full participation of both men and women at all levels in programs to degradation and mitigate its effects. During the project inception the mandatory UNEP gender marker will be applied. This requires that this project be rated for gender relevance. This will, for example, include a brief analysis of how the project plans to achieve its environmental objective by addressing the differences in the roles and needs of women and men.

Furthermore, gender marking implies the production of the following data by the project's year 2 and by its end:

- Total number of full-time project staff that are women
- Total number of full-time project staff that are men
- Total number of Project Board members that are women
- Total number of project Board members that are men
- The number of jobs created by the project that are held by women
- The number of jobs created by the project that are held by men

5. Benefits. Describe the socioeconomic benefits to be delivered by the project at the national and local levels. Do any of these benefits support the achievement of global environment benefits (GEF Trust Fund) and/or adaptation to climate change?

5. Benefits.

Intensive livestock systems as they are practiced today, can degrade the environment by producing high levels of carbon and methane emissions, polluting water courses, and causing land degradation. Cereals being produced for feed take away land from food production. Some forms of intensification have negative effects on human and animal welfare. Sustainable pastoral systems are more efficient, productive, and resilient than sedentary, agricultural systems in the same rangelands, when all factors and environmental benefits are counted, and they provide healthier products for human consumption.

The project will significantly assist in development of green economy jobs, skills retention and development and through improved land-cover to assist carbon sequestration, and thus the mitigation of climate change.

Wildlife protection and law enforcement will be promoted on farms together with a biodiversity monitoring programme as per output 3.1. Wildlife protection and law enforcement will be encouraged by all participating farms through the audited, certified and accredited Fair Game brand membership scheme with incentives and disincentives built into the brand scheme. Effective Biodiversity monitoring programme will be developed and implemented to assess changes in the status of biodiversity in the project operational area and to measure efficacy of the various interventions. This will accompany a proper scientific evaluation of the actual environmental and economic impact of all methods of management of predation and damage-causing animals on livestock farms, both lethal (where livestock farmers continue to prefer this method), and non-lethal methods (where farmers wish to test these methods on their farms). These results are independently evaluated and lessons learnt will be published and widely disseminated, targeting farmers as well as decision/policy makers.

6. Risks. Indicate risks, including climate change, potential social and environmental future risks that might prevent the project objectives from being achieved, and if possible, propose measures that address these risks:

6. Risks.

Risk	Risk level	
(a) Participating farmers may have limited endurance and risk acceptance, as well as may not be able to provide consistent adherence to monitoring and evaluation protocols	Medium	These risks will be mitigated through regular repeated contact, training, technical support, encouragement and regular sharing of know-how, progress and results by the project team with and between all participant farmers.
(b) The number of capable and motivated shepherds and farmers that can be identified, employed and retained during the project lifetime is limited	Medium	<p>This risk will be addressed by building upon the spectrum of participating herders in prior and ongoing programmes by the LF, adopting broad advertisement and transparent selection processes, and providing initial training and continued capacity development, motivational and team-building activities.</p> <p>There is a strong perception that labour trends are against the envisaged herding that is being promoted, both as a trend in commercial agricultural practices and as higher paying jobs in the urban areas take hold. However, this flies in the face of increasing unemployment, not just in cities, but particularly pronounced in small rural towns with a population of people coming from farms. It would appear that this attrition of jobs on farms is far more likely to come from an employer choice than an employee choice driven by perceived punitive labour laws and economies of scale and traditional commercial farming practices. This, together with reported increasing livestock losses due to human-wildlife conflict occurring with a decrease in farm employment, and evident effective mitigation option for these production losses through herding, is the basis of the project innovation. This production risk (human-wildlife conflict) and the using of herders to counter it will provide a reverse in</p>

