

# Rhino Mercy

## Rhinoceros Conservation Project

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## Executive Summary

The African Black and African White Rhino are under extreme threat of extinction due to an increase in illicit demand for rhino horn. In 2014, 1,215+ rhino were brutally killed, often times the horn is hacked off by callous poachers with a machete while the animal is immobilized and fully aware of what is happening to it; the rhino suffers an unimaginable agonizing slow death. The aim of this project is to provide a holistic approach that rhino hosting communities can implement to reduce the vulnerability of poaching incidence. The project was developed through a coalition of public and private partnerships including government agencies, private game reserves, universities, and NGO's located in the Greater Kruger National Park in the Republic of South Africa. The multi-faceted approach relies on active protective services (boots on the ground), integration of technology in traditionally low tech strategies, academic research targeting the scholar practitioner, and community education and upliftment opportunities.

This three year project promotes three primary strategies including 1) an anti-poaching plan that deploys Environmental Monitors, an armed response force, a sniffer and tracking K-9 unit, drone with nighttime video technology, and cellular aided camera traps placed in strategic high risk areas; 2) university research specializing in both environmental and social sciences and when appropriate a blending the two disciplines to develop effective best practices in human – mega herbivore conflict; and 3) the development of an effective regional communications and intelligence system among game reserve managers and law enforcement agencies for increased sharing of information related to threats.



## Part One: The Project

### A Preventive Approach to Rhino Poaching

Collaboration is one of several tools in providing effective environmental leadership and management. To that end, Rhino Mercy (Thomas L. Tochterman, CV exhibit 1), Transfrontier Africa (Craig Spencer, CV exhibit 2), Olifants West Nature Reserve (OWNR) in cooperation with Balule Nature Reserve (BNR) and South African National Parks Board (SANParks) have formed a coalition to address a national and international concern; the brutal slaughter of the rhinoceros and illegal trafficking of rhino horn. The coalition firmly believes that an effective preventive strategy must consist of a multi-faceted approach that includes, boots on the ground, integration of science and technology, and community education and upliftment.

**The project.** Balule Nature Reserve Coalition (BNRC) proposes a stratified approach to protecting the rhino and other threatened or endangered species; primary members of the coalition charged with implementing the Balule Rhino Conservation Project include Transfrontier Africa (TA), Olifants West Nature Reserve (western most region of BNR), and Rhino Mercy (RM). The coalition has created the following three primary initiatives in support of its mission to deter poaching:

- An anti-poaching initiative has been established in partnership with SANParks which the coalition proposes to be supported by the latest drone technology.
- An initiative to effectively use volunteers and university students to support the management of the OWRN and conduct vital research in the development of socio-ecological best practices for game reserves and ecosystems.
- An initiative to improve communications network that seeks to stimulate regional partnerships for sharing information among the association of private nature



reserves on the western boundary of the Kruger National Park regarding all environmental threats including poaching. The purpose of the information network is to strengthen collaborative protection and law enforcement efforts and to support national and international initiatives to root out illicit wildlife trade corridors.

The Rhinoceros Conservation Project is an environmental conservation and social upliftment program. The social upliftment component aims to address unemployment and assist with skills development of disadvantaged farm families living within the OWNR. Local residents of the reserve are no longer allowed to farm due to changes in permitted land uses from agriculture to ecotourism; some have resorted to poaching plains game with snares for basic subsistence. In an effort to effect social change by way of providing economic benefit to the locally disadvantaged through participation in the ecotourism industry, the coalition has engaged SANParks to fund the salaries of up to eight Environmental Monitors to act as an unarmed anti poaching reconnaissance team. SANParks will function as the implementation agent for this social upliftment component and therefore carries the responsibility to the national government for the persons employed by the project as Environmental Monitors. Specifically, Transfrontier Africa will operate as the Host Agent on behalf of SANParks and accommodate up to 8 men/women as ‘eyes and ears’ or early detection of a poaching incident or threat; for the purpose of this proposal, the Environmental Monitors are referred to as the Black Mamba Anti-Poaching Unit (APU). The APU will not have ‘use of force’ responsibilities or arrest authority; they will however be capable of alerting an armed rapid response force on standby from the local community of Hoedspruit. SANParks will pay the wages of the APU and TA, in partnership



with Rhino Mercy, is responsible for their on-site housing, training, equipment, uniforms, and transport. TA is responsible for the day to day supervision and management of the APU.

