



REQUEST FOR CEO ENDORSEMENT

PROJECT TYPE: Full-sized Project

TYPE OF TRUST FUND: GEF Trust Fund

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PART I: PROJECT INFORMATION

Project Title: Strengthening Law Enforcement Capabilities to Combat Wildlife Crime for Conservation and Sustainable Use of Species in South Africa (target: rhinoceros)			
Country:	South Africa	GEF Project ID: ¹	4937
GEF Agency:	UNEP	GEF Agency Project ID:	856
Other Executing Partner(s):	Department of Environmental Affairs, Ministry of Water and Environmental Affairs, South Africa	Submission Date:	01/11/2013
		Resubmission date:	05/12/2013
GEF Focal Area (s):	Biodiversity	Project Duration(Months)	48
Name of Parent Program (if applicable):	n/a	Project Agency Fee (\$):	269,045
	<ul style="list-style-type: none"> ➤ For SFM/REDD+ <input type="checkbox"/> ➤ For SGP <input type="checkbox"/> ➤ For PPP <input type="checkbox"/> 		

A. FOCAL AREA STRATEGY FRAMEWORK²

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Grant Amount (\$)	Cofinancing (\$)
BD-1	Outcome 1.1: Improved management effectiveness of existing and new protected areas	Output 2. Coverage (2,130,077 hectares) of unprotected threatened species (two species of rhino)	GEF TF	2,690,455	23,795,000
Total project costs				2,690,455	23,795,000

B. PROJECT FRAMEWORK

Project Objective: Improve the effectiveness of efforts to combat wildlife crime in South Africa's Protected Area system, focused on rhinoceros, through improved forensic technologies and capacity, strengthened data gathering, sharing and analysis systems at national level, and enhanced cooperation structures and mechanisms at international level to support law enforcement efforts along the whole trafficking chain

Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Grant Amount (\$)	Confirmed Cofinancing (\$)
1. Use of forensic technology to combat rhino poaching and the illegal rhino horn trade	TA	1.1 Improved and more effective forensic capacity (techniques, procedures, training, equipment and institutional arrangements) to combat rhino poaching	1.1.1 Critical resources (equipment, personnel, etc) at key public- and private-sector wildlife forensics facilities, notably the Veterinary Genetics Laboratory (VGL) at the University	GEF TF	1,480,910	11,800,000

¹ Project ID number will be assigned by GEFSEC.

² Refer to the [Focal Area Results Framework and LDCF/SCCF Framework](#) when completing Table A.

		<p>in South Africa's protected areas and the associated illegal trade in rhino horn, with service providers put onto a sustainable financial and institutional footing</p>	<p>of Pretoria and SAPS Forensics Laboratories, are provided to improve identification and tracking of rhino horns for enforcement purposes</p> <p>1.1.2 New wildlife forensic approaches and techniques to tackle rhino poaching and associated illegal sale of rhino horn developed for adoption in South Africa's PAs</p> <p>1.1.3 Wildlife crime scene investigation protocols (SOPs) and other relevant procedures reviewed, revised and formalized, essential wildlife crime scene and forensics equipment provided</p> <p>1.1.4 Targeted training and awareness-raising programmes delivered to specific groups dealing with criminal cases involving rhinos on the relevance and collection of forensic evidence for tackling wildlife crime in South Africa</p> <p>1.1.5 Initial steps taken for the establishment of a dedicated institutional structure in South Africa (provisionally an Environmental Forensic Section) to coordinate and analyse all wildlife forensic evidence, initially focused on rhinoceros</p>			
2. Information sharing and analysis for more effective law enforcement	TA	2.1 Improved gathering and analysis of relevant data and enhanced national coordination platforms for	2.1.1 Systems for gathering key information on individual rhinos, including their DNA, populations, movements	GEF TF	652,000	6,750,000

among national actors to tackle rhino poaching and the illegal trade in rhino horn		information management and threat forecasting to combat rhino poaching and the associated illegal trade in rhino horn within and outside South Africa's Protected Areas system	(restricted activities), provenance and relevant crime and law enforcement data are improved, and available to key vetted national and provincial wildlife and enforcement agencies (DEA, SANParks, SAPS) through secure, linked databases 2.1.2 A Wildlife Crime Analysis and Forecasting Tool (WCFT) that links the key rhino management and conservation and crime and law enforcement databases, developed to analyse restricted activities related to rhinos, e.g. poaching and illegal trade, and better forecast and prioritise action against potential future restricted activities, which can then be mapped within PAs			
3. Cooperation and exchange at the international level to tackle poaching and the illegal trade along the whole trafficking chain	TA	3.1 Improved cooperation and exchange between South Africa and other relevant countries to tackle poaching of rhinos and the illegal trade in rhino horn along the whole trafficking chain	3.1.1 Sections of the Action Plans (APs) for the Memoranda of Understanding (MoUs) and other appropriate agreements, between South Africa and other relevant countries dealing with rhino poaching and illegal trade in rhino horn implemented 3.1.2 Procedures established, 'good practice' captured and disseminated, and capacity built, for the exchange of relevant data and samples of illegally traded parts and derivatives (with a focus on rhinos) between South Africa and relevant	GEF TF	329,000	3,500,000

			national and international enforcement agencies, such as ICCWC members and other relevant organisations, to assist with forensic investigations			
			3.1.3 RhODIS upgraded to become the global standard and database for storage of rhino DNA and profiles			
Monitoring and Evaluation				GEF TF	83,000	580,000
Subtotal				GEF TF	2,544,910	22,630,000
Project Management Cost (PMC) ³				GEF TF	145,545	1,165,000
Total project costs					2,690,455	23,795,000

C. SOURCES OF CONFIRMED COFINANCING FOR THE PROJECT BY SOURCE AND BY NAME (\$) - Letters confirming cofinancing for the projects are included with this form (annex L)

Sources of Co-financing	Name of Co-financier (source)	Type of Cofinancing	Cofinancing Amount (\$)
National Government	DEA	Cash	1,803,000
National Government	DEA	In-kind	4,207,000
National Government	DEA/SANParks	Cash	4,128,000
National Government	DEA/SANParks	In-kind	9,632,000
CSO	VGL University of Pretoria	In-kind	1,400,000
CSO	WWF SA	Cash	149,000
CSO	WWF SA	In-kind	1,276,000
Other Multilateral Agencies	ICCWC Partnership	In-kind	300,000
Other Multilateral Agencies	CITES Secretariat	In-kind	800,000
GEF Agency	UNEP	In-kind	100,000
Total Co-financing			23,795,000
Total co-financing indicated at PIF stage:			11,659,174

D. TRUST FUND RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY¹

GEF Agency	Type of Trust Fund	Focal Area	Country Name/ Global	(in \$)		
				Grant Amount (a)	Agency Fee (b) ²	Total c=a+b
UNEP	GEF TF	Biodiversity	South Africa	2,690,455	269,045	2,959,500
Total Grant Resources				2,690,455	269,045	2,959,500

¹ In case of a single focal area, single country, single GEF Agency project, and single trust fund project, no need to provide information for this table. PMC amount from Table B should be included proportionately to the focal area amount in this table.

² Indicate fees related to this project.

³ PMC should be charged proportionately to focal areas based on focal area project grant amount in Table D below.

F. CONSULTANTS WORKING FOR TECHNICAL ASSISTANCE COMPONENTS:

Component	Grant Amount (\$)	Cofinancing (\$)	Project Total (\$)
International Consultants*	0	0	0
National/Local Consultants	380,000	420,000	800,000

*international consultants are not envisaged at this stage

G. DOES THE PROJECT INCLUDE A “NON-GRANT” INSTRUMENT? No

PART II: PROJECT JUSTIFICATION

A. DESCRIBE ANY CHANGES IN ALIGNMENT WITH THE PROJECT DESIGN OF THE ORIGINAL PIF⁴

A.1 National strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. NAPAS, NAPs, NBSAPs, national communications, TNAs, NCSA, NIPs, PRSPs, NPFE, Biennial Update Reports, etc.

No change from PIF – however some key updates and expanded information is provided, particularly with regard to updating of national strategies and plans governing protection of rhinos and law enforcement measures.

South Africa ratified the CBD on 2 November 1995 and the CITES on 15 July 1975. The GEF rhino Project is consistent with and supports several national conservation priorities as well as other provincial and local level policies that are relevant to the objectives of the rhino project. The overarching biodiversity legislation in South Africa is the National Environmental Management Act 107 of 1988 (NEMA) and the GEF initiative is fully aligned with this.

The project is also fully aligned with the current NBSAP for South Africa which identifies the need for management plans for species of special concern to ensure their long-term survival in the wild and for the development of Norms and Standards for Biodiversity Management Plans (BMPs) for Species. The project is designed to support and help implement the National Strategy for the Safety and Security of rhinoceros Populations in South Africa (2010). The Strategy makes reference to all relevant international conventions that have been signed and ratified by the Government of South Africa, notably CITES. The project also sits within the framework of the SADC Rhino Conservation Strategy (see below for more information on Rhino Strategies). The project's execution arrangement through the DEA (ref. section B.1 below) provides an optimal set-up to ensure: (a) full coordination, added-value and maximum complementarity with all other relevant ongoing initiatives at national and regional level and (b) long-term sustainability of project outcomes.

The project is also aligned with other existing legislation, such as the "National Environmental Management: Biodiversity Act No. 10 of 2004 (NEM:BA)" which provides protection for both species of rhinos and the "National Environmental Management: Protected Areas Act No. 57 of 2003; (NEM:PAA)", and follows recommendations in the BMPs for both species. A new revised National Black Rhino Biodiversity Management Plan (BMP) was published by the DEA on 25 January 2013, and a draft White Rhino BMP has been produced with a the final version anticipated sometime during 2013. Both these BMPs have a long-term vision and shorter-term measurable goals, outline a series of Actions/Strategies that will be required to achieve each Key Component objective, and highlight the need for effective protection of rhinos, including proactive and reactive enforcement actions, improved investigation techniques, cooperative intelligence management and effective prosecution. Both rhino BMPs highlight the need for effective protection of rhinos and this includes proactive and reactive enforcement actions, improved investigation techniques, cooperative intelligence management and more effective prosecution. The project's aim to improve wildlife forensic capacity [especially of RhODIS™ (Rhino DNA Index System) rhino DNA and ballistics analysis] and intelligence gathering and data analysis together will directly

⁴ For questions A.1 –A.7 in Part II, if there are no changes since PIF and if not specifically requested in the review sheet at PIF stage, then no need to respond, please enter “NA” after the respective question.

contribute to helping achieve rhino security and protection key component objectives, directly contributing to addressing the goals of both rhino BMP s. More detail on the Institutional, legal and policy background governing the conservation of rhinos in South Africa is presented in Annex O.

The ‘South Africa – United Nations Strategic Cooperation Framework’ (UNSCF formerly called UNDAF) for 2013-2017, addresses UN support towards the achievement of MDGs, and covers four main focus areas: (i) inclusive growth and decent work; (ii) sustainable development; (iii) human capabilities; and (iv) governance and participation. The very specific technical focus of this project is not explicitly covered in the broad and more sustainable development oriented UNSCF. However the project is indirectly supporting SDCF focus area areas (ii), (iii) and it will also directly contribute to the achievement of UNSCF’s Key Result Area 4: Strengthened national institutions and systems to support South Africa’s contributions for a Better Africa and a Better World.

A.2. GEF focal area and/or fund(s) strategies, eligibility criteria and priorities:

No change from PIF – *however some key updates and expanded information is provided:*

The project objective is to improve the effectiveness of efforts to combat wildlife crime in South Africa’s Protected Area system, focused on rhinoceros, through improved forensic-based technologies, data gathering and analysis and data management systems at national level, and increased cooperation structures and mechanisms at international level to support law enforcement efforts along the whole trafficking chain. Hence, the project is fully consistent with GEF Biodiversity Focal Area Strategic Objective One: “Improve sustainability of Protected Area (PA) systems”, and aims to make significant contributions to Outcome 1.1: “Improved management effectiveness of existing and new protected areas”, and will specifically deliver benefits under Output 2 coverage (2,130,077 hectares) of unprotected threatened species (two species of rhino in South Africa) by improving the conservation status of protected areas where the two species of rhino already exist (by reducing poaching and providing improved capacity for law enforcement activities). It will also contribute to Outcome 1.2 “Increased revenue for protected area systems to meet total expenditures required for management”, through helping to reduce poaching in protected areas and therefore reduce the level of expenditure which is currently being allocated to rhino security efforts (in some cases up to 80% of the reserve’s operational budget) allowing expenditures on other important management activities.

A.3 The GEF Agency’s comparative advantage:

No change from PIF – *no additional information required, and more detail on links and coordination with other UNEP and non-GEF initiatives is also provided in Annex P*

A.4. The baseline project and the problem that it seeks to address:

Some changes from PIF – some technical and presentational changes resulted from the stakeholder consultations and assessments that were carried out during the PPG. The project rationale was clarified and expanded, and the project logical framework was revised and improved and made more detailed. Some changes in the project logical framework were also made to clarify specific technical issues and/or to address GEF and STAP review comments. Therefore:

1. The revised project framework is summarized in **Part I, Section B** of this document
2. The Project Rationale, Logical Framework and a detailed description of outputs and activities table are presented in full detail in **Annex A1 and A2** to this CEO Request Document
3. A rapid-comparison table is provided below, summarizing changes between PIF and CEO request document, with a focus on the higher-level Components and Outcomes (full details are provided in **Annexes A1 and A2**)

<i>Component (PIF)</i>	<i>Component (CEO)</i>	<i>Outcome (PIF)</i>	<i>Outcome (CEO)</i>	<i>Notes on Changes</i>
<i>1. Enhancing Rapid-Response Capacity and Innovative Approaches and Technologies to</i>	1. Use of forensic technology to combat rhino poaching and the illegal rhino horn trade	<i>1.1 Innovative approaches to rhinoceros conservation, management and</i>	1.1 Improved and more effective forensic capacity (techniques, procedures, training, equipment and institutional arrangements)	The re-formulated Outcome is more specific, providing more clarity on the expected changes resulting from the project. Additional details provided at the

<i>Combat Wildlife Crime</i>		<i>enforcement identified, developed, encouraged and used within protected area networks</i>	to combat rhino poaching in South Africa's protected areas and the associated illegal trade in rhino horn, with service providers put onto a sustainable financial and institutional footing	Outcome and Output level (see Annex A1 and A2), reflect results of stakeholders consultations and also addressing GEF Review and STAP comments
<i>2. Enhancing Cooperation and Coordination</i>	2. Information sharing and analysis for more effective law enforcement among national actors to tackle rhino poaching and the illegal trade in rhino horn	<i>2.1 Mechanisms enhanced and maintained for effective national and regional coordination of rhinoceros conservation, management and law enforcement efforts</i>	2.1 Improved gathering and analysis of relevant data and enhanced national coordination platforms for information management and threat forecasting to combat rhino poaching and the associated illegal trade in rhino horn within and outside South Africa's Protected Areas system	Original PIF Component 2 and Outcome 2.1 is split into two components/outcomes, to clarify and differentiate between national and international level work, and to provide a more detailed list of outputs under each Outcome. This also addresses the GEF Review and STAP comments requesting more specific details on the technical scope of this component.
	3. Cooperation and exchange at the international level to tackle poaching and the illegal trade along the whole trafficking chain	<i>none</i>	3.1 Improved cooperation and exchange between South Africa and other relevant countries to tackle poaching of rhinos and the illegal trade in rhino horn along the whole trafficking chain	Same as above

A. 5. Incremental /Additional cost reasoning: describe the incremental (GEF Trust Fund/NPIF) or additional (LDCF/SCCF) activities requested for GEF/LDCF/SCCF/NPIF financing and the associated global environmental benefits (GEF Trust Fund) or associated adaptation benefits (LDCF/SCCF) to be delivered by the project:

No change from PIF – *however some additional detail is provided:*

A.5.1. Incremental Cost Reasoning

The main focus of the GEF project is to improve the effectiveness of wildlife crime mitigation efforts in South Africa's Protected Area system, through improved forensic capabilities and data gathering and analysis at the national level, together with improved sharing and coordination systems at the international level.