		<p>declining agricultural income, better jobs security and opportunities for up-skilling and better paying jobs for herders. That is the project innovation: reinvigorating herding as a green jobs initiative that supports biodiversity conservation on production landscapes.</p> <p>The baseline work done by Landmark Foundation has demonstrated a desired need of several commercial farmers to return to herding as a means to mitigate human-wildlife conflict. The project will work with these commercial farmers, the Tamarisk Trust funded learning site operations and the African Centre of Holistic Management to drive through this innovation into production landscapes.</p> <p>The larger risk is whether this will be socially palatable to herders themselves. That can only be tested in the project implementation. To mitigate this aspect the income of herders will be augmented to become financially attractive and an elevation above traditional farm labour positions, their accommodation both in family housing and infield accommodation will be improved. In this way it will be promoted as a career advance. LF has done a great deal of pre-project preparation in identifying willing participant farmers.</p>
(c) Climatic events, effects of climate change and diseases (i.e. other factors than the expected human-wildlife conflict causes) that may occur unexpectedly, affecting the status of rangeland and project results and impacting the general morbidity and mortality of livestock	Medium	The potential occurrence and impact of such risks will be mitigate through an adequate selection of a diverse set of participating demonstration farms and controls, as part of an appropriate and scientifically sound design of the M&E programme that will monitor and take into consideration the possible impact of key external factors.
(d) The credibility of studies conducted by the project by be undermined by the need for an adequately long time series to allow a proper assessment of project results	Medium	This risk will be mitigated through a two pronged approach: (i) new studies will build upon prior and ongoing work by LF and partners, thus providing for at least partial (i.e. for some parameters) longer time series and baseline data, and (ii) studies will be implemented through existing academic partners, farmers and CSOs, that are committed to continuing the experiments with LF also post-project, thus allowing for a further validation of initial project results
(e) Market forces accept the brand development strategy	Medium	Initial studies conducted by the LF and partners seem to indicate a positive outlook for a “fair game” brand, reflecting increasing demand for safe and environmentally friendly farm products. This risk will also be will be mitigated through the early involvement (and already ongoing) of retailers that will buy in and provide support to this effort.
(f) Limited retailer/outlet & consumer participation in the green ‘fair game’ brand	Medium	This risk will be mitigated through the development and promotion of (i) a convincing and attractive brand product, and (ii) economically sound pre-sales agreements targeting micro distribution locations in the already existing niche markets.

7. Cost Effectiveness. Explain how cost-effectiveness is reflected in the project design:

7. Cost Effectiveness.

Cost effectiveness of the land use management interventions to be promoted: Prior to project commencement Landmark Foundation has piloted this intervention over the last seven years. The retrospective analysis of the outcomes is part of a major peer reviewed paper (J. S. MCMANUS, A. J. DICKMAN, D. GAYNOR, B. H. SMUTS and D. W. MACDONALD that can be found online at <http://journals.cambridge.org>). This demonstrated the feasibility and cost effectiveness of the intervention to be promoted. This pre-project trial and concept development enabled the project to be developed. It has

proven and demonstrated that the intervention is cost-effective within production landscapes. While the previous efforts are globally significant there is now a demonstrated need to develop a large-scale controlled pilot intervention as envisaged in this project that will facilitate the intended roll out, replication and upscaling of the intended outcomes.

Working with The African Centre for Holistic Management, Savory Institute and other institutions to facilitate the training programme along lines of already tried and tested modalities and thus makes it cost effective to establish the herding academy.

The project is further designed to augment both production and price for produce that should provide sustainability beyond this funded phase, and enable revenue generation into the future to sustain the project.

The Landmark Foundation's pre-work has set the enabling environment for the project to be implemented without delay. Foreign consulting costs have been avoided. The project will be able to run itself after the initial pilot and grant funded implementation phase as many of the costs financed by the pilot scheme will be carried by the producers thereafter as part of production costs, and the value will be achieved through increased production and increased prices from the value added brand scheme, namely Fair Game™.

The original co-financing was made within the project design and each funding partner made their commitments within this project design and conditional on the project advancing as detailed in the MSP documentation. Each funder was aware of the GEF application process and their participation has been integral in it, and thus confirmed therein.

Tamarisk Trust donation will establish the facility of the herding academy and provide for the operations of the farming at the learning site whereon the herding will be operationalized. All operations, livestock required, equipment and supplies, and brick and mortar needed to operate the academy and main project learning site is funded through this money, together with support from the Landmark Foundation and Green Fund. The Woolworths, Tamarisk Trust, Green Fund and Landmark Foundation co-funding is accordingly committed and finalized.

8. Coordination. Outline the coordination with other relevant GEF-financed projects and other initiatives [not mentioned in 1]:

8. Coordination.

This project will coordinate with other GEF projects, many of which have been completed. Important lessons from these programmes have been used in the development of this project, and will be accessed in the implementation. Several entities involved in the past projects will serve on the steering structures of this project.