In addition to the Black Mamba's, the coalition has deployed an armed APU tactical force across the Balule landscape when necessary to assist in areas adjacent to Olifants West Nature Reserve; areas that also have high security risks. The deployment strategy will change from time to time based on current threat assessments. The provision of the armed response unit was established similarly to the Black Mamba Environmental Monitors with the support of SANParks. Armed services are provided via a contract with a local provider; the company name is Protrack. Protrack provides daily supervision of the unit and Craig Spencer (TA) provides management oversight.

Furthermore, TA successfully applied for a specialist sniffer dog trained in Germany that is currently assisting the APU and OWRN Warden in crime-scene investigations, routine patrols, road-blocks, and other poaching deterrent initiatives.

**The project location.** The Balule Nature Reserve (BNR) is one of four large nature reserves that comprise the Association of Private Nature Reserves (APNR). Per contract and operating agreements with the South African National Parks system (SANParks), BNR is designated as part of the Greater Kruger National Park (see Figure 1). The APNR, including Balule, is an open bio system allowing animals, including the mega herbivores such as the rhino and elephant, to traverse an additional 186,000 hectares beyond the 2,800,000 hectares of the Kruger National Park. BNR is modeled on a cooperative management system that employs the South African government management model insuring alignment between public and private sector conservation interests.



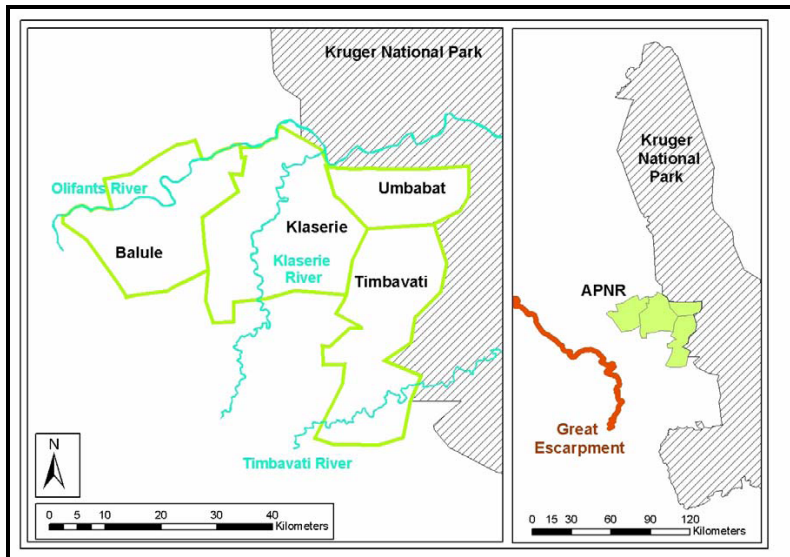


Figure 1. The Association of Private Nature Reserves in relation to the Kruger National Park.

**Duration of the project.** The project began February 1, 2013 with the formal agreement between Transfrontier Africa, Balule Nature Reserve, Olifants West Nature Reserve, and Rhino Mercy to establish a security protocol as a preventive measure to rhino poaching on the western boundary of the Kruger National Park, specifically the Balule Nature Reserve. The term of the project is three years with respect to the involvement of SANParks (with options to renew); other coalition partners view the term of this project as perpetual.

**Amount of funds needed.** The total amount of funds required over three years is R 1,141,000 or (USD \$123,379 at a currency exchange rate of USD \$1 to R 9.25). Detail is provided in Table 2.

**Partner Commitments.** The financially committed coalition partners in this project and their specific responsibilities to the project are as follows:

- **Olifants West Nature Reserve & Olifants West Conservation Trust**
  - ✓ Provide accommodation and construct compound for new staff.
  - ✓ Provide office and administrative accommodation for the project.