The GEF Project will complement baseline investments by the Government of South Africa to improve conservation efforts for rhinoceroses by addressing three key sub-optimal problem areas:

- (i) Inadequate capacity for efficient and timely DNA collection and analysis for use as forensic evidence;
- (ii) Weak coordination mechanisms and information sharing among all actors involved in law enforcement and anti-poaching efforts; and
- (iii) Insufficient cooperation and information exchange at the international level to enable successful prosecutions of poaching and the illegal trade along the whole trafficking chain.

To address these gaps, the GEF Project will: (i) use and deploy innovative forensic technologies for enforcement in Protected Areas; (ii) improve information management by linking relevant databases on rhino conservation and rhino crime; and (iii) support the use of forensics, information-sharing and analysis at the international level to improve law

enforcement efforts. With this focus in mind, the incremental cost reasoning for the UNEP-GEF Rhino Project is summarised in Annex Q.

A.5.2 Global Environmental Benefits

The benefits generated through the GEF project will mainly accrue to rhino populations within the Kruger National Park (1,948,500 ha), where the largest populations of rhino occur in SA and the majority of rhino poaching is currently concentrated. However, the GEF project will also boost the rhino security efforts in all other (less well resourced) PAs in SA where rhino populations (and poaching) occur and hence improve their conservation status. Project efforts will be initially focused on Key Populations (of continental significance) irrespective of their location or management (so both state and privately owned sites), including: the Provincial Nature Reserves of Hluhluwe (14,381.39ha), Mfolozi (44,544.07ha) and Ndumo (13,849.53ha) in KwaZulu-Natal, as well as the Marakele (58,801.71ha) and Pilansberg (50,000ha) National Parks, all of which are spending considerable time and resources on anti-poaching efforts (some up to 80% of their operating budgets). Therefore the total area that will receive improved conservation benefits will be 2,130,077 ha in 6 major PAs. Indirectly, the GEF project will also positively affect the conservation status of all other Rhino populations (and their host public and private protected areas) in SA, as well as benefiting the overall SADC regional population, as South African rhinos are regularly exported for re-introduction into PAs in other SADC countries, and the region's sub-populations are all closely inter-dependent. Indeed, SA's population has been critical for the re-establishment and maintenance of the regional population over the last 30 years (see Annex R).

In addition, there are other valuable plants and animals in almost all rhino conservation areas that will benefit. The protection of rhinos through anti-poaching measures will thus help protect other species, including elephants, buffalo, and small game, that are targeted by poachers. Indeed where wildlife-based land-use systems are established, rhinos act as true 'flagship species' because: they require large areas and significant protection measures that help to conserve a wide range of biodiversity; the conservation of these rare and charismatic animals attract donor as well as state support, with the latter being stimulated by the national prestige of a rhino conservation project; and the rhinos are a major attraction for eco-tourists, and (where markets are established) have a high value in live sales, thus generating revenue for wildlife operations (du Toit 2006)⁵.

More generally, the GEF project's piloting of new approaches, technologies and partnerships to more successfully tackle wildlife crime will also benefit conservation of several other globally important species listed under CITES that are affected by similar issues of wildlife crime and illegal trafficking in the SADC region, other parts of Africa and worldwide, including all other globally important species of rhino surviving other parts of the world, all of which are threatened by illegal hunting and trade in their horns⁶, African Elephant and great apes. The development and improvement of DNA and other forensic technologies and improved anti-poaching efforts are also likely to impact positively on efforts to combat the illegal trade in other species such as reptiles which are being targeted in SA's protected areas.

The GEF project aims to support, complement and build on the on-going baseline efforts of the Government of South Africa to tackle the drastic increase in the number of incidents of rhino poaching in the country (see Annex A2) and the continued leakage of certain horn stocks into the international illegal trade, and thereby the negative impact rhino poaching is having on the country's PA network and the management authorities abilities to provide effective management of PAs. It will do this by focusing on three key areas (gaps) – insufficient capacity to deliver and use forensic evidence; suboptimal mechanisms and institutional arrangements for sharing, analysing and managing

⁵ du Toit, R. (ed.), *Guidelines for Implementing SADC Rhino Conservation Strategies*. SADC Regional Programme for Rhino Conservation, Harare (Zimbabwe), 2006.

⁶ There are five species of rhino: three found in Asia (Javan, Sumatran and Indian rhino) and two in Africa (White and Black rhino), of which the Javan and Sumatran rhinos are categorized by IUCN as critically endangered and the Indian Rhinoceros is categorized as vulnerable. The Viet Nam subspecies of the Javan Rhinoceros was declared extinct on 25 October 2011. A small population of Javan rhinos still exists in Indonesia. In Africa, the White Rhinoceros subspecies includes the endangered Southern White Rhinoceros, the most abundant rhino in the world, and the critically endangered Northern White Rhinoceros. The four subspecies of the critically endangered Black Rhinoceros include the eastern, south-western, southern central and western rhino. The Western Black Rhino subspecies was declared extinct in 2011.

information among national actors needed to tackle poaching and the illegal trade; and weak international collaboration and exchange arrangements to deal with the illegal trade in rhino horn at the international level. The proposed project will strengthen the efforts of participating institutions, organisations and stakeholder groups, both public and private, to address these gaps.

The project will develop the professional capacity of the existing and/or newly recruited staff in all key government and non-government partners involved in the rhino anti-poaching effort in South Africa. Capacities will be developed in the fields of forensic-based DNA analysis and related database management technologies to support and enhance ongoing wildlife law enforcement and anti-poaching efforts. All the involved partners are already investing and will continue to invest significant resources in rhino conservation and law enforcement. The additional professional capacity developed through the GEF project will address some of the principal constraints to more effective anti-poaching and law enforcement, and be enshrined in existing and efficient institutions in SA and in the wider SADC region. This approach is expected to facilitate and catalyze replication in other countries and maximize the sustainability of project outcomes after project completion and in the longer term.

The project will significantly enhance the wildlife forensic capacity beyond South Africa. The proposed strengthening of the Veterinary Genetics Laboratory DNA Lab at the University of Pretoria (Output 1.1.1) will enable it to act as a regional facility offering wildlife DNA forensic analysis assistance to all countries of the region, so benefit the fight to address poaching of rhino and illegal trade in rhino horn (and other species) throughout Southern Africa. In addition, the expanded South African database (Output 3.1.3) will serve as a depository for rhino DNA profiles from rhino populations in other countries. Thus, although this is a South African project it will have a regional impact. In addition, although the focus of the GEF project is on South Africa, reliable evidence obtained through DNA analysis will also potentially benefit prosecutions in Asia (through Outcome 3).

The project’s emphasis on filling key gaps and strengthening current efforts in the fight against rhino poaching as well as demonstrating the up-scaling and replication potential of project approaches to fighting wildlife crime affecting protected areas, which affects many other species and countries, justifies the GEF investment.

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

A.6.1 Risk analysis and risk management measures

This project presents overall medium-high risks due to the complexity of the issues being addressed. However, these are moderated by the good baseline capacity and investment, sound foundations and the science-based and consultative approach adopted to identify priority actions in the National Strategy for the Safety and Security of Rhinoceros Populations in South Africa, and the BMPs (Biodiversity Management Plans) for the two rhino species (see Annexes R and S). The main risks that may prevent the project objectives from being fully achieved are listed in the table below.

Risk	Risk level	Mitigation Measures
Increasing demand for rhino products in recipient countries mostly in the Far East, notably Vietnam and China	Medium-High	A variety of measures are being developed to mitigate this risk through the project itself but especially through other initiatives to which the GEF project is linked. Through support for the delivery of the Plan of Action for the Memorandum of Understanding between the governments of South Africa and Vietnam and the similar expected agreement with China (Outcome 3), the project will help raise awareness of the impact of the illegal market among senior decision-makers in recipient countries and through capacity building activities it will strengthen law enforcement activities and more successful prosecutions in these countries which should act as a deterrent to reduce demand. The project also seeks to improve information/intelligence flow between SA and international law enforcement and other agencies dealing with the illegal trade, particularly members of ICCWC (under Outcome 2) that are working in south-east Asia to address the market. Other project partners are working to understand and address the demand for rhino products, e.g. WWF, TRAFFIC, or raise awareness among consumers in south-east Asia, e.g. EWT, and the GEF project will be linking with these initiatives and providing support as appropriate (see Annex P). It should be recognised that the GEF project seeks to address only a part, but a critical part, of the

		whole illegal rhino horn trade chain, namely the 'supply' section in South Africa.
Rapidly-evolving strategies, capacity and resources of poachers and wildlife traffickers with a huge influx of poachers into PAs overwhelming PA manpower and resources	Medium-High	Substantially increased resources have recently been committed to protecting rhinos in public protected areas, notably by SANParks at KNP, including the use of drones to monitor potential poacher movements along the border with Mozambique and increased numbers of field rangers operating in the field, as well as support from the South African Defence Force, which has committed a substantial deployment of military personnel, particularly at KNP. The current effort is also expected to improve the motivation and morale of rangers and staff involved in complex anti-poaching activities. This commitment is expected to continue as the rhino poaching is very high on the political agenda.
Socioeconomic conditions around sites with rhino populations worsen leading more locals to take up rhino poaching also resulting in more local violence (armed gangs) with less support for rhino conservation in neighbouring communities	Medium-Low	Involvement of local communities in, and support for, rhino conservation is being promoted and facilitated through a large number of NGO-driven initiatives as well as government-funded programmes in and around these sites, including successful initiatives by SANParks with communities around KNP that have led to individuals within these communities rejecting poaching and acting as informants. Many of the other stakeholders, listed in Annex T (detailed stakeholder mapping and analysis), have awareness-raising in local communities around PAs with rhinos and some such as www.stoprhinopoaching.com have been very successful in working with local community groups. WWF-SA is addressing this issue as one of its five main areas within its Rhino Strategic Framework and programme and is investing considerable resources into field action.
High costs of rhino conservation efforts in South Africa put strain on public and private sector budgets	Medium	The current global economic downturn continues to have negative impacts in terms of public and private sector funding for rhino conservation efforts, and there is a risk of a loss of focus on environmental issues in favor of economic costs. This situation is a risk for any project and will need to be closely monitored and taken into account, with possible adjustments to the project approach taken as necessary. This risk is probably greatest for the private rhino owners who own small numbers of rhinos as the expense of maintaining adequate protection measures is less cost-effective, and some have sold their rhino stock to larger owners in the last couple of years. The GEF project, through its stakeholder meetings and direct work with some private sector owners will look to link owners as much as possible to enable them to better cost-share forensic equipment, etc. The project will also participate in national and regional stakeholder meetings that attempt to link rhino security initiatives, which will promote cost-sharing and cost-effectiveness, and to coordinate on fund-raising efforts. In addition, this risk is offset to some extent by the continuing massive media coverage internationally about the plight of the rhino and involvement of major public and celebrity figures, such as His Royal Highness Prince William, Duke of Cambridge, who are figureheads for major fund-raising efforts to tackle rhino-poaching. There is also increased interest to fund anti-poaching activities from other national government, e.g. USA because of the developing links between illegal wildlife trade and financing of terrorism operations.
Mistrust between the various groups holding relevant information on either rhino conservation and management or crime and law enforcement databases is too difficult to overcome resulting in poor exchange of information and integration of	Medium	Substantial parts of the information gathered and held in the current rhino conservation and management and crime and law enforcement databases are considered confidential. This is particularly the case for crime-related databases operated by SAPS. There have been issues of trust with leaks of sensitive information in the past and consequently some mistrust has developed between various agencies involved. This particularly impacts the development and operation (and therefore usefulness) of the WCAFT (Output 2.1.2). In order to overcome this, the WCAFT will be developed and operated through an oversight steering committee comprising the CEOs/Directors of the various agencies and institutions that host the relevant databases that contribute to the WCAFT, and a system will be put in place that will allow different users different levels of access to the WCAFT, and ensure only key, heavily vetted individuals will be able to access the most sensitive data. It is recognised that the WCAFT is particularly innovative and will need piloting. In addition, the project will initially only focus on the less sensitive data, such as sharing of DNA forensic data, before building in different data sets from different databases in order to pilot the WCAFT during the first year of operation.

databases		
Financial resources for fighting wildlife crime, particularly forensics, will be diverted into addressing increasing human crime issues due to limited public sector budgets	Medium	Resources, particularly SAPS staff time, have been diverted away from dealing with wildlife forensics into human crime cases in the past slowing the forensics and consequently prosecution processes. The GEF project seeks to assist with this challenge by focussing on the initial steps required for the creation of a specific institutional structure within SAPS that will only deal with wildlife forensics, with its own ring-fenced funding, and a clear plan for its financing over the long-term.
US Dollar to SA Rand currency fluctuations reduce local spending power of GEF funds or price inflation in SA over life of project means less purchasing power for the GEF funds	Low-Medium	The project is seeking to build capacity for forensics (Outcome 1) and information sharing and analysis (Outcome 2) which will necessitate purchase of equipment, e.g. DNA sequencer, which have to be imported into South Africa and are therefore subject to currency fluctuations. The project will overcome this to a certain extent by maintaining the project funds in a US Dollar account, operating a competitive bidding process on contracts, in line with SA legislation and DEA practice, and following a procurement plan agreed with UNEP (ref annex U – this will be also reviewed and approved by the Steering Committee during the inception phase).
Political change and differences over policy implementation in South Africa and in the region with regard to rhino conservation and trade	Low	Changes of government often lead to changes in policy and with these budgets for law enforcement and environmental management can be affected. There is likely to be at least one national election during the project period. However, given the all-party support to address the rhino poaching crisis, the recognition that the loss of rhino from SA would have potentially huge economic costs (principally from tourism) and poses a security threat, that poaching also presents environmental and social challenges, and given SA's stated commitment to the CITES (and SA will be hosting the CoP in 2016) it is unlikely that there would be a major change in policy away from supporting increased protection measures for the country's rhinos during the project period. In addition, stakeholders across the political spectrum have agreed to and endorsed the National Strategy for the Safety and Security of Rhinoceros Populations in South Africa, which the GEF project will help to implement. The project will encourage continued government and private sector involvement in addressing the rhino poaching crisis through regular coordination and consultation with all governmental sectors and other stakeholders. The project will also seek to further support this trend through targeted communications and media work promoting the value of forensics and importance of information sharing and international cooperation in dealing with wildlife trade issues.
Climate change impacts may, over the medium to longer term, impact the habitats and protected areas currently supporting rhinos causing a shift in the range and area of suitable rhino habitat	Low	Projected ecological changes from future climate change in southern Africa may impact the expected outcomes of the project over the longer term through changes in the area of suitable habitat for rhinos and thus alter the value of specific protected areas for both Black and White rhinos, but during the 4-year period of the project this is unlikely to have a major impact. Also, many of the PAs that currently support rhinos are large, e.g. KNP, which may allow movement of rhinos if habitat is lost in one area to another more suitable location within the PA. The main risk here is for the smaller, private game reserves. However, many of these are close to or border larger state reserves, e.g. Timbavati private game reserve borders KNP. Also, the authorities in South Africa are very aware of predicted climate change impacts and are independently looking to link PAs to allow for movement of animals between areas of suitable habitat among other climate change strategies. Climate change does not directly impact the delivery of the technical aspects of the project's intended outputs.