The project will liaise with the following GEF projects, both complete and still ongoing, with a focus on key lessons learnt and those developing:

- GEF ID 5327 - Securing Multiple Ecosystems Benefit Through SLM in the Productive But Degraded Landscapes of South Africa by UNDP
- GEF ID 2913 - Human-Wildlife-Coexistence Management Project in Northern Botswana by World Bank
- GEF ID 1516 - C.A.P.E. Biodiversity Conservation and Sustainable Development Project by World Bank
- GEF ID 2615 - National Grasslands Biodiversity Program by UNDP
- GEF ID 3807 - Project for Ecosystem Services (ProEcoServ) by UNEP
- GEF ID 134 - Cape Action for People and the Environment (CAPE) by World Bank
- GEF ID: 4937 - UNEP/GEF Project in South Africa, Titled "Strengthening Law Enforcement Capabilities to Combat Wildlife Crime And Sustainable Use of Species in South Africa (Target Rhinoceros)" executed by Department of Environmental Affairs, Ministry of Environmental Affairs. Other Project partners:

Univ. Pretoria VGL, SAPS-FSL, WWF-SA, ICCWC (CITES Secretariat, Interpol, UNODC, WCO), CSIR, SANParks.

Newer GEF 6 project in the pipeline that are relevant will be sought out for collaboration, as they are approved.

The project will establish formal coordination mechanisms with the existing relevant institutions, other ongoing programmes, and key stakeholders (ref section A.2) in several ways: (a) A project steering committee that will meet half yearly and will include all key project partners (private sector, government and non-governmental organisations); (b) The project coordinator will serve on the Eastern Cape Implementation Committee of SANBI to report on project progress to all other civil society, government and private sector stakeholders working in the conservation sector, (c) a focus group of specialists will advise on day to day monitoring and evaluation mechanisms, and (d) The LF website will be enhanced to serve as knowledge sharing hub between participant and interested landholders and the new herding academy will provide a natural learning and knowledge exchange hub.

The African Centre for Holistic Management and the Savory Institute have already established similar programmes for training shepherds in Zimbabwe. The lessons generated through their 20 years past and ongoing programmes that are doing similar work will inform project design and implementation.

Currently there are few other brand development initiative in this sector in South Africa. However initiatives such as i.e. the “Karoo Origins Meat” (a Pretoria University initiative) and “Grain Fed Beef” initiatives are two unfolding initiatives that the GEF project will be engaging with. Woolworths, the targeted retailer that will collaborate with the project, has for some years been considering the development of an ethical brand in animal fibres and meats, and they have identified “Fair Game” as a potential partner to achieve their objective. The “Fair Trade” network will also be engaged as a partner to this GEF initiative as they have recently established a presence in South Africa.

9. Institutional Arrangement. Describe the institutional arrangement for project implementation:

9. Institutional Arrangement.:

The role of UNEP, Division of Environmental Policy Implementation (DEPI)

The project will be implemented by UNEP through the designated Task manager for the project, who will work together towards fulfillment of the project’s objectives. UNEP will process legal instruments and disbursements to the executing Agency (EA) and will use the UNEP Project Cooperation Agreement (PCA) which is a legal document to be signed before work commences. UNEP will disburse funds quarterly to the executing Agency (EA) according to the agreed work plan. The EA will submit quarterly expenditure reports and half yearly progress reports to UNEP.

The UNEP will be the contact point between the EA (Landmark Foundation), as the GEF Implementing Agency (UNEP). The UNEP will receive all reports before distribution to the steering committee and GEF. The UNEP will conduct regular site visit to monitor the project implementation and compliance with implementation arrangements.

UNEP will be the GEF Implementing Agency and will manage the project according to the GEF Project Cycle. UNEP will be accountable to GEF for project delivery and will have ultimate responsibility for supervising project development and guiding project development activities. UNEP will ensure technical support and supervision of the project through the assigned Task Manager, Fund Manager and other technical staff by providing the Executing Agency (EA) with technical and administrative backup assistance throughout the project

duration. UNEP will participate in project design and consultations as well as contribute to the preparation of the project work plan. Specifically, UNEP will:

- Disburse funds to cover project activities and procurements according to the Budget breakdown by component and UNEP Budget Lines;
- Provide project oversight, including participation in the kickoff and closing meetings and to PSC if and as required, by ensuring the required technical and administrative support to the Project manager (PM) and Project Team (PT) of the Landmark Foundation to execute the project;
- Develop the project monitoring and evaluation activities, according to the M&E Plan
- Participate in the PSC
- Will be accountable to GEF for overall delivery of outputs
- Conduct PIRs, MTR and TE,

The role of the UNEP Sub regional Offices in South Africa

The UNEP-Sub-regional office in South Africa will be the contact point between the EA (Landmark Foundation) and the GEF Implementing Agency (UNEP). The UNEP Sub-regional office in South Africa will represent UNEP/DEPI on the steering committee in the event that UNEP/DEPI is not able to attend.