- ✓ Provide accommodation and facilities for researchers.
- ✓ Provide one specialist tracker with local knowledge and supply equipment and training.
- **Transfrontier Africa**
  - ✓ Manage the selection process for the environmental monitors (Black Mamba APU).
  - ✓ Act as host agents and absorb administrative responsibility to Implementing Agents (SANParks). Includes monthly reports and time-sheets.
  - ✓ Supervise team and deploy APU where necessary.
  - ✓ Ensure APU transport is provided.
  - ✓ Provide for and maintain specialist sniffer-dog (sponsored by Endangered Wildlife trust).
  - ✓ Provide and maintain camera-traps.
  - ✓ Provide for regular monitoring of rhino (radio-telemetry), veterinary bills and transport for researchers.
  - ✓ Maintain sniffer and tracking dog.
  - ✓ Organize drone (UAV) demonstration and implementation.
  - ✓ Provide accommodations, curriculum, and logistics for volunteers.
- **SANParks**
  - ✓ Provide funding to host agent (Transfrontier Africa) for wages.
  - ✓ Report progress to National Government.
- **Aalborg Zoo**
  - ✓ Provide sniffer dog and training.



- ✓ Funding for fuel and rations.
- **Rhino Mercy**
  - ✓ Provide funds for skills training of new APU recruits, uniforms and equipment.
  - ✓ Provide operational funds for “off-reserve” activities such as assisting other areas and role-players at road-blocks, crime-scene investigations and operations that require our resources and skills sets.
  - ✓ Market voluntourism and student research opportunities.
- **Endangered Wildlife Trust SA**
  - ✓ Provide initial funding for sniffer dog.
  - ✓ Provide funding for drone demonstration.
- **University of South Africa and Western Kentucky University**
  - ✓ Current providers of students for environmental research projects.
- **Elephants Alive**
  - ✓ Provides opportunities for collaborative high profile mega herbivore research initiatives.





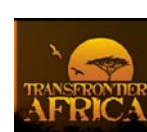
**Project Financial Requirements.** Capital expenses are represented in South African Rand (ZAR). At the time of this writing, the exchange rate was ZAR 9.25 to USD 1.00. For cost detail for each project please see exhibit 3.

### Three Year Financial Plan

Project	FY 1	FY 2	FY 3	Total	Raised to Date
Construction of APU accommodations	77,000	0	0	77,000	42 000
Researchers accommodations	150,000	0	0	150,000	
Administrative office lease and supplies	10,000	0	0	10,000	10 000
Administrative supervision	36,000	36,000	36,000	108,000	
GPRS camera-traps (4)	18,000	0	0	18,000	
Anti Poaching Unit vehicle	50,000	50,000	50,000	150,000	
Transport for off-reserve interactions	12,000	0	0	12,000	12 000
Training of APU members (8)	120,000	0	0	120,000	
Equipment & Uniforms for APU per member	80,000	0	0	80,000	
Drone (acquisition, training, mtc.)	380 000	0	0	380 000	
K-9 Unit for tracking (food, vet, gear, training)	12 000	12 000	12 000	36 000	36 000
<b>Total in ZAR</b>	<b>949 000</b>	<b>98 000</b>	<b>98 000</b>	<b>1 141 000</b>	<b>100 000</b>
<b>Total in USD</b>				<b>124 444</b>	

*Table 2. Financial Plan in South African Rand (ZAR)*

The Olifants West Conservation Trust was established and registered as a South African Section 21 Company to create the primary mechanism for receiving and managing donations. This fiduciary structure is in place to ensure that funds received follow correct audit procedures and that appropriation of funds are in accordance with the donors wishes.



**Part Two: Why & How**

**Background and Justification for the Project**

The Rhino Conservation Project was created to address the growing rhino poaching crisis in the Republic of South Africa. Since 2007 the number of recorded poaching events has skyrocketed with 668 rhinos poached in 2012; over 60% of the illegal rhino killing took place within the Kruger National Park where poachers frequently enter the park from a shared border with Mozambique (see Table 1). At the time of this writing, 408 rhinos had been poached in 2013.