More generally, the above identified risks will be mitigated through: (a) targeted awareness raising and education activities being undertaken as part of the various rhino strategies and plans (e.g. National Strategy for the Safety and Security of Rhinoceros Populations in South Africa, BMP for Black Rhino – see Annex S) that will also include work with partners in countries where the demand originates (e.g. WWF in Vietnam); (b) the GEF-supported engagement of the ICCWC partnership is expected to significantly boost the capacity of DEA and national institutions to combat wildlife crime and stem the tide of rhino poaching; and (c) the project builds upon significant ongoing efforts by the DEA, SAPS and several other partners, and these efforts will be further strengthened through this project to address identified risk.

A.6.2 Key assumptions

In common with all other interventions, the effectiveness of the GEF project rests on several assumptions. The key assumption is that more effective forensics and information sharing will lead to improved law enforcement through quicker and more successful prosecutions of poachers and traders in illegal rhino horn, which will act as a deterrent to others engaging in these activities. In other words, the GEF project seeks to improve the chances of those engaged in this wildlife crime being caught and deterring others from taking part in these activities. This is the basis on which the criminal prosecution system operates on all other crimes.

The project seeks to strengthen existing rhino conservation and management and crime and law enforcement databases and ensure that they collect a common set of data that can be brought together and used for improved forecasting of wildlife crime (looking for patterns such as where and when poaching incidents are likely to happen, which communities may be involved, likely transportation routes, etc.) through Component 2. The project assumes that these analyses and forecasts can be quickly translated into action; in other words, that there is sufficient capacity in the field to use the improved data gathering, analysis and predictions from the WCAFT in law enforcement efforts. Although it is recognized that there are capacity issues within key agencies responsible for law enforcement and wildlife management such as the SAPS Hawks and SANParks, on-the-ground capacity constraints are being addressed through other initiatives.

Similarly, the project is seeking to strengthen law enforcement efforts at international level through providing resources to implement some elements of the Action Plans of the MoUs agreed between the governments of South Africa and recipient countries, notably Vietnam where much of the current demand for rhino horn is believed to occur (Milliken and Shaw 2012) A key assumption here is that capacity at international level, especially within relevant enforcement authorities in Vietnam, China and Mozambique, will be sufficient to execute these protocols and mechanism and cooperation, although it is recognized that some targeted capacity building, notably training in treatment, processing and shipment of forensic samples, especially rhino DNA, will be needed. It is also assumed that there is sufficient and continued political will and interest within enforcement agencies in rhino horn recipient and transit countries to maintain engagement with South Africa on sharing information and cooperation, despite changes to political administrations.

A.7. Coordination with other relevant GEF financed initiatives

Linkages to UNEP and other non-GEF initiatives are presented in Annex P. There are no projects in the current GEF portfolio that specifically focus on wildlife forensics, or that are directly tackling wildlife poaching and the illegal trade issues in the Southern Africa region. However, a number of GEF projects of projects in other regions, notably in Asia, are party seeking to address illegal wildlife trade in protected areas, and many GEF project indirectly address the threat of illegal and unsustainable wildlife trade through providing resources to improve management effectiveness at protected areas where this threat exists. There are also a number of ongoing and recently completed conservation programs and projects in South Africa, whose work is broadly relevant to the present proposal. These include:

- The World Bank-GEF ‘Wildlife Consumption in Vietnam: Reforming Policies and Practices to Strengthen Biodiversity Conservation’ project (GEF ID 4286), currently under implementation, looks to address the threat from unsustainable levels of illegal trade and consumption of biodiversity from Vietnam's forests, wetlands and protected areas, through strengthening policies and legal frameworks, monitoring and enforcement of consumption controls and raising public awareness of the issue.
- The proposed World Bank-GEF ‘Strengthening protection and management effectiveness for wildlife and protected areas’ project in Lao PDR (GEF ID 4650), contains an element to address the illegal national and regional wildlife and timber trade, including activities to improve capacity for on-ground wildlife poaching and trade control in/around project sites and coordination between Laos-Vietnam on controlling illegal trade in wildlife and timber

- The proposed UNDP-GEF project ‘Improving Management Effectiveness of the Protected Area Network’ (GEF ID 4848) in South Africa, currently at the PPG stage and will be implemented through SANParks and other partners. Its stated objective is ‘The biodiversity of South Africa is protected from existing and emerging threats through the development of a sustainable, effective and representative national protected areas network, cost effective protected area expansion in biodiversity priority areas and improved land use practices in buffers around parks with a focus on community benefits and partnerships’.
- The ongoing UNDP-GEF ‘Mainstreaming Biodiversity into Land Use Regulation and Management at the Municipal Scale’ (GEF ID 5058), which aims to mitigate multiple threats to biodiversity by increasing the capabilities of authorities and land owners to regulate land use and manage biodiversity in threatened ecosystems at the municipal scale, in South Africa.
- The ongoing UNEP-GEF ‘Project for Ecosystem Services (ProEcoServ)’ (GEF ID 3807) seeks to reduce threats to globally important biodiversity through integrating the findings and tools of ecosystem service assessments in policy and decision making, and includes South Africa as one of its target countries and involves the DEA as a national executing partner.

Communication systems, linkages and coordination with individual (GEF and non-GEF) projects will be established by the project management team and the project Steering Committee during the inception period in order to optimize synergies, examine the potential for cost sharing, and ensure efforts are complementary.

B. ADDITIONAL INFORMATION NOT ADDRESSED AT PIF STAGE:

B.1 Describe how the stakeholders will be engaged in project implementation.

B.1.1. Project implementation and coordination arrangements

UNEP will be the GEF implementing agency and the Department of Environmental Affairs (DEA) within the Ministry of Water and Environmental Affairs, South Africa will be Executing Agency (EA) for the Project. The EA will be responsible for the coordination, management and day-to-day administration of the project and its delivery in accordance with the outcomes, outputs and activities outlined in this document. Please also refer to Annex H for a diagram illustrating project implementation and coordination arrangements described in this section.

The DEA oversees the national parks system in South Africa and is thus already working closely with the wide range of national partners involved in rhino conservation in the country. The DEA also plays an important role at the regional level as a lead partner in the implementation of the Regional Rhino Conservation Strategy for the SADC Region, and is thus already working closely with all other countries hosting remaining populations of rhinos. Furthermore, the DEA and CITES Secretariat have worked closely to address the illegal trade of rhino horns (as well as on several other species listed under the CITES) for many years. The DEA is therefore best positioned to lead the project and will coordinate activities with all partners at the national and international level, as an integral part of its mandate and ongoing work. The project will be executed as an element of the ongoing Action Plan for the implementation of the SA Rhino Conservation Strategy, as well as within the framework of the SADC Rhino Conservation Strategy. This arrangement will help ensure full coordination, added value and maximum complementarity with other relevant ongoing initiatives at national and regional level, as well as long-term sustainability of project outcomes.

The DEA will be in charge of national project oversight to ensure the proper coordination of project activities and will liaise with key stakeholders, especially other governmental ministries and institutions. The DEA will be responsible to UNEP to ensure that all technical and financial aspects of the project are timely executed and converted into the intended outcomes outlined in this document. DEA’s responsibilities will include: coordinating the development of annual work plans, overseeing implementation of all project activities, coordinating monitoring and evaluation activities and reports, and managing the project execution arrangements described in this section. DEA will coordinate and maintain extensive and continued stakeholder consultations at national and international level to support all components of the project within the framework of (a) DEA’s and SANParks mandate and role, and (b) as part of the regular consultative mechanism established as part of the ongoing implementation of the National Rhino Conservation Strategy

of SA and SADC Region. Internationally, coordination will also be facilitated by DEA in collaboration with the CITES Secretariat. This will ensure continued coordination with all other ICCWC partners including the INTERPOL, the United Nations Office on Drugs and Crime (UNODC), the World Bank and the World Customs Organization (WCO).

Coordination mechanisms will be established as and where appropriate by the DEA through the establishment of *ad-hoc* consultative groups and/or participation in existing consultative mechanisms. The DEA will also ensure that proper coordination is maintained with the proposed UNDP/GEF project “Improving Management Effectiveness of the Protected Area Network” (GEF ID 4848), which will also be implemented through SANParks and other partners, thus optimizing synergy and complementarity of efforts.

The DEA will provide a Project Implementation Unit (PIU) and employ a Project Manager whose responsibilities will include: coordinating the development of annual work plans, overseeing implementation of all project activities, coordinating monitoring and evaluation activities and reports for UNEP and GEF, and managing the project execution arrangements. The Project Manager will also act as the contact point for the project for the other partner organizations and outside bodies, and manage sub-contracts with other organizations or individuals. The DEA will provide additional support for project activities through the input of other relevant staff.

UNEP, as the GEF Implementing Agency, will be responsible for overall project supervision to ensure consistency with GEF and UNEP policies and procedures, will provide guidance on linkages with related UNEP and GEF-funded activities, monitor implementation of the project activities and will clear and transmit the financial and progress reports to GEF. Additionally, UNEP will be responsible for reviewing and approving the substantive and technical reports produced according to work schedule, and will provide the linkages with major international conventions and international environmental conservation networks and fora. UNEP has a Liaison Office in Pretoria, South Africa that will facilitate project implementation and contacts with partners at the country level. UNEP HQ is also located within the same sub-region thus allowing more cost-effective and more frequent visits to South Africa by UNEP HQ staff as necessary. In addition, UNEP staff based at UNEP HQ in Nairobi are involved in coordinating related initiatives (and with some of the same partners) entailing the development and application of forensic-based technologies for other wildlife species, such as elephants and Great Apes, who will provide technical support to the project.

An executive project Steering Committee responsible for overall project oversight and guidance, reviewing general project progress and the monitoring and evaluation reports will also be established by the DEA, comprising representatives from the main stakeholders, including DEA, UNEP, SAPS, SANParks, WWF-SA, University of Pretoria VGL, IUCN’s SSC African Rhino Specialist Group, the Private Rhino Owners Association and other NGOs. It is envisaged that this will be an expanded group based on the Project Development Working Group (PDWG) which was a small group of stakeholder representatives convened during the Project Preparation Phase (PPG) to advise on and guide the design and development of the GEF project and delivery of the Project Document and CEO Endorsement Request. In addition, experts and advisors may also be invited by the DEA to the Steering Committee as and when required. The Committee will be responsible for reviewing the semi-annual progress, technical, as well as monitoring and evaluation reports, and it will meet annually to review general progress. Its role will also be to provide overarching guidance and direction to the PIU, from the implementing organizations and partners. The Project Manager will provide administrative support to the Steering Committee and act as its secretary.

Other formal or informal steering or advisory groups may be convened when needed for the implementation of project outputs and activities, e.g. for training and capacity building (Output 1.1.4) and for oversight of the development, management and operation of the WCAFT (Output 2.1.2).

B.1.2. Stakeholder involvement Plan

A detailed stakeholder analysis and more details on the roles and responsibilities of the key stakeholder institutions developed through negotiations during the PPG stage are presented in **Annex T**, and a summary with their roles in specific outputs is presented below. The DEA will be the project Executing Agency, responsible for project delivery, and will coordinate and maintain extensive and continued stakeholder consultations at both national and international

levels to support all components of the project. The project's Steering Committee (SC) will ensure that there is wide stakeholder involvement in the decision-making and oversight level of the project.