The Roles of the National project steering committee

The Project will be guided by a Project Steering Committee (PSC) composed of Department for Environmental Affairs (DEA) as the chair, South Africa National Parks Authority (SANParks) South Africa National Biodiversity Institute (SANBI), Ministry of Agriculture, Ministry of Education, Local Governments and NGOs, private sector, Provincial Conservation Departments and Statutory Boards, University of Pretoria (Veterinary Faculty) as the research partner, and the National Project Manager and UNEP. The PSC is responsible - among others - to adopt the project's strategic decisions, reports and approve annual work plans, budgets and financial procurement, as well as control of the use of financial resources.

The PSC will meet twice a year and whenever necessary to oversee the project execution and monitor the conformity with the approved project work plan and to review and approve the project deliverables. The PSC will have the following roles:

- Provide strategic advice to the project team on the implementation of project activities to ensure the integration of activities with national policies and sustainable development objectives
- Ensure coordination/complementarities between the project and other ongoing activities in the country
- Ensure full participation of stakeholders in project activities
- Provide policy guidance and technical backstopping to the project.
- Approve reports and annual work plans, budgets and financial procurement, as well as control of the use of financial resources

The Project Management Unit will act as the secretariat of the PSC.

The role of Landmark Foundation (LF)

Landmark Foundation will be the project Executing Agency (EA). The EA will manage the GEF grant, coordinate execution with all key partners, and provide technical and financial management of the project. The LF will organize Project Steering Committee Meetings, which will be chaired by the South African Department of Environmental Affairs (DEA), and will involve all relevant government like SANBI and SANParks, civil society, academic and private-sector stakeholders and UNEP (as the GEF executing Agency for the project). LF will report to UNEP for technical and financial delivery of the project outputs while it will report to DEA and PSC for policy backstopping purposes.

10. Knowledge Management. Outline the knowledge management approach for the project, including, if any, plans for the project to learn from other relevant projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

10. Knowledge Management.

Component three will address main existing knowledge gaps, and will support education and outreach functions and information dissemination. Independent researchers will conduct a proper scientific evaluation of the actual environmental and economic impact of all methods of management of predation and damage-causing animals on livestock farms, both lethal (where livestock farmers continue to prefer this method), and non-lethal methods (where farmers wish to test these methods on their farms). Sophisticated GPS tracking and data collection devices will be used to monitor both the predators and guarding animals and their responses to shepherding efforts.

The lessons learnt will be captured in reports and analysis and graphic video guides for further shepherding training and farmer extension functions. Published findings and lessons learned from the research will provide the basis for education and training programs, and will be widely disseminated.

The impact of these practices on biodiversity is not yet fully understood nor quantified, and (as with wolf research in Yellowstone), conservationists are only just beginning to understand the impact of predator control on the entire trophic pyramid. This component will help evaluate the efficacy and impact of the various control methods (lethal and non-lethal) in terms of their impact on biodiversity, livestock production and financial return to landowners. The findings will provide authorities, conservationists and agriculturalists with the basis to make informed decisions on land management, and principally to mainstream biodiversity concerns into decision making and land-use and agricultural policies.

Learning networks will be established and led by the monitoring and evaluation teams. Several university groups will be involved as well as organized farmer groups in the region, through the establishment of learning networks amongst participants in the Fair Game scheme, and in connection with existing regional formal agricultural training and extension structures.

11. Consistency with National Priorities. Is the project consistent with the National strategies and plans or reports and assessments under relevant conventions? (yes /no). If yes, which ones and how: NAPAs, NAPs, NBSAPs, ASGM NAPs, MIAs, NCs, TNAs, NCSA, NIPs, PRSPs, NPFE, BURs, etc.