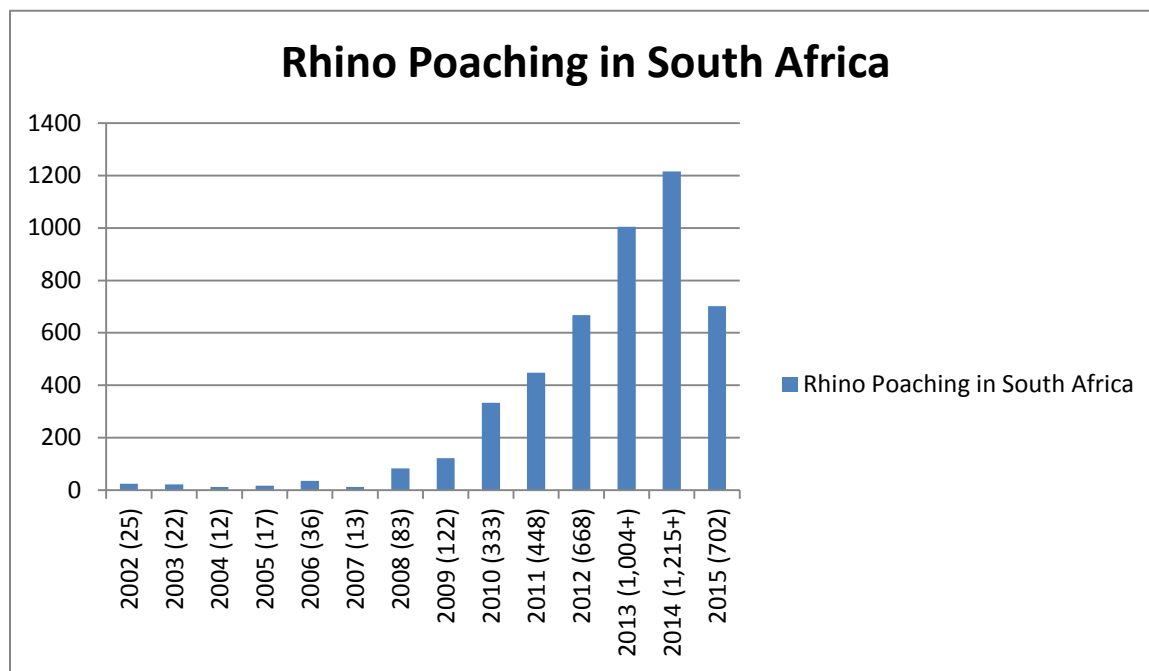


Table 1. Number of illegal rhino killings in the Republic of South Africa (Milliken, Shaw, Emslie, Taylor, and Turton, 2012; OSCAP, 2015)

The cause of the rise in poaching is considered primarily a result from the high demand in rhino horn for use in Traditional Chinese Medicine. Historically rhino horn powder was mixed with botanical compounds and believed effective in reducing fever in young children; a claim



that is contradicted by science (But, Lai-Ching, & Yan-Kit, 1990). Rhino horn is nearly pure keratin, the same organic composition as human finger nail or hair (Hieronymus, Witmer, & Ridgely, 2006). The spike in Asian demand is due in part to false claims that rhino horn can cure cancer and alleviate hangover symptoms from excessive alcohol intake. To a lesser degree, wealthy Middle Eastern cultures also use the rhino horn as an ornamental status symbol of wealth; the horn is carved and used as a dagger handle. The average value of a rhino horn on the black market is approximately USD \$65,000 per kilogram and the average weight of a pair of horns from one rhino is 4 kg!

The act of poaching has gotten substantially more covert. To avoid detection by the sound of a loud gunshot, many rhino's are brutally attacked being drugged first with a tranquillizer (M 99), then while the animal is still alive and immobilized by the drug, the horn is removed using an axe or a panga (machete) with the rhino fully aware of what is happening; the rhino is often left to die a slow horrific death. If interested, visual images are plentiful via the Internet.

To date, the BNR has lost five rhino to poachers; the parties to this coalition project are convinced that rhino poaching will soon encroach intensively upon the Balule Nature Reserve and therefore are committed to proactively seek resources and establish protocol to deny or at least limit the impact of the rhino poacher. The Olifants West Nature Reserve, being the western most boundary of the Greater Kruger National Park, assumes that as officials within the Kruger Park gain control of their poaching crisis the poachers will then refocus their deeds on the least secured private reserves. Olifants West Nature Reserve is the front line of defense for the Balule Nature Reserve and therefore inherently needs this program!