Stakeholders	Roles and Contributions
National Government of South Africa and affiliated organizations	
Department of Environmental Affairs, the Ministry of Water and Environmental Affairs, South Africa	The Department for Environmental Affairs (DEA) will be the Project Executor, responsible for project delivery, and will coordinate and maintain extensive and continued stakeholder consultations at both national and international levels to support all components of the project. The GEF Project Manager, who will be responsible for the day-to-day delivery of the project, will be based within the DEA's Legal Authorisations, Compliance and Enforcement Branch (LACE), specifically within the Chief Directorate: Enforcement. . The DEA will also take the lead on developing and implementing those components of the MoUs and Actions Plans signed between the governments of South Africa and rhino range states e.g. Vietnam, which deal with addressing the illegal trade in rhino horn (outputs 3.1.1 and 3.1.2). The National Wildlife Information Management Unit (NWIMU) together with the Endangered Species Section (ESS) within the Organised Crime Unit (OCU) of SAPS will lead on the delivery of project activities relating to information management and development of the wildlife crime analysis and forecasting tool (Outputs 2.1.1 and 2.1.2).
SA National Parks (SANParks), Ministry of Water and Environmental Affairs, South Africa and other PA authorities	SANParks is currently developing a GIS-based mapping tool for analysing rhino, law enforcement and other spatial data, which will inform the development of the WCAFT tool (Output 2.1.2). Also, several project activities will be centred on KNP, such as piloting of a mobile forensics unit (Output 1.1.3) and training and capacity building workshops (Outputs 1.1.3 and 1.1.4) will include rangers and other staff from KNP. In addition, it is expected that the piloting of new forensic techniques in the field (Output 1.1.2) will be undertaken at KNP for logistical reasons. Other PAs hosting significant rhino populations, including Pilanesberg National Park, will be targets for similar project activities.
South African Police Service (and its forensic lab)	The SAPS Forensic Science Laboratory (FSL) will lead on researching new forensic techniques for rhino crime scenes (Output 1.1.2) and on first steps for the establishment of a national Environmental Forensic Service (Output 1.1.5). The NWIMU together with the Endangered Species Section (ESS) within the Organised Crime Unit (OCU) of SAPS will lead on the delivery of project activities relating to information management and development of the Wildlife Crime Analysis and Forecasting Tool (Outputs 2.1.1 and 2.1.2).
SANDF – South African National Defense Force	Members of the SANDF operating in KNP are expected to attend some of the awareness raising activities (Output 1.1.3).
Department of Justice's National Prosecuting Agency (NPA)	The NPA is expected to participate in some of the wildlife forensics training and capacity building workshops (under Outputs 1.1.3 and 1.1.4)
Customs Authority	The Customs authority is expected to participate in some of the wildlife forensics training and capacity building workshops (under Outputs 1.1.3 and 1.1.4)
Research institutions	
Veterinary Genetics Laboratory (VGL), University of Pretoria	The VGL will play a major role in the project. It will be the target for measures to boost capacity for rhino DNA analysis (Output 1.1.1) and play a lead role in helping to establish an international standard and database for DNA typing of rhinos (Output 3.1.3), as well as providing advice and acting as training staff for some of the wildlife forensics capacity building workshops (Output 1.1.4). It is also envisaged that the RhODIS database will be one of the databases linked to the WCAFT (Output 2.1.2).
Private Sector	
The Private Rhino Owners Association in South Africa (PROA SA) and The Rhino Action Group under the LEAD SA Initiative	The private run Game Ranches play a vital role in maintaining a viable meta-population of rhinos in SA, and they are already engaged with DEA and SANParks to implement the Rhino Strategy for SA. Private Sector Partners to be involved in the project include the Private Rhino Owners Association (PROA) of SA. PROA SA includes most of the 400 private Rhino owners of SA. Some of their members (field rangers) will benefit from GEF project training courses (Output 1.1.4). The Rhino Action Group under the LEAD SA Initiative www.leadsa.co.zac is supporting a media-driven campaign, raising funds from the public, and focusing on awareness raising education, and supporting Rhino anti-poaching initiatives. This is an existing Public Private Partnership that will be further developed through the GEF project.
CSOs, conservation NGOs & other conservation- oriented partners	
Conservation NGOs, including WWF-South Africa, IUCN-	The role of most CSO partners in rhino conservation and security is already defined as part of the Rhino Strategy implemented by DEA. WWF-SA is currently assisting the VGL with various elements of its operational requirements, including the development of a Business Plan to ensure financial and technical sustainability of the

African Rhino Specialist Group (AfRSG), and Honorary Rangers from SANParks for Kruger NP	Laboratory, and the GEF project will collaborate on the implementation of the recommendations of the Plan, which complements Output 1.1.1. The AfRSG will be involved in the development of new forensic techniques for better dating rhino carcasses in the field (Output 1.1.2) and has already handed over data and results from preliminary studies in this area to the SAPS FSL. Given its membership, the AfRSG will provide guidance on the strengthening of existing rhino management and conservation databases and law enforcement databases (Output 2.1.1) and the development of the Wildlife Crime Analysis and Forecasting Tool (Output 2.1.2). The AfRSG will also advise and likely participate in all of the international-level project activities (Outputs 3.1.1, 3.1.2, and 3.1.3), and enabling linkages with parallel ongoing work in the SADC region and beyond, etc.
Local and Indigenous Community Groups, including Women groups	
Communities around target PAs	These groups are already engaged in supporting the implementation of the Rhino Conservation Strategy through existing consultative mechanisms put in place by the DEA and SANParks. Local communities help provide information on rhino crimes in their areas through a 'hotline' and interaction with the police and PA staff. They will therefore be contributing to the data in the databases which will be linked through the WCAFT (Output 3.1.2). However the GEF project will not actively be involving communities, and no community level project activities are envisaged. This is in line with the project's narrow technical focus on the national level and on forensics and information sharing, and a reflection that other groups, e.g. WWF, are addressing the local community level.
International Multi-lateral Environmental Agreements, UN and International Organisations	
CITES Secretariat, UNEP, other ICCWC members (INTERPOL, UNODC, the World Bank and WCO), Office for Trans-frontier Conservation Areas (TFCA) under the Directorate of Food, Agriculture and Natural Resources of the SADC	<p>Over the project period, ICCWC partner agencies will provide significant support to rhinoceros range States and to those that were identified as transit or destination States for illegal rhinoceros horn trade. ICCWC partners will, both individually and collectively, also engage in a number of activities directly related to supporting rhinoceros conservation and the GEF project, in the remainder of 2013. These include:</p> <ul style="list-style-type: none"> · Convening a CITES Rhinoceros Enforcement Task Force · Providing operational training for African and Asian countries · Delivering a Rhinoceros DNA sampling training workshop in South Africa, in cooperation with the Department of Environmental Affairs (DEA) and the University of Pretoria's Veterinary Genetics Lab (VGL). · INTERPOL will host the INTERPOL-UNEP International Environmental Compliance and Enforcement Conference where wildlife crime and illegal rhinoceros horn trade will be discussed throughout a number of meetings. · The 16th Meeting of the Conference of the Parties to CITES adopted Decision 16.89 paragraph b), directing the CITES Secretariat to develop, in conjunction with relevant institutions and experts, a manual containing guidelines on best practices, protocols and operational procedures, that will promote the use of wildlife forensic technology. · UNODC is currently developing a project for the development of protocol for the use of wildlife forensics to combat illegal ivory trade. Activities conducted under this project will also complement the activities to be conducted to combat illegal rhinoceros trade. <p>In addition to the immediate activities highlighted above, ICCWC partners are in the process of designing a number of national and regional activities that would further complement the proposed work over the four year period of the project. Other in kind contributions in the form of staff time, operational costs, support for training and consultative workshops or other related efforts are also expected to contribute to the project.</p> <p>The project team will also actively liaise (as part of existing contacts between the DEA and the SADC TFCA), with the Office for Trans-frontier Conservation Areas (TFCA) under the Directorate of Food, Agriculture and Natural Resources.</p>

In addition to direct involvement in the project, all the above stakeholders will contribute a significant baseline investment that the GEF contribution will build upon. In the case of the government-affiliated institutions, for instance, these contributions will include the baseline costs of wildlife forensics, law enforcement, data management and information sharing, PA management, stakeholder consultations, and education and awareness, as well as most of the underlying hardware, e.g. IT platforms, lab facilities & equipment, personnel, infrastructure and funding for a broad range of related collateral activities.

The Project will also be set within the framework of the regular consultative mechanism established as part of the ongoing implementation of the National Rhino Conservation Strategy of SA and the SADC Region. The DEA is

responsible for the coordination and monitoring of implementation of the South Africa Black Rhino Biodiversity Management Plan 2011-2020.

B.2 Describe the socioeconomic benefits to be delivered by the Project at the national and local levels, including consideration of gender dimensions, and how these will support the achievement of global environment benefits (GEF Trust Fund/NPIF) or adaptation benefits (LDCF/SCCF):

Rhino conservation has significant socio-economic benefits, particularly in relation to sustainable hunting, sale of live animals and tourism. Rhino populations have important economic and social benefits for both public protected areas and private game ranches in South Africa and for its eco-tourism industry and are an important part of the public image of South Africa. The GEF project through its measures to reduce poaching in PAs and the illegal trade in rhino horn will help support and improve these benefits.

i. Hunting

There are over 400 Private Game Ranches in South Africa, and many depend on income from trophy hunting and live sales of rhino to survive. For instance, the Professional Hunters' Association in South Africa reported figures of Rand 650,129,718 (today equivalent to approximately US\$ 66.7 Million) in declared income for 2009 (<http://www.sawma.co.za/images/2011Abstracts.pdf>) and noted that the professional hunting industry 'contributes significantly towards the economic viability of game ranching'. Overall, the game ranching and sport hunting industries account for the employment of some 70 000 people, many of whom live in the rural areas of South Africa (TRAFFIC Rhino Report, Pg 33). The hunting industry also contributes to the training of wildlife rangers and field guides, as well as providing funding for anti-poaching efforts. In the past it was not necessary to have a national hunting quota for rhino as the number of wealthy hunters from traditional hunting countries such as the United States and Europe was limited and as such market forces dictated that only a limited and sustainable number of White Rhino were hunted every year. However, as indiscriminate, illegal rhino hunting increases, the number of rhinos that can be sustainably hunted will decrease.

ii. Sale of live rhinos

The conservation of rhinos in state-run protected areas and on private lands is very closely inter-related in SA, and linked to the economic value of rhinos to private owners. For example, many state-run parks are near their productive carrying capacities for rhinos and need to remove surplus animals to maintain optimum productivity. The private sector and local communities have provided the extra land to absorb these animals and have therefore been critical to conservation efforts to expand rhino range and numbers, and their involvement has been a key element in the conservation strategies for both species of rhinos. This translocation of rhinos has led to an increase in rhino range and the number of animals being managed by the private sector and communities, and e.g. it is now estimated that there are more than 4,500 White Rhinos conserved on private land in South Africa (2010). However, the extent to which the private sector can continue to provide this conservation service largely depends on economic incentives and the perceived risk of managing rhinos.

State conservation agencies have in the past used much of the money raised from live White Rhino sales to the private sector to either help subsidize the high cost of their conservation efforts or, in the case of SANParks, to assist with buying additional conservation land. For example, White Rhino sales have been the biggest contributor to total turnover at Ezemvelo KZN Wildlife (EKZNW) game auctions (both live and catalogue), accounting for 74.9% of total turnover from 2008 to July 2011. The weighted average price obtained per White Rhino from combined EKZNW and SANParks sales in 2011 was R234,405 (c. US\$29,300).

However, the costs and risks to private game ranchers of protecting their rhino herds (usually through very costly private security companies) in the face of the recent hugely increased risk of poaching has become unsustainable for many owners, particularly those with small numbers of rhinos. Indeed, many owners have increasingly seen their rhinos as a financial and security liability and been forced to sell their animals. This has resulted in reduced demand for live rhinos and a corresponding drop in prices at auctions, making the economics of maintaining rhinos on private land much less attractive. This decline in demand and price for surplus rhino has a knock-on effect, negatively affecting state conservation agencies' income and their ability to execute their greater conservation mandate.

The increase in rhino poaching levels could also lead to international pressures to up-list South Africa's White Rhino population from Appendix II to Appendix I at CITES which would effectively ban legal hunting and have very negative consequences for the country's legal hunting industry. There is therefore a concern that any moratorium on hunting and banning the export of South Africa's legal rhino trophies may result in a further reduction in prices and more rhino owners may sell their animals, undermining the economic incentives for the private ownership and protection of rhinos. This would mean a big reduction in the estimated 2,227,400ha of conservation land that private landowners currently contribute to the conservation of Black and White Rhino in South Africa, and detrimentally affect the conservation status of its White Rhino population. This was highlighted the Minister of Environment at the recent CITES CoP16 in March 2013, who noted that such action would exacerbate an already worrying trend of increasing numbers of rhino owners disinvesting in rhino due to increased costs and risks associated with escalating poaching rates and declining economic incentives to conserve White Rhino⁷.

iii. Tourism

Rhinos also contribute to economic growth and sustainable development through the tourism industry, which creates job opportunities and provides tangible benefits to local communities living alongside rhinos. Rhinos are one of the "Big Five" animals popular on African safaris (indeed tourists to South Africa expect to see rhinos given that the country has the world's largest population of White Rhino). Consequently, there is also concern over the negative impact of the current levels of rhino poaching on the country's tourism industry and the possible damage to South Africa's image if the country comes to be seen as an increasingly dangerous place to visit to see wildlife because of armed poachers.

Other studies, notably 't sas Rolfes (2011) have identified a range of additional values that rhinos (both alive and dead) have to humans including:

- Existence values - The concept of existence value (sometimes embodied as a concept of 'animal rights') asserts that rhinos have intrinsic value, independent of any direct value they may provide to humans;
- Other non-use values - These include ecological values, for example rhinos may also play a role in maintaining the integrity of ecosystems on which humans ultimately depend, e.g. providing food for predators/scavengers and recycled nutrients to the soil;
- Non-fatal consumptive use values - Harvesting rhino horn from a live rhino by sedation and dehorning constitutes a use that is consumptive but not fatal for the animal, which has been considered as one method to control or reduce the illegal trade in horn in the future.

In addition, there are major security concerns, especially in KNP where many of the poachers are from Mozambique, and worries that if the current levels of poaching cannot be stopped it will encourage the hunting of other species, notably elephants for their ivory which has increased dramatically recently in Central Africa and which appears to be moving further south in Africa.

Thus poaching and the illegal trade have both direct and indirect socio-economic impacts and these will continue if the issue is not addressed effectively and there is a concern that unregulated hunting may rise to unsustainable levels and become prejudicial to good conservation and population growth, with consequent negative economic impact for a broad range of related economic actors in the country, including women groups, indigenous groups, workers and hunting guides employed at multiple levels in a number of small local enterprises who depend upon sustainable nature-based tourism or the game hunting industry on public and private lands (<http://www.wrsa.co.za/conservation-a-hunting/49-the-Rhino-moratorium-curse>).

The GEF intervention's focus on addressing rhino poaching through increasing the 'risk' side of the equation to poachers (easier detection of poachers, disruption of trading operations, better prosecution rates, etc) to reduce the levels of poaching of rhinos in SA's PA network will help maintain these socio-economic benefits. Helping to support the income base of private rhino owners can be seen as a social safeguard in its own right but also helps to maintain important populations of both White and Black rhino that are outside state PAs.

⁷ <http://www.pacificbreeze353.com/newsletters/index.cfm?y=article&company=17&article=5851&nl=840&click=web&subsection=50&lang=1>

Gender equality is not an issue that is directly relevant to the scope, objectives and expected impact of this project. However the project will seek to adopt a gender-balanced approach in the execution of all its technical components, both internally (in terms of achieving a gender-balanced composition of the project team and consultants), as well as externally (in terms of achieving a gender-balanced approach in liaison with stakeholders and beneficiaries). Part of the project strategy is also to closely involve a wide group of stakeholders to mitigate any adverse social, economic or environmental impacts. In addition, the project's Socio-economic and Environmental impact has been assessed at the project design stage (see Annex M) and this aspect will be closely monitored during implementation as an integral part of the project Monitoring and Evaluation Plan.