11. Consistency with National Priorities.

South African National Parks Board (SANParks) is actively expanding five key protected areas in the region, namely the Tankwa Karoo National Park, Karoo National Park, The Camdeboo National Park, the Mountain Zebra National Park and the Addo National Park. This project has strategically selected sites to implement its outputs in locations near or between these protected area with the ambition to expand biodiversity pattern and process conservation in the areas around/between these nationally protected areas. This objective serves to expand conservation influence for protected areas beyond their statutory boundaries into key areas of biodiversity importance. (Karoo National Park, Park Management Plan, Oct 2006; Mountain Zebra National Park, Park Management Plan, March 2008, Addo National Park Park Management Plan, Oct 2006, Camdeboo National Park, Park Management Plan, Aug 2012, Tankwa Karoo National Park, Park management Plan, March 2008.).

The project specifically addresses some of the priorities emerging from the recent UNU/TEEB study on NBSAPs: “A 2010 gap analysis by the Institute for Advanced Studies of the United Nations University revealed, however,

that existing national biodiversity strategies and action plans do not adequately address the underlying causes of biodiversity loss. In particular, the mainstreaming of ecosystems services and biodiversity into economic planning and sectors, as provided for under the new Strategic Plan for Biodiversity 2011-2020 adopted under the Convention, remains a considerable challenge.”

(<http://www.teebweb.org/InformationMaterial/TEEBUpdates/tabid/1137/Default.aspx>)

In the South Africa National Biodiversity Strategy and Action Plan (NBSAP - First Published in 2005 for the period 2005 – 2010) states that mainstreaming “means that all sectors that impact on biodiversity need to factor biodiversity considerations into their policies, plans and programmes, especially agriculture and urban planning. Mainstreaming implies that the full value of biodiversity should be recognized, so that activities that conserve biodiversity or use it sustainably should be rewarded economically and/or in other ways, while activities that destroy biodiversity should bear the associated cost.” This project sets out to achieve this, first through employment creation, skills development and retaining, supporting agricultural production through improved production and through the value-adding (PES) brand of “Fair Game” providing for both social and ecologically responsible land management. It also specifically supports the preservation and restoration of natural ecological patterns and processes on productive farms.

The project is also fully aligned with the objectives of the South Africa National Development Plan Vision 2030 (<http://www.npconline.co.za/medialib/downloads/home/NPC%20National%20Development%20Plan%20Vision%202030%20-lo-res.pdf>) through its specific focus on creation of ‘green’ jobs and youth development in rural areas, and on agricultural and environmentally sustainable initiatives in the rural economy. Therefore this project speaks not only to need to preserve the ecological integrity of SA’s natural heritage, but also to the national priority and objectives of addressing inequality and poverty. The project is entirely aligned with South African Government strategy and priorities as stated in the 2011 President’s State of the Nation Address. President Jacob Zuma stated that “2011 a year of job creation through meaningful economic transformation and inclusive growth” and agriculture is a sector highlighted as a particular focus. These priorities include the focus on both employment creation and skills development. This objective was again reiterated in the 2012 and 2013 State of the Nation speeches, with special attention devoted to agriculture and rural development, and the green economy as a driver of job creation, all of which objectives this project aims to address and support. The expansion and investment in agricultural job creation was also supported by the 2012 Budget speech, particularly emerging farmers and employment creation efforts. In 2012 an additional 250 million Rand (US\$16m) was allocated to agricultural support services. This project is also focused on addressing massive rural depopulation and skills loss through training and empowering shepherds and farm workers in becoming gainfully employed and capacitated to take ownership and control of their economic destinies, including supporting biodiversity through this initiative. The project is aligned with several key (and most important) current strategic planning priorities and departmental planning processes for the South African Government.

Finally, this project contributes to two outcomes of the United Nations Development Assistance Framework (UNDAF) in South Africa namely;

- UNDAF Outcome 2: Government and its social partners are supported to accelerate economic growth and development for the benefit of all.
- UNDAF Outcome 5: Poverty eradication interventions are intensified.

12. M & E Plan. Describe the budgeted monitoring and evaluation plan.

12. Monitoring and evaluation Plan

UNEP will be responsible for managing the mid-term review/evaluation and the terminal evaluation. The National Project Manager and partners will participate actively in and support the process.

The project will be reviewed or evaluated at mid-term (tentatively in January 2018 as indicated in the project milestones). The purpose of the Mid-Term Review (MTR) or Mid-Term Evaluation (MTE) is to provide an independent assessment of project performance at mid-term, to analyze whether the project is on track, what problems and challenges the project is encountering, and which corrective actions are required so that the project can achieve its intended outcomes by project completion in the most efficient and sustainable way. In addition, it will verify information gathered through the GEF tracking tools.