## Objectives of the Project

**Environmental objectives.** The environmental concerns are that the African Black and African White Rhinoceros, as endangered and threatened species respectively, are under eminent threat of being poached into extinction. The macro environmental objective is establishing protections for mega herbivores and apex predators within the Olifants West Nature Reserve thereby developing a model of stewardship that can be replicated elsewhere. The collaborators believe the long term viability of the wild bush ecosystem is dependent on maintaining healthy stocks of such ‘gateway’ species. Secondly our environmental objective is to establish long term funding mechanisms modeling using public/private partnerships; stewardship of natural resources is everyone’s responsibility as everyone is a beneficiary of a healthy and wild bush environment.

**Social objectives.** What sets this project apart from many others is that the coalition members are convinced that for there to be long term change in man’s custodianship of natural resources a new approach to social theory must also be adopted and practiced. Such social theory must take due care and consideration of special circumstances applicable to site specific socio-economic conditions such as poverty, disease, and political instability. For example, in the case of OWNR/BNR, a deeper understanding of the effects of apartheid era influences, regional social theory such as ubuntu, land use conversions from farming to game reserve operations, family structures, tribal customs, and the general consequences of poverty must be explored in order to better understand how such factors impact human behavior with respect to stewardship and what might be possible in terms of developing a new generation of ecologically concerned and motivated citizens. This project is conducting site specific research with the objective to better understand social drivers and influences that both prevent and sustain positive social



change for local residents as well as global citizens. The social objective is to develop an environmental management model that is mutually informed by environmental science and social science.

### **Project Implementation and Management Plan**

**Expected project results.** To protect, grow, and manage the resident rhino population to a sustainable size herd in the BNR starting specifically within the OWRN; to engage all stakeholders of the bush and establish a cohesive long term socio-environmental best practices plan for consumptive and non-consumptive uses of natural resources; develop an ecological systems management model based on cutting edge social science and environmental science; alleviate consequences of poverty such as poor health and illiteracy among “previously disadvantaged peoples” living within the OWRN/BNR by creating new ways for participation in the benefits of ecotourism.

**Project activities and work plan.** The activities highlighting the collective approach of the collaborators include the following. For detailed descriptions of each activity please see exhibits 4 through 8:

- *Indlovu Camp Voluntourism.* A bush camp designed to host short term volunteers to aid in daily routines of game reserve management and to provide highly specialized baseline environmental education creating ambassadors for the sub-Saharan ecosystem.
- *Olifants West Research House.* A residency program and collaborative effort among US, European, and South African universities to provide real world academic research opportunities for undergraduate, graduate, doctorate and post doctorate research initiatives.



- *Black Mambas Anti-Poaching Unit.* A locally sourced two prong approach to providing ‘boots on the ground’ as a proactive approach to prevent poaching. The Black Mambas APU are the eyes and ears of the reserve and have been trained accordingly. The primary mission of the APU is to detect the presence of poachers and sound the alarm. An outside professional armed rapid response unit is on call per contract with OWNR once the Black Mambas detect an eminent threat. The Black Mambas are also supported by an onsite and highly specialized K-9 unit.
- *Experience Africa Project.* A program designed for ‘gap year’ young adults (18-20 year olds) to participate in a rhino conservation program hosted at Indlovu Camp.
- *Operation Rhino Pro-Tech.* An initiative to implement technology in protection and research strategies including a rhino monitoring program tracking Black Rhinoceros using radio technology. Efforts are also underway to host a demonstration project for the potential deployment of state of the art drone and video technology. State of the art satellite collars are also being tested to provide real time data and cost reductions.

**Project beneficiaries.** The primary beneficiaries include all animals and habitat of the OWNR/BNR ecosystems as well as those individuals dependent on long term sustainability and vitality of the game reserves.

**Implementing agent for management of the project.** The responsible party for management of all aspects of this project is Mr. Craig Spencer of Transfrontier Africa.



### Project Monitoring and Evaluation

The project will be evaluated annually per the Olifants West Conservation Trust (OWCT) goals and objectives and that of typical non-profit, public benefit organizations. Two primary areas of program evaluation are financial and operational performance; the OWCT will provide an annual evaluation of project effectiveness. Further, the financial records of the project will be reviewed annually by a South African equivalent of a Certified Public Accountant. Day-to-day monitoring and performance evaluations will be the responsibility of Mr. Craig Spencer.



## References

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