B.3. Explain how cost-effectiveness is reflected in the project design:

The project is designed to take full advantage of existing capacities and builds upon existing institutional and professional strengths at the national level instead of paying for their establishment through project funds. This reduces implementation costs considerably. While there will be costs associated with the project team, the administrative costs of those institutions involved, namely DEA and SAPS, as well as the delivery of many project activities through partners, such as WWF-SA and the AfrSG, will be largely paid for by themselves as they are built into their own normal business practices. The DEA, with the appointment of a Project Manager as a permanent member of staff under government employment contract and the involvement of other DEA staff, will play a very important role in this aspect for the project implementation.

The GEF intervention is cost effective in that it utilizes results from past projects in SA, the SADC region and globally and builds on existing rhino management and security strategies and plans, e.g. it helps deliver some of the key recommendations of the National Strategy for the Safety and Security of Rhinoceros Populations in South Africa (2010), which has been endorsed by all the key stakeholders, and has been designed to complement several new initiatives due to be implemented over the period 2013-2018, and will benefit from their preliminary outputs. This approach is expected to maximize cost-effectiveness as well as the long-term sustainability of project outcomes, since there is already high institutional buy-in, and will avoid duplication of efforts, and is considered especially important given the relatively limited GEF funding available compared to the nature and scale of the issues the project seeks to address.

The lengthy project design (PPG) phase, which involved the main stakeholders through the Project Development Working Group (PDWG) and which will continue as the project's Steering Committee (SC) during project implementation, will help avoid duplication of efforts and maximise cost-effectiveness. The project will help create or maintain strong partnerships between the DEA, SAPS, SANParks, WWF-SA, IUCN's AfrSG, Stoprhinopoaching.com and other stakeholders, to work in a coordinated manner for the most cost effective and sustainable results, particularly through helping to deliver the SADC rhino management strategy.

Other aspects of cost-effectiveness built into the design of the project include the involvement of the UNEP Liaison Office in Pretoria, South Africa, which will facilitate project implementation and contacts with partners at the country level and be represented on the project's Steering Committee. UNEP HQ is also located within the same sub-region, thus allowing more frequent and more cost-effective visits to South Africa by UNEP HQ staff. The project will also be able to draw upon UNEP's long-term work in the region, and UNEP will support the project technically through: (a) UNEP staff based in UNEP HQ who are involved in coordinating related initiatives (and with the same partners) entailing the development and application of forensic-based technologies for other wildlife species such as i.e. elephants and Great Apes; (b) UNEP/DELCO also hosts CITES staff based in the UNEP HQ and is involved in the MIKE program and will be involved in supporting the project technically; and (c) technical staff involved in supporting the UNEP Biosafety portfolio where similar DNA-testing technology is being used and several highly specialized partner research institutes are involved. In addition to the above, the UNEP-hosted CITES Secretariat in Geneva will provide significant support to the project, and the project supports implementation of the resolutions from the recent CITES Cop16.

Project cost-effectiveness requires consideration of a project's likely outcomes compared to alternative or complementary approaches. A complimentary approach, to increase armed field ranger density within existing PAs, is being addressed through other projects, but even so is expensive and tends to deal with those operating at level 1 (poachers and sometimes couriers, see Annex A2) and does not address the issue of the traders, financiers and other

middlemen or those involved in transporting the rhino horn from the PAs to markets (levels 2, 3 and 4). A more radical alternative, to relocate rhinos in areas subject to poaching to one or a small number of central ‘fortresses’ with high security electric fences, and a very high density of armed rangers patrolling 24-hours a day (effectively supporting them in ‘fortified zoos’), is not considered realistic, mostly due to likely extremely high costs of establishing and maintaining such an option and the limited amount of rhinos which could be protected this way given their habitat requirements and large home ranges needed for successful breeding.

C. DESCRIBE THE BUDGETED M & E PLAN:

The project will follow UNEP standard monitoring, reporting and evaluation processes and procedures. Reporting requirements and templates will be an integral part of the UNEP legal instrument to be signed between UNEP and the executing agency, DEA. The project's M&E framework is consistent with the GEF M&E policy, and includes a detailed Project Results Framework (Annex A) with SMART indicators and mid-term and end-of-project targets. These indicators along with the key deliverables and benchmarks included in Annex I will be the main tools for assessing project implementation progress and whether project results are being achieved.

A fully costed M&E Plan is presented in Annex G, with costs associated with obtaining the information to track the indicators and other M&E related costs fully integrated in the overall project budget. The M&E plan will be reviewed and revised as necessary during the project inception workshop to ensure project stakeholders understand their roles and responsibilities vis-à-vis project monitoring and evaluation, and a project supervision plan will also be developed and presented at this stage. Indicators and their means of verification may also be fine-tuned at the inception workshop. Day-to-day project monitoring is the responsibility of the project management team at DEA but other project partners will have responsibilities to collect specific information to track the indicators.

The project’s Steering Committee will receive periodic reports on progress and will make recommendations to UNEP concerning the need to revise any aspects of the Results Framework or the M&E plan. Project oversight to ensure that the project meets UNEP and GEF policies and procedures is the responsibility to the Task Manager in UNEP-GEF. The Task Manager will also review the quality of draft project outputs, provide feedback to the project partners, and may establish peer review procedures to ensure adequate quality of scientific and technical outputs and publications.

Any remaining baseline data gaps will be addressed during the first year of project implementation. The main aspects for which additional information are needed relate to, i.e.: the extent of different forensic information used in wildlife prosecution cases in South Africa (relevant to indicators for Outcome 1); level of experience and training within relevant institutions in South Africa needed to carry out forensic data collection in the field e.g. number of EMIs and police personnel who need additional training in collection of forensic data when attending a crime scene (relevant to delivery of Output 1.1.3); the precise additional requirements of the existing databases to be linked to the WCAFT (relevant to delivery of Output 2.1.1); and the specific joint (bilateral) activities related to rhino conservation and wildlife forensics that will need to be delivered as part of the Plans of Action (these still need to be defined) to implement the Memoranda of Understanding between the governments of South Africa and Vietnam, China, etc. (relevant to indicators for Outcome 3). Detailed and gender-disaggregated information on the social and economic benefits resulting from the implementation of the GEF project at the local scale (i.e. within and around Kruger National Park and other target PAs) and at the national level, will also be gathered during the project inception phase.

Project supervision will take an adaptive management approach. The Task Manager will develop a project supervision plan at the inception of the project that will be communicated to the project partners during the inception workshop. The emphasis of the Task Manager supervision will be on outcome monitoring but without neglecting project financial management and implementation monitoring. Progress vis-à-vis delivering the agreed project global environmental benefits will be assessed with the Steering Committee at agreed intervals. Project risks and assumptions will be regularly monitored both by project partners and UNEP. Risk assessment and rating is an integral part of the annual Project Implementation Review (PIR). The quality of project monitoring and evaluation will also be reviewed and rated as part of the PIR. Key financial parameters will be monitored quarterly to ensure cost-effective use of financial resources.

A mid-term management review will take place on or about month 24 of project implementation, which will include all parameters recommended by the GEF Evaluation Office for such mid-term evaluations and will verify information gathered through the GEF tracking tools, as relevant. The review will be carried out using a participatory approach whereby parties that may benefit or be affected by the project will be consulted. Such parties were identified during the stakeholder analysis undertaken as part of project design (and detailed in Annex T). The project Steering Committee will participate in the mid-term review and develop a management response to the evaluation recommendations along with an implementation plan. The UNEP Task Manager will monitor whether the agreed recommendations are being implemented. Similarly, an independent terminal evaluation will take place at the end of project implementation, and the process will be managed by UNEP's Evaluation Office. The terminal evaluation (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, the GEF and the executing partners. A review of the quality of the evaluation report will be submitted along with the report to the GEF Evaluation Office not later than 6 months after the operational completion of the project. The standard terms of reference for the terminal evaluation, adjusted to the special needs of the project, will be included in the Appendixes to the legal instrument between UNEP and the project Executing Agency (DEA).

Personnel from the DEA and UNEP will be kept abreast of the progress of the project. Yearly progress reports that reflect all the aspects of implementation of the project will be prepared by the management team and reported to the steering committee through the DEA. These reports will reflect the performance of the project and the stage of compliance of the products with the project and their contribution to the GEF tracking tools. The GEF tracking tools are attached as Annex J. These will be updated at mid-term and at the end of the project, verified by the mid-term and terminal evaluation teams and will be made available to the GEF Secretariat along with the project PIR report.


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

- A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT(S) ON BEHALF OF THE GOVERNMENT(S) :**
 (Please attach the [Operational Focal Point endorsement letter\(s\)](#) with this form. For SGP, use this [OFP endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Mr Zaheer Fakir	Acting Deputy Director General, International Cooperation, Department of Environmental Affairs	MINISTRY OF WATER AND ENVIRONMENTAL AFFAIRS, SOUTH AFRICA	03/28/2012

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF/LDCF/SCCF/NPIF policies and procedures and meets the GEF/LDCF/SCCF/NPIF criteria for CEO endorsement/approval of project.

Agency Coordinator, Agency Name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
Maryam Niamir-Fuller, Director, GEF Coordination Office, UNEP		11/01/2013	Edoardo Zandri, GEF Task Manager, DEPI, GEF BD/LD Unit, UNEP, Nairobi	+254 20 762 4380	edoardo.zandri@unep.org

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ANNEX A: PROJECT RESULTS FRAMEWORK

This section includes two sub-sections:

A.1 Logical Framework Table

A.2 Detailed description of project rationale, and all elements of the logical framework - to the activity level

A.1 Logical Framework Table

Project Objective	Objective level Indicators	Baseline	Targets and Monitoring Milestones (MTE - mid-term evaluation; EoP – end of project)	Means of Verification	Assumptions & Risks	UNEP MTS (2014-2017) reference
To improve the effectiveness of efforts to combat wildlife crime in South Africa’s Protected Area system, focused on Rhinoceros, through improved forensic technologies and capacity, strengthened data gathering, sharing and analysis systems at national level, and enhanced cooperation structures and mechanisms at international level to support law enforcement efforts along the whole trafficking chain	<p>1. Ratio of number of successful convictions for rhino poaching and illegal trade (treated separately) against number of arrests and cases brought to court, where forensic technology has been used⁸</p> <p>2. PA management plans and associated annual work plans for target PAs (those hosting Key and Important rhino</p>	<p>1. Baseline currently not available so will be collected at start of inception for 2013</p> <p>2. Baseline to be collected for 2013 at inception stage</p> <p>3. METT scores not yet collected</p>	<p>1. MTE – increase over baseline figure</p> <p>EoP target – increase over baseline and MTE figure</p> <p>2. MTE – 50% of all management plans and work plans</p> <p>EoP – 100% of all management plans and work plans</p>	<p>1. Information needed is recorded by the police and judicial authorities annually and accessible by DEA and also from forensics labs e.g. VGL. Special reporting form would be needed but easy to develop, and data collected by Project Manager (PM)</p> <p>2. Data readily available from PA authorities in official annual reports and copies of management</p>	<p>Assumption – increased conviction rates and longer sentences resulting from improved law enforcement efforts, including forensics, acts as a deterrent against poaching</p> <p>Risk – US Dollar to SA Rand currency fluctuations reduce local spending power of GEF funds or price inflation in SA over life</p>	<p>Environmental Governance Subprogramme</p> <p>Expected Accomplishment (b): <i>“the capacity of countries to develop and enforce laws and strengthen institutions to achieve internationally agreed environmental objectives and goals and comply with related obligations is</i></p>

⁸ The validity of target within the project time frame will be re-assessed at inception, based on analysis of baseline data on i.e. current average duration of prosecution process (e.g. time between detection of crime or capture of perpetrators, and final conviction)

	<p>populations targeted by the project) include activities and budget for collection of forensic evidence by end of GEF project</p> <p>3. Scores of selected measures in the Management Effectiveness Tracking Tool (METT) relevant to law enforcement at target protected areas⁹</p> <p>4. Proportion of Key and Important rhino populations which are in areas with approved and operational Crime Scene Standard Operating Procedures set up¹⁰</p>	<p>and target PAs need to be agreed first</p> <p>4. Baseline for 2013 collected during inception period¹¹.</p>	<p>3. MTE – increase scores over baseline</p> <p>EoP – increased score over MTE target</p> <p>4. EoP - >50% increase (over baseline) in coverage of Key and Important rhino populations</p>	<p>plans. To be collected by PM</p> <p>3. To be provided by PA authorities and private game reserve owners to project at Mid-term and End of Project</p> <p>4. SOP implementation records obtained through Police and court records provided by SAPS/DEA and collected by PM – overlapped with distribution of Key and Important rhino populations (data held by WWF-SA and AfRSG)</p>	<p>of project means less purchasing power for the GEF funds</p> <p>Risk – profit from illegal trade escalates leading to huge influx of poachers into PAs (cost-benefit ratio altered against protection measures) overwhelming PA and law enforcement manpower and resources</p>	<p><i>enhanced</i></p>
COMPONENT 1	Use of forensic technology to combat rhino poaching and the illegal rhino horn trade					
Project Outcome	Outcome Indicators	Baseline	Targets and Monitoring Milestones	Means of Verification	Assumptions & Risks	MTS Expected Accomplishment (2014-2017)

⁹ Validity of this indicator is under review and will be re-assessed at project inception as it contains very few measures related to tackling wildlife crime within protected areas

¹⁰ This indicator should be further refined at project inception, in consultation with the IUCN AfRSG. For instance, suggestion is that the project could assess the proportion of Scenes of Crime where Standard Operating Procedures (SOPs)'s were followed. This would be an indicator of success as roll out of SOP's to areas that don't have them and with more training should result in fewer crime scenes being sub-optimally surveyed. This is also an potential indicator for inclusion in future versions of the METT as it would indicate one dimension of 'improved management effectiveness'.