The project Steering Committee will participate in the MTR or MTE and develop a management response to the evaluation recommendations along with an implementation plan. It is the responsibility of the UNEP Task Manager to monitor whether the agreed recommendations are being implemented. An MTR is managed by the UNEP Task Manager. An MTE is managed by the Evaluation Office (EO) of UNEP. The EO will determine whether an MTE is required or an MTR is sufficient.

An independent terminal evaluation (TE) will take place at the end of project implementation. The EO will be responsible for the TE and liaise with the UNEP Task Manager throughout the process. The TE will provide an independent assessment of project performance (in terms of relevance, effectiveness and efficiency), and determine the likelihood of impact and sustainability. It will have two primary purposes:

- (i) to provide evidence of results to meet accountability requirements, and
- (ii) to promote learning, feedback, and knowledge sharing through results and lessons learned among UNEP and executing partners.

While a TE should review use of project funds against budget, it would be the role of a financial audit to assess probity (i.e. correctness, integrity etc.) of expenditure and transactions.

The TE report will be sent to project stakeholders for comments. Formal comments on the report will be shared by the EO in an open and transparent manner. The project performance will be assessed against standard evaluation criteria using a six point rating scheme. The final determination of project ratings will be made by the EO when the report is finalized. The evaluation report will be publically disclosed and will be followed by a recommendation compliance process.

The direct costs of reviews and evaluations will be charged against the project evaluation budget as shown in **Annex 5** while technical monitoring is catered for in the project logframe of **Annex 1**.


PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

A. Record of Endorsement⁹ of GEF Operational Focal Point (S) on Behalf of the Government(S): (Please attach the [Operational Focal Point endorsement letter\(s\)](#) with this template. For SGP, use this [SGP OFP endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
MR ZAHEER FAKIR	CHIEF POLICY ADVISOR, INTERNATIONAL GOVERNANCE AND RELATIONS – GEF FOCAL POINT	DEPARTMENT OF ENVIRONMENTAL AFFAIRS, SOUTH AFRICA	09/19/2014

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF policies¹⁰ and procedures and meets the GEF criteria for project identification and preparation under GEF-6.

Agency Coordinator, Agency name	Signature	Date (MM/dd/yyyy)	Project Contact Person	Telephone	Email
Brennan Van Dyke, Director, GEF Coordination Office, UNEP		April 12, 2016	Jane Nimpamya Division of Environmental Policy Implementation (DEPI) UNEP Nairobi, Kenya	Tel: +254 207 624 629 Cell phone +254 718436427	Jane.Nimpamya@unep.org

C. ADDITIONAL GEF PROJECT AGENCY CERTIFICATION (*Applicable only to newly accredited GEF Project Agencies*)

For newly accredited GEF Project Agencies, please download and fill up the required [GEF Project Agency Certification of Ceiling Information Template](#) to be attached as an annex to this project template.

ANNEX A: PROJECT RESULTS FRAMEWORK (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

See annex 1 attached

ANNEX B: CALENDAR OF EXPECTED REFLOWS (if non-grant instrument is used)

⁹ For regional and/or global projects in which participating countries are identified, OFP endorsement letters from these countries are required even though there may not be a STAR allocation associated with the project.

¹⁰ GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, and SCCF

Provide a calendar of expected reflows to the GEF/LDCF/SCCF Trust Funds or to your Agency (and/or revolving fund that will be set up) N/A

Acronyms

BD	- Biodiversity
CAPE	- Cape Action for People and the Environment
CapeNature	- Western Cape Nature Conservation Board
BSA	- Development Bank of South Africa
DEA	- Department of Environmental Affairs
EA	- Executing Agency
FSC	- Forestry Stewardship Council
GEF TF	- Global Environment Facility Trust Fund
GPS	- Global Positioning System
LF	- Landmark Foundation Trust
LGDs	- Livestock Guarding Dogs
MTR	- Mid-Term Review
MTE	- Mid-Term Evaluation
NGO	- Non Governmental Organisation
PES	- Payment for Ecosystem Services
PAs	- Protected Areas
SA	- South Africa
SANBI	- South Africa National Biodiversity Institute
SLM	- Sustainable Land Management
SANParks	- South African National Parks Board
TM	- Trade Mark
TEEB	- The Economics of Ecosystems and Biodiversity
UNDAF	- United Nations Development Assistance Framework