¹¹ Some baseline data may exist for EKZMW but baseline is to be assessed at project inception

<p>Outcome 1.1 Improved and more effective forensic capacity (techniques, procedures, training, equipment and institutional arrangements) to combat rhino poaching in South Africa’s protected areas and the associated illegal trade in rhino horn, with service providers put onto a sustainable financial and institutional footing</p>	<p>1.1.1 Establishment of a South Africa Environmental Forensics Service (linked to RhODIS) within the SAPS with identified sustainable financing set out in a Business Plan</p> <p>1.1.2 Wildlife Crime Investigation and Forensic Collection Kits (combined DNA, ballistics, and other forensic-related crime scene equipment and manuals) and Mobile Units deployed at target PAs and other Key and Important rhino population sites experiencing poaching</p> <p>1.1.3 % DNA profiles obtained as part of investigations and prosecutions for poaching or illegal trade in rhino horn, and results of DNA analysis used, as appropriate, in cases brought to court (DNA results will not always be relevant or a requirement for</p>	<p>1.1.1 No integrated, dedicated environmental forensic service in South Africa. Such provision is piecemeal and largely uncoordinated involving several state and private sector institutions</p> <p>1.1.2 At present some elements of the Kits and Mobile Units exist but these are not integrated and available across all the target PAs or Key or Important rhino areas</p> <p>1.1.3 No information exists at present and needs to be collected at inception stage for 2013</p>	<p>1.1.1 MTE– establishment of Environmental Forensic Section within SAPS</p> <p>EoP –establishment of Environmental Forensic Service with sustainable financing identified</p> <p>1.1.2 MTE – all developed and operational at target PAs and other Key and Important rhino population experiencing poaching</p> <p>1.1.3 MTE – DNA profiles collected from 95% of all rhino poaching scenes and results of DNA analysis used, as appropriate, in 80% cases brought before court</p> <p>EoP – DNA samples collected from 100% of all rhino poaching scenes and results of DNA analysis used, as appropriate, in 100% cases brought before</p>	<p>1.1.1 Progress and achievement can be tracked through correspondence, minutes of meetings, etc, with its establishment detailed in official government documents. PM will collect data.</p> <p>1.1.3 - Delivery of the Wildlife Crime Investigation and Forensic Collection Kits and Mobile Units can be easily documented, and checks on PA annual reports show their use (also included in inventory of PA equipment)</p> <p>1.1.3 Police files and court records. SAPS included as senior partner in GEF project so this information is accessible and will be collected by PM</p> <p>1.1.4 Police and court records provided by SAPS and collected by PM</p>	<p>Assumption - Value of forensics in fighting wildlife crime is understood and accepted, and forensic evidence widely adopted in criminal trials</p> <p>Risk – financial resources for fighting wildlife crime will be diverted into addressing increasing human crime cases due to limited public sector budgets</p>	<p>Environmental Governance</p> <p>Expected Accomplishment (b): <i>“the capacity of countries to develop and enforce laws and strengthen institutions to achieve internationally agreed environmental objectives and goals and comply with related obligations is enhanced”</i></p>
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	<p>successful prosecution)</p> <p>1.1.4 Annual number of court cases being dismissed as a result of poor scene of crime collection protocols or lack of implementation of improved protocols</p> <p>1.1.5 Number of DNA samples analyzed/day (throughout) for individual black and white rhinos by VGL</p>	<p>1.1.4 Baseline for 2013 collected during inception period</p> <p>1.1.5 Baseline currently lacking and will be provided by VGL at project inception</p>	<p>court</p> <p>1.1.4 MTE – 50% reduction in number cases being rejected due to poor scene of crime collection protocols or lack of implementation of improved protocols</p> <p>EoP - No cases rejected due to poor scene of crime collection protocols or lack of implementation of improved protocols</p> <p>1.1.5¹² MTE– increase in samples and analysis rate by 20% over baseline</p> <p>EoP – increase in samples and analysis rate by 40% over baseline</p>	<p>1.1.5 Data on number of records held on database at VGL, their provenance, and rate of analysis is available through VGL reports and will be provided to PM</p>		
<p>Related Outputs</p>						

¹² Actual realistic target value to be defined by at inception by project technical team

1.1.1: Critical resources (equipment, personnel, etc) at key public- and private-sector wildlife forensics facilities, notably the Veterinary Genetics Laboratory (VGL) at the University of Pretoria and SAPS Forensics Laboratories, are provided to improve identification and tracking of rhino horns for enforcement purposes
1.1.2 New wildlife forensic approaches and techniques to tackle rhino poaching and associated illegal sale of rhino horn developed and piloted for adoption in South African PAs
1.1.3 Wildlife crime scene investigation protocols (SOPs) and other relevant procedures reviewed, revised and formalized, and essential wildlife crime scene and forensics equipment provided
1.1.4 Targeted training and awareness-raising programmes on the relevance and collection of forensic evidence for tackling wildlife crime in South Africa delivered to specific groups dealing with criminal cases involving rhinos
1.1.5 Initial steps taken for the establishment of a dedicated institutional structure in South Africa (provisionally an Environmental Forensic Section) to coordinate and analyse all wildlife forensic evidence, initially focused on rhinoceros

COMPONENT 2		Information sharing and analysis for more effective law enforcement among national actors to tackle rhino poaching and the illegal trade in rhino horn				
Project Outcome	Outcome Indicators	Baseline	Targets and Monitoring Milestones	Means of Verification	Assumptions & Risks	MTS Expected Accomplishment (2014-2017)
Outcome 2.1 Improved gathering and analysis of relevant data and enhanced national coordination platforms for information management and threat forecasting to combat rhino poaching and the associated illegal trade in rhino horn within and outside South Africa's Protected Areas system	<p>2.1.1 Basic set of crime scene information to be collected at a rhino poaching incidents agreed among key rhino conservation and law enforcement agencies and incorporated within all the data collection systems linking to the Wildlife Crime Analysis and Forecasting Tool (WCAFT)</p> <p>2.1.2 Wildlife Crime</p>	<p>2.1.1 No agreements at present, no linkage to central analytical system and at present there is no single list of all the information that is needed to better forecast potential poaching activity</p> <p>2.1.2 No such</p>	<p>2.1.1 MTE target – agreements on crime scene information to be collected finalized and published</p> <p>2.1.2 MTE – design and operational arrangements of WCAFT completed</p> <p>EoP – WCAFT being used to forecast crime for at least one year of</p>	<p>2.1.1 The development of the list and the incorporation of variables into existing database/data gathering structures can be monitored through minutes of meetings, project progress reports, etc, and the final list of crime scene information needs will be produced as a report by the PM</p> <p>2.1.2 Progress towards delivery can be measured</p>	<p>Assumption – analyses and forecasts can be quickly translated into field action (in other words, there is sufficient capacity in the field to use the improved data gathering, analysis and forecasting from the WCAFT in law enforcement efforts)</p> <p>Risk – mistrust between the various groups holding relevant</p>	<p>Environmental Governance</p> <p>Expected Accomplishment (b): <i>“the capacity of countries to develop and enforce laws and strengthen institutions to achieve internationally agreed environmental</i></p>

	<p>Analysis and Forecasting Tool (WCAFT) developed and rolled out</p> <p>2.1.3 Number of key organised crime group members involved in rhino poaching and the illegal trade in horn that have been successfully prosecuted and neutralised as a direct result of the use of the Wildlife Crime and Analysis Tool)¹³</p>	<p>meta tool currently exists</p> <p>2.1.3 no WCAFT in place</p>	<p>operation</p> <p>2.1.3 MTE– WCAFT Steering Committee members to decide on appropriate targets at project inception</p> <p>EoP – WCAFT Steering Committee members to decide on appropriate targets at project inception</p>	<p>through minutes of meetings, etc. Product is a specific software and hardware system overseen by a high-level steering committee so can be monitored by contracts for its development, etc. Records kept by the PM.</p> <p>2.1.3 Data on successfully finalised cases would be provided by the police and/or judicial sources and not from open sources (e.g. media).</p>	<p>information on either rhino conservation and management and crime and law enforcement databases is too difficult to overcome and trust declines, particularly in relation to sharing of crime-related data</p>	<p><i>objectives and goals and comply with related obligations is enhanced”</i></p>
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Related Outputs

2.1.1 Systems for gathering key information on individual rhinos, including their DNA, populations, movements (restricted activities) and provenance and relevant crime and law enforcement data are improved, and available to key vetted national and provincial wildlife and enforcement agencies (DEA, SANParks, SAPS) through secure, linked databases

2.1.2 A Wildlife Crime Analysis and Forecasting Tool (WCAFT) that links the key rhino management and conservation and crime and law enforcement databases, developed to analyse restricted activities¹⁴ related to rhinos, e.g. poaching and illegal trade, and to better forecast and prioritise action against potential future restricted activities, which can then be mapped within Pas

COMPONENT 3	Cooperation and exchange at the international level to tackle poaching and the illegal trade along the whole trafficking chain					
Project Outcome	Outcome Indicators	Baseline	Targets and Monitoring Milestones	Means of Verification	Assumptions & Risks	MTS Expected Accomplishment (2014-2017)

¹³ The validity of this Indicator and associated targets are to be further discussed at project inception by WCAFT Steering Committee and particularly with SAPS, DEA and CITES

¹⁴ These are defined under South African National Environmental Management: Biodiversity Act 10 of 2004

<p>Outcome 3.1 Improved cooperation and exchange between South Africa and other relevant countries to tackle poaching of rhinos and the illegal trade in rhino horn along the whole trafficking chain</p>	<p>3.1.1 Bilateral Plans of Action (PoAs) between South Africa and key countries involved in the transit or receipt of illegal rhino horn that include activities to strengthen law enforcement activities to address rhino poaching and the illegal trade in rhino horn</p> <p>3.1.2 Clear protocols for exchange of rhino DNA samples and profiles are in place at international level</p> <p>3.1.3 Number of DNA profiles and samples for individual black and white rhinos in South Africa and rest of world held within VGL database</p> <p>3.1.4 Number of enforcement personnel from key transit and</p>	<p>3.1.1 MoU between SA and Vietnam agreed 2012, but no Plan of Action yet agreed or operational</p> <p>3.1.2 No protocols currently exist</p> <p>3.1.3 Baseline currently lacking and needs to be provided by Dr Cindy Harper at VGL</p> <p>3.1.4 Current baseline unclear and will be collected during inception period</p>	<p>3.1.1 MTE target – 1 PoA agreed and operational (Vietnam)</p> <p>TE target – at least 2 other PoAs (could include China, Mozambique and Thailand) agreed and operational</p> <p>3.1.2 MTE – international protocols in place</p> <p>3.1.3¹⁵ MTE– increase in profiles and samples 20% over baseline</p> <p>EoP – increase in profiles and samples 40% over baseline</p> <p>3.1.4¹⁶ MTE – A people trained and B kits dispensed</p> <p>EoP– C people trained and D kits dispensed</p>	<p>3.1.1 PoAs are documents hence measureable. Minutes of meetings between party governments would allow progress to be monitored. DEA will provide documents to PM</p> <p>3.1.2 Protocols will be recorded in formal legal documents</p> <p>3.1.3 Data on number of records held on database at VGL and their provenance are available through VGL reports and will be provided to PM</p> <p>3.1.4 Records and evaluation reports of training workshops, and delivery receipts for DNA sample kits and Forensic Collection Kits, collected and maintained by PM</p>	<p>Assumption – capacity at international level, especially within relevant enforcement authorities in Vietnam, China and Mozambique will be sufficient to execute these protocols</p> <p>Assumption – there is sufficient and continued political will and interest within enforcement agencies in rhino horn recipient and transit and recipient countries to maintain engagement with South Africa on sharing information and cooperation, even following changes to political administrations</p>	<p>Environmental Governance</p> <p>Expected Accomplishment (b): <i>“the capacity of countries to develop and enforce laws and strengthen institutions to achieve internationally agreed environmental objectives and goals and comply with related obligations is enhanced”</i></p>
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¹⁵ Actual realistic target value to be defined by at inception by project technical team

¹⁶ Actual realistic target values for A,B and C,D to be defined by at inception by project technical team

	destination countries trained in rhino DNA sample collection and provided with Forensic Collection Kits					
Related Outputs						
3.1.1 Sections of the Action Plans (APs) for the Memoranda of Understanding (MoUs) and other appropriate agreements between South Africa and other relevant countries dealing with rhino poaching and illegal trade in rhino horn implemented						
3.1.2 Procedures established, 'good practice' captured and disseminated, and capacity built, for the exchange of relevant data and samples of illegally traded parts and derivatives (with a focus on rhinos) between South Africa and relevant national and international enforcement agencies, such as ICCWC members and other relevant organisations, to assist with forensic investigations						
3.1.3 RhODIS upgraded to become the global standard and database for collection and storage of rhino DNA and profiles						

A.2 Detailed description of project rationale, and all elements of the Logical Framework up to the activity level

A.2.1 Key problem and impacts

i. Threat posed by the international trade in wildlife and timber

The illegal wildlife and timber trade has become one of the most significant criminal activities in the world today, worth many billions of US Dollars¹⁷. Much of this activity is focused on Protected Areas due to their concentrations of biodiversity but the trade is complex and transboundary in nature, involving (among others) local poachers or collectors, trackers, couriers, weapons and other equipment suppliers, dealers with international transportation and distribution contacts, financiers, and distributors and sales outlets in the recipient countries (ICCWC 2012).

In Africa, the illegal wildlife trade is increasingly affecting populations of large mammals, reptiles and some types of insects and plants, especially elephants and rhinos, the latter of which are now largely restricted to protected areas. It also has serious socio-economic impacts through reducing the ecotourism value of protected areas targeted by poachers/collectors, reducing tourism opportunities for local communities, and it presents a security threat because of the presence of armed individuals in an area. The seriousness and complexity of the problem has been recognised at international level with, for instance, the creation of a joint consortium to tackle the illegal trade in 2009 comprising the Convention on International Trade in Endangered Species (CITES) Secretariat, INTERPOL, the United Nations Office on Drugs and Crime (UNODC), the World Bank and the World Customs Organization (WCO).

As an indication of just how serious the illegal wildlife trade has become, the US Government has specifically highlighted this trade as an emerging threat, and there are concerns that profits from the illegal trade may be being used to fund terrorist groups. Indeed, the former US Secretary of State, Hilary Clinton, made a keynote address to a Wildlife Trafficking and Conservation Partnership Meeting (held at the US State Department) in November 2012 calling for more resources and coordinated action to address the threat as a matter of urgency. She noted that wildlife trafficking 'has become more organized, more lucrative, more widespread, and more dangerous than ever before'¹⁸, and 'trafficking relies on porous borders, corrupt officials, and strong networks of organized crime, all of which undermine our mutual security' and that 'illegal trade in wildlife undermines borders and economies'.

ii. Impact of poaching and the illegal trade in rhino horn in Africa

The IUCN reports that there are currently 5,055 Black Rhinoceros *Diceros bicornis* and 20,405 White Rhinoceros *Ceratotherium simum* in Africa. Killing of rhinos for their horn has become a significant threat to both these species of rhinos in recent years. In 2012, at least 745 rhinos were poached throughout Africa – the highest number in two decades. Between 2011 and 2012, rhino poaching increased by 43%, representing a loss of almost 3% of the population that year, according to IUCN's Species Survival Commission's (SSC) African Rhino Specialist Group (AfRSG). Poaching for rhino horn has already led to the extinction of the Western Black Rhino *Diceros bicornis longipes* in Cameroon and the possible extinction of the Northern White Rhino *Ceratotherium simum cottoni* in the DRC (Milliken et al., 2009).

South Africa, which has the largest population of the African White Rhino, has a deservedly proud track record of successful rhino conservation. Up to 2008 rhino poaching was contained to acceptable levels, with an average of 42

¹⁷ Illegal wildlife trade (excluding fisheries and timber) is estimated to be worth nearly USD 15 billion per year, with the illegal international timber trade worth around USD 7 billion per year (although it is impossible to obtain accurate values given the generally covert nature of the trade). See TRAFFIC website <http://www.traffic.org/trade>

¹⁸ Other issues identified in the presentation by Hilary Clinton were that "wildlife trafficking has serious implications for the security and prosperity of people around the world", and that 'local populations that depend on wildlife, either for tourism or sustenance, are finding it harder and harder to maintain their livelihoods'. Former Secretary Clinton's keynote address is available online at <http://www.state.gov/secretary/rm/2012/11/200294.htm>

animals poached per year in the period 2000-2007 and the population of rhinos in SA was healthy and increasing. However, illegal hunting of White and Black Rhinoceros in South Africa has increased dramatically in recent years (every year since 2007 – see Table 1) with a record 668 rhinos illegally killed in 2012, and 704 are known to have been killed up to the 25 September 2013 suggesting the total for 2013¹⁹ will be even higher.

Unfortunately, since 2001 there has been a progressive decline in rhino horn recoveries, suggesting a precipitous drop in law enforcement effectiveness in Africa overall, but especially so in Zimbabwe and South Africa. For example, 68% of all illegally procured horns were intercepted in 2001, but only 8% in 2009, which translates to some 90% (or 9 out of 10 horns) of illegal horns are moving out of Africa and into Asian consumer markets without interference (Milliken et al., 2009). This is believed to be primarily due to increased involvement of well-organised criminal syndicates with international connections. Consequently, there is an urgent need to enhance criminal investigations and prosecutions with improved intelligence and use of forensic techniques and evidence.

Most poaching was previously carried out using just guns (AK47 assault rifles, .303 and heavier .375 and .458s calibre rifles). However, subsequent recent incidents have also included the use of helicopters, dart guns immobilising drugs and hunting rifles, and even poison and cross-bows have been used in South Africa, with the *modus operandi* in poaching methods and horn removal varying from case to case, and poaching operations have become much more sophisticated and coordinated. Forensic evidence, time-lines and the variety of new killing techniques, suggest that rhino poaching has become the new ‘get-rich-quick’ criminal activity, and that despite regular arrests, new ‘players’ have been entering the field on virtually a daily basis.

The crisis has put enormous stress on the management and financing of the country’s protected area system, where it is often described as a ‘war’, with substantial and increasing efforts being diverted into anti-poaching measures that could have been spent on other protected area management activities to benefit biodiversity. In some cases, an estimated 80% of a PA’s operating budget is being spent on rhino security measures²⁰. Along with state protected areas, private game reserves have also been forced to upgrade their security with some hiring (expensive) specialist security contractors. Although rhinos are being killed illegally in both State and private reserves, rhino poaching incidents are concentrated mainly in the Kruger National Park (KNP) where the largest population of 10,000 rhinos is found (see Annex R).

Table 1: Rhino poaching statistics in South Africa from 2010 to 2013

(Source: Department of Environmental Affairs (25 Sept 2013), and CITES CoP16 Document 54.2)

South Africa	2007	2008	2009	2010	2011	2012	2013
KNP (SANParks)	10	36	50	146	252	425	434
MNP (SANParks)	0	0	0	0	6	3	2
GP	0	0	7	15	9	1	4
LIM	0	23	16	52	74	59	80
MP	3	2	6	17	31	28	48
NW	0	7	10	57	21	77	69
EC	0	1	3	4	11	7	2
FS	0	0	2	3	4	0	0
KZN	0	14	28	38	34	66	65
WC	0	0	0	0	6	2	0
NC	0	0	0	1	0	0	0
Total	13	83	122	333	448	668	704

Maintaining South Africa’s populations of both Black and White Rhino is critical to the survival of these iconic and ancient species and needs to be a principal focus in the fight against rhino poaching. By the beginning of 2011 South

¹⁹ Source: DEA (25 Sept 2013).

²⁰ Figures from joint analysis by stoprhinopoaching.com and WWF-SA on unpublished, confidential data gathered as part of the GEF PPG phase in 2013

Africa held eight of Africa's 11 IUCN SSC AfRSG rated **Key1** White Rhino populations of continental significance, and the majority of the other rated **Key** (11/14) and **Important** (41/53) populations.²¹ The two largest populations in Kruger National Park and Hluhluwe-iMfolozi Park accounted for an estimated 53% and 13% of South Africa's 18,800 White Rhinos in 2010, respectively. While the majority of White Rhino still occur in State Reserves and Parks, the private sector has been playing a major role in its conservation, conserving about 24% (4,500) of the national population by the beginning of 2011. Similarly, for the Black Rhino, by the beginning of 2011 South Africa conserved three of Africa's seven IUCN/SSC/AfRSG rated **Key1** Blackblack rhino populations of continental significance, and 42% of the other rated **Key** (3/10) and **Important** (12/26) populations. Consequently, South Africa's conservation efforts for both White Rhino and Black Rhino are of continental importance and critical for long-term survival of the species..

Although South Africa's white rhino have increased at an average of 7.2% per annum from 1991-2010, this growth is under pressure from poaching. Approximately 3.2% of the national population was lost to poachers in 2012. Consequently, the population is expected to grow at around 4% per annum. However, the rate of poaching has been rapidly increasing and, according to IUCN's Species Survival Commission's (SSC) African Rhino Specialist Group (AfRSG), the current high and escalating levels of poaching are predicted to lead to the point where the populations of South African rhinos will start declining from as soon as 2015/2016 (i.e. deaths from poaching will exceed the numbers of rhino born into the population)²². Whilst there is some uncertainty to this estimate, and it is difficult to say when the Black and White Rhino would become functionally extinct in the wild in South Africa if the current trends continue, what is clear is that the rate of poaching has increased dramatically in the last 5 years.

Poaching and the illegal trade have a wider impact than simply just killing the animals. Sustainable livelihood measures, such as South Africa's lucrative nature tourism, are also undermined by poaching and the illegal trade, which negatively impact the protected areas (both State and privately owned) that support rhinos and the local communities around these sites that rely on them. The involvement of armed poachers and criminal syndicates also presents an increased security risk to protected area staff and surrounding communities, dissuades private owners from maintaining rhinos on their land, and the threat of potential violence is a disincentive for tourism that further negatively impacts local livelihoods.²³ A film produced under the auspices of CITES, "Rhinos under Threat", noted that: ***'It is clear that the increased levels of rhino poaching and rhino horn thefts has an impact on several continents and that a well-coordinated law enforcement response, as well as high-level political responses, will be required to address this problem effectively.'***²⁴

Also, some of the areas managed by government entities in South Africa have reached their productive carrying capacities for white rhino in the last decade and surplus animals have been relocated to private game reserves and community-managed reserves (the sales help generate important funds for the state conservation agencies) to maintain maximum population growth rates.). However, the incentives for private landowners and communities to make land available for rhinos are mostly financial, including potential live sales from productive herds, eco-tourism and hunting. Unfortunately, due to the high levels of poaching, these incentives are increasingly outweighed by the security costs required to protect rhino populations and the heightened personal risks to those protecting the animals. As a result, there has been a decline in demand for surplus rhino from the private sector and a reduction in the live-

²¹ A Key Population is an AfRSG rating to indicate a rhino population whose survival is considered critical for the survival of the species (Emslie, R. and Brooks, M. (1999). African Rhino. Status Survey and Conservation Action Plan. IUCN/SSC African Rhino Specialist Group. IUCN, Gland, Switzerland and Cambridge). Page 14 of the IUCN Rhino Action Plan document shows the specific criteria for each of the Key populations

²² IUCN Media Release http://www.iucn.org/media/news_releases/?12538/African-rhinos-wont-hold-out-for-much-longer-IUCN-experts-war

²³ As the WWF notes, the "very existence of illegal trade undermines efforts made by countries to protect their natural resources. Huge economic losses are incurred through lost earnings from legal trade. Illegal wildlife trade run by criminal networks with wide, international reach, is also linked to the trafficking of illegal drugs, arms and even people" (see <http://worldwildlife.org/threats/illegal-wildlife-trade>).

²⁴ http://www.cites.org/eng/news/pr/2012/20120618_rhinos_under_threat_rio.php

sale price in recent years, with the turnover of live White Rhinos at auctions dropping from 25% in 2001 to less than 3% in 2011. Such is the concern among private owners, especially those with smaller herds and fewer resources, that some have disinvested themselves of their rhinos. If the poaching continues, sales of surplus white rhinos from state-owned protected areas would diminish resulting in a reduction in revenue to state protected areas to purchase new conservation land and to fund anti-poaching measures, and the impact of illegal killing will become even more significant.

A.2.2. Root causes

The poaching of rhinos in South Africa's protected areas is being driven by an increased demand and high prices for rhino horn in Asia. Rhino horn has long been used in traditional medicine in the region, with practitioners ascribing it with cooling abilities, fever reduction and purging of toxins from the liver, kidney and spleen, although new 'uses' of the horn have developed in recent years (Milliken and Shaw, 2012)²⁵. There is particular demand from Vietnam (China banned the trade in rhino horn in the early 1990s and substitutes were adopted, although a certain level of illegal trade is still thought to occur) where rhino horn is reportedly being promoted as a health/hangover 'tonic', and used as a social and financial status symbol (e.g. traded to gain promotion, given as an expensive gift, and acts as financial insurance)²⁶. Rhino horn is also now being promoted as a palliative for cancer (although there is no scientific evidence to support any positive health benefits²⁷). Indeed, apparent reports of high-profile Vietnamese being 'cured' of cancer are thought to be an important factor in the recent upsurge in rhino horn trading in Vietnam, although there are suggestions these rumours may have been deliberately started to encourage a market in rhino horn.

Because of the limited supply, high demand, and illegality of the trade, rhino horn now commands a higher price than cocaine or gold of equivalent weight. Unfortunately, the high potential profits that can be made from the trade and associated low risk (relative to illegal trade in arms, guns and people) are attracting well-resourced, highly organised, dangerous criminal syndicates who have resources to kill rhinos quickly using sophisticated hunting technology and national and international networks to move wildlife products to supply the market in Asia. These syndicates have also been involved in facilitating the "leakage" of South African horns from stocks in the public and private sector into the illegal international markets in recent years. Rhinos in other African and Asian range countries are also being targeted by poachers and criminal groups. In addition, it is suspected that expanding Asian economic involvement in parts of Africa over the last decade, with new and strengthened trade routes between Africa and Asia, may have facilitated an expansion of illegal rhino horn trade in Africa (Emslie *et al.*, 2007).

Intelligence gathered by South African and international enforcement agencies clearly indicate the involvement of organized crime groups in rhino poaching. Various analyses of this crime²⁸ have shown a complex web of players, from 'ordinary people' recruited from communities adjacent to rhino reserves up to well-established international criminal syndicates for which rhino horn is just another commodity (along with weapons, drugs and people) that can be traded for illegal gain. These groups operate not only in rhino range states, but also in Europe (where many rhino

²⁵ In addition to the horn, other parts of the rhino are also believed to have curative properties: i) rhino blood mixed with strong wine was believed to cure many diseases; ii) rhino dung, dried and mixed with strong alcohol was used to relieve chronic joint pains; iii) rhino gallstones were used to treat boils, tumours and water retention; iv) dried rhino skin is used by snake handlers amongst Vietnam's snake farming community to draw out snake poison.

²⁶ Milliken, T. and Shaw, J. (2012). The South Africa – Viet Nam Rhino Horn Trade Nexus: A deadly combination of institutional lapses, corrupt wildlife industry professionals and Asian crime syndicates. TRAFFIC, Johannesburg, South Africa.

²⁷ Representatives from the traditional medicine community in China have reported that '*although Rhinoceros horn has been prohibited from use in traditional Asian medicine since the early 1990s, it appears that practitioners remain convinced of its effectiveness in the treatment of fever and cerebrovascular disease*' (CITES Secretariat Report to the 61st Standing Committee meeting in 2011, available at <http://www.cites.org/eng/com/sc/61/E61-45-01.pdf>). In other literature, the online Journal Of Chinese Medicine states categorically that rhino horn '*contains no medicinal properties*' and that '*in addition to herbal alternatives...rhino horn can be simply, cheaply and effectively replaced by Aspirin*' (<http://www.icm.co.uk/engangered-species-campaign/rhinoceros/alternatives-to-rhino-horn/>).

²⁸ See <http://www.polity.org.za/article/sa-statement-by-the-department-of-water-affairs-on-n-rhino-management-in-south-africa-at-cites-cop16-08032013-2013-03-08>, <http://www.cites.org/cop/16/doc/E-CoP16-54-02.pdf> and Milliken and Shaw (2012)

horns have been stolen from museums in recent years²⁹), the USA, Australia, the Philippines and Hong Kong SAR (evidence from seizures of illegal rhino horn in transit); accordingly, the rhino horn trade has an impact on several continents which requires increased international cooperation and a well-coordinated law enforcement response to address this threat effectively³⁰.

Evidence suggests that there are five different levels involved in rhino-related crimes in South Africa, from the numerous poachers to the buyers and end-consumers.

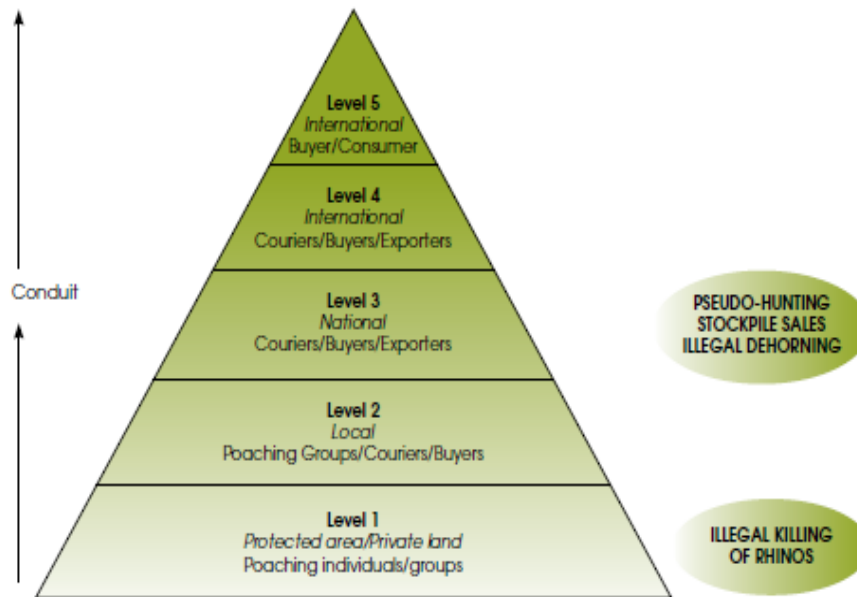


Figure 1: Structure of organized crime groups involved in rhinoceros poaching and illegal rhinoceros horn trade in South Africa (adapted from Milliken and Shaw 2012)

Poachers (Level 1) make up the majority of arrests, usually in or close to protected areas, which is understandable given that they comprise the most numerous group involved in rhino crime. For instance, in the period from 1 January 2012 to 16 October 2012, South African authorities arrested a total of 207 offenders involved in illegal trade in rhinoceros horn, of which 179 (86%) were at level 1 (poachers). However, in order to disrupt the illegal rhino horn trade chain, it is important that the dealers, middlemen and international crime gangs are identified and apprehended but organized crime syndicate members on levels 4 and 5 are often located in consumer countries and beyond the reach of enforcement authorities in range countries. The number of arrests of couriers, buyers and exporters (Levels 2-4) is increasing and a number of high-profile and high-level arrests have been recorded in South Africa recently³¹. Unfortunately, while numbers of rhino-related arrests per day have been rising year-on-year, so have poaching levels (Emslie, 2013).³²

²⁹ It has been speculated that this may be due to recent restrictions on the granting of hunting licenses in South Africa through the revised Norms and Standards, which has shifted criminal attention to these other (relatively easier, less risky) sources of horn, i.e. thefts from museums, illegal dehorning.

³⁰ <http://www.cites.org/eng/cop/16/doc/E-CoP16-54-02.pdf>

³¹ Several imprisonments of between 6-12 years have been handed down recently, with a Thai national sentenced to 40 years imprisonment, a Vietnamese citizen to 25 years and South African and Mozambican poachers to 29 years each. However, most arrests concern lower level operatives; the syndicate heads generally have evaded arrest. South Africa is increasingly charging offenders with a multitude of charges and seizing considerable assets, for example: i) one case where the accused faced 1,872 charges and had USD 6.7 million of their assets secured prior to finalisation of the case; ii) a person convicted of dehorning without a permit and then trying to sell the horn (illegally) was sentenced to eight years, fined USD 25,000 (paid to the Environmental Management Inspectorate), and had assets forfeited amounting to USD 1.39 million.

³² Information Document E-CoP16i-51.pdf

Poachers come from a variety of localities, but many of those caught in KNP have crossed the border from Mozambique. The two countries share a 356km border through the KNP, which although fenced has a porous section extending some 40km where the fence was dropped following the creation of the Greater Limpopo Transfrontier Park in 2002. In March 2013, KNP recorded 72 cross-border armed incursions from Mozambique; of the 94 rhino-related arrests in South Africa in 2013, 44 of these were carried out in KNP.³³ Unfortunately, once back across into Mozambique, SANParks Rangers are been unable to continue their pursuit. However, meetings are underway between the South African and Mozambican governments to investigate the possibility of collaboration on several fronts, including law enforcement efforts along the South Africa-Mozambique border. It has been suggested that, in the wake of the increased law enforcement actions against rhino crimes in South Africa, Mozambique has become not only the source of the majority of foreign poachers, but also appears to be an important *entrepôt* and transit country (Emslie *et al* 2013)³⁴.

The situation is exacerbated by the relative poverty in local communities around many PAs in South Africa and adjacent areas in neighbouring countries, which combined with very limited livelihood options and the relatively large financial gains that individuals can achieve from rhino poaching activities, particularly for poorly-educated rural people with few other options, attracts some people to engage in illegal activities (acting as poachers, trackers, couriers, middle men, etc, for the criminal syndicates). In the case of KNP National, for instance, as mentioned above, many of the poachers arrested have come across the border from Mozambique where poverty is rife and there is little law enforcement. Indeed, it is increasingly recognized that the fight against poverty needs to be part of the battle against rhino poaching (and wildlife crime generally).³⁵

Various recent studies, policy statements and management plans have identified a range of barriers that need to be addressed to tackle the rhino poaching crisis and associated illegal trade in rhino horn. These barriers are complex and multi-layered and depend on the location. In South East Asia, the key focus is to better understand the market and finds ways to reduce the demand for rhino horn and its products, which is being addressed through other initiatives, such as those being undertaken by WWF, TRAFFIC, and Endangered Wildlife Trust (see Annex T). In South Africa, the focus, as set out in the National Strategy for Safety and Security of Rhinoceros Population in South Africa, particularly Strategy Outcomes 3 and 4³⁶, and various CITES, TRAFFIC and other policy documents, argues for increased efforts to reduce the supply of horns to the market through more effective law enforcement and proactive protection activities.

A.2.3. Baseline and gaps preventing solutions to the problem

The GEF project is not in a position to eliminate or overcome all the drivers of the threat and the barriers that are preventing effective solutions to the problem. Instead, it seeks to address certain key 'gaps' in the baseline activities, through carrying out specific activities to address the poaching in South Africa's protected areas as well as linking with other initiatives taking place to weaken and disrupt, and ultimately close down, the international trade chain in rhino horns. The key barriers within South Africa that the GEF Project will address are: (i) the low capacity to carry out critical forensics at rhino crime scenes; (ii) inefficient information management (rhino conservation, as well as crime and law enforcement) and rhino crime analysis and forecasting; and (iii) weak cooperation and coordination of international efforts to disrupt the operations and ultimately dismantle crime syndicates involved in the illegal rhino horn trade.

³³ http://www.savetherhino.org/latest_news/news/667_why_are_krugers_rhinos_being_hit_so_hard

³⁴ Urgent calls were made to Mozambique at the 16th CoP to CITES in March 2013 to tackle its role in the rhino poaching crisis, with a deadline of 31st January 2014 to report back to CITES on its progress in this regard.

³⁵ <http://www.news24.com/Green/News/End-poverty-preserve-heritage-Molewa-20130305>

³⁶ Strategy Outcome 3 - Supporting the establishment of a national coordination structure for information management, law-enforcement response, investigation and prosecution. Strategy Outcome 4 - Developing an integrated and coordinated national information management system for all information related to rhino species in order to adequately inform security related decisions.

i. *Suboptimal capacity for effective collection and use of forensic evidence.* Forensic³⁷ evidence is critical for successful prosecution of those involved in wildlife crime. For instance, it is vital that the samples are processed to ensure that forensic evidence is acceptable and delivered within a specified time frame for court purposes particularly when urgent results are required for bail hearings. Correctly collected and handled samples ensure chain of custody requirements, and are critical for successful prosecution. The individuals responsible for the collection of samples at a crime scene must often appear in court cases and their competence to collect and process forensic evidence to ensure sample integrity and prevent contamination is frequently questioned by defense teams.

However, there is limited forensic capacity in South Africa where human, rather than wildlife, crime is the priority for the existing laboratories, and there are no dedicated wildlife crime laboratories in the country or indeed within the Southern Africa Development Community (SADC) region. DNA evidence has been particularly problematic but is especially important in criminal prosecution cases. For instance, the key laboratory in South Africa that undertakes the analysis of Rhino DNA from rhino crime scenes for the South Africa Police Service (SAPS) is the VGL at the University of Pretoria, using the RhODIS™ system developed jointly by the VGL and the SAPS Forensic Science Laboratory currently has only one old sequencing machine that can only process a small number of samples at one time and this machine is already beyond its estimated working life and needs to be replaced. The VGL also suffers from staff capacity limitations and constant funding issues. In addition, there is limited human capacity within government institutions (protected area staff, police, etc) and among private rhino owner operations to collect, share and use DNA and other forensic evidence, and there is still limited awareness of the value of DNA forensic evidence for combating wildlife crime among the legal profession in South Africa, many of whom are not up-to-date on the latest technologies and approaches. Overall, the timeliness of response to support wildlife forensic cases is below requirements, and prevents rapid, successful prosecutions of wildlife crimes (notably those involving rhinos).

Some training has been provided in these areas over the last 5 years through other schemes in South Africa, but this needs to be expanded to include other Environmental Management Inspectors (EMIs), prosecutors, magistrates, PA officials, police officers, provincial authorities, stockpile managers and veterinarians.

ii. *Suboptimal mechanisms and institutional agreements for sharing of information needed for effective law enforcement and anti-poaching efforts among national actors.* At the national level, there is a lack of direct communication and protocols on information-sharing between relevant agencies that need to work together in wildlife law enforcement, namely SAPS, Customs Authority, SA National Defense Force (SANDF), DEA, SANParks as well as most private game reserves. Many key databases - both those dealing with rhino conservation and management as well as crime and law enforcement - are independent and not linked. This introduces delays in the response time on wildlife forensic cases and the ability to identify wildlife crimes committed by the same groups, or the same weapon or under the same *modus operandi* across several separate crimes and protected areas. For instance, although some information on environmental crime is held by SANParks on one system (MEMEX), SAPS uses a different system, and there is currently no mechanism whereby common information critical for law enforcement can be accessed by each party. In addition, there is no common Rhino DNA database available to all enforcement agencies and staff and what does exist is not linked to rhino permitting processes (permits are needed to move rhinos, e.g. between private owners following sales). In many cases there is an issue of trust over the sharing of information and boundaries of responsibility for data management and exchange are often not clear. Many of the individual databases also need additional development, updating and/or redesign, and also need to be better tailored to users in the field (who have generally lower levels of education and training than the analysts in Pretoria for which the data gathering systems are

³⁷ Forensics is the application of natural and physical sciences in the resolution of legal matters. Wildlife forensics is the use of traditional forensic methods in the investigation of crimes against plant and animal species. The scientists in this field use methods that are similar to those used in crimes involving human victims. Recent strides in forensics and prosecuting criminals based on this science has led to added capabilities in the fight to curb wildlife crimes.

often designed). Unfortunately, there is no agreement on a common set of data fields that needs to be collected to improve the fight against poaching and the illegal trade, which introduces huge inefficiencies.

iii. *Weak institutional structures, mechanisms, protocols and capacity for cooperation and information/forensic sample exchange at the international level needed for successful prosecutions along the whole trafficking chain.* Collaboration and joint law enforcement initiatives at both national and international levels are seen to be vital to tracking down and dismantling criminal networks and several international organisations dealing with wildlife conservation and law enforcement have reiterated that poaching and illegal trade will continue 'until the top criminals behind the chains are taken down'.³⁸

At the international institutional level, CITES has led the fight against the illegal trade in rhino horn. The CITES Secretariat's Notifications to the Parties Nos. 2012/014³⁹ and 2012/053⁴⁰ outlined a variety of measures that have been implemented by Parties to put an end to the current high levels of rhinoceros poaching and the associated illegal trade in its horn. However, despite these measures and the significant resources being invested to combat rhinoceros poaching and illegal rhinoceros horn trade, together with the 'commendable efforts by enforcement authorities in a number of countries'⁴¹, the number of rhinos poached on an annual basis continues to rise at an alarming rate.

As the CITES Secretariat noted in its report to the 16th CoP in March 2013, higher level organized crime syndicate members (levels 4 and 5) are often located in consumer countries and, accordingly, beyond the reach of enforcement authorities in range countries. Increased cooperation and coordination through improved communication and collaboration between national and international enforcement agencies is therefore needed to target the criminals operating outside of South Africa, and will help improve efforts aimed at stopping criminals engaged in illegal activities particularly at levels 4 and 5 of the trade chain pyramid.

Although cooperation is good between stakeholders at the regional SADC level, e.g. SADC Rhino Management Group and SADC Rhino and Elephant Security meetings, capacity with regard to address joint activities to tackle rhino crime and the exchange of information and forensic samples at the wider international level, particularly with South East Asian countries, is suboptimal, with few recent successes. This lack of cooperation has prevented a quicker response to international law enforcement efforts, and increased international cooperation and coordination are vital to tackle those engaged in criminal activities at levels 4 and 5.

For example, there is a lack of formal protocols for the international exchange of DNA samples and profiles to support prosecutions along the whole trafficking chain, and a need for increased use of Interpol and World Customs Organization systems to ensure timely and secure exchange of information on criminal groups. For instance, to date, the 33 rhino horns that were discovered in Hong Kong in November 2011, in a container shipped from Cape Town and labeled as carrying "scrap plastic" (Milliken and Shaw, 2012), have not been tested for DNA sampling to determine the origin of the rhinos; this is due to the lack of an agreement on protocols and mechanisms between South Africa and China.

A.2.4. Project rationale and overall aims

The project aims to reduce poaching of rhinos in South Africa and the associated illegal national and international trade in rhino horn by increasing capacity within South Africa to carry out wildlife law enforcement. It will do this by addressing each of the above gaps, through: the use and deployment of innovative forensic technologies applied to enforcement in PAs; improving management of information on rhino conservation and rhino crime, and linking relevant databases to create a new, innovative, wildlife crime analysis and forecasting tool that can be used to better

³⁸ FOCAC website <http://www.focac.org/eng/zxxx/t1019834.htm>

³⁹ Notification 014 to the Parties of 2012 – available at <http://www.cites.org/eng/notif/2012/E014.pdf>

⁴⁰ Notification 053 to the Parties of 2012 – available at <http://www.cites.org/eng/notif/2012/E053.pdf>

⁴¹ In document CoP16 Doc. 54.2 (Rev.1) available online at <http://www.cites.org/eng/cop/16/doc/E-CoP16-54-02.pdf>

predict where rhino-related crime will take place in and around PAs; and by supporting the use of forensics and information sharing and analysis at the international level in an effort to improve law enforcement efforts along the whole rhino horn trafficking chain. The project will ensure that seized rhino horn can be linked to crime scenes and implicated suspects, which will facilitate investigation, arrest and successful prosecutions against this crime, and help to disrupt and weaken the illegal trade chain.

Du Toit (2006)⁴² proposed a simple equation that **Poaching Incentive = Reward** available to poachers/syndicates **divided by** [**Risk** to poachers/dealers x **Effort** that needs to be expended (includes costs to poachers and syndicates)]. The GEF project seeks to reduce the incentive for poaching by increasing the risk to poachers/dealers and increasing effort and costs to obtain and move horn to markets. Better intelligence and prosecution rates, as a result of this project, will increase the risk of poachers/dealers being caught (including before they kill rhino), and, provided reward doesn't dramatically increase in response, this should reduce effort. Costs to poachers and dealers will also be increased through improved information analysis feeding into more effective law enforcement operations, further reducing poaching incentives (again provided reward doesn't increase in response to supply). The project will therefore make a positive contribution to help reduce incentives to poaching/dealing in horn by increasing risks to poachers/dealers (of being caught and getting lengthy, deterrent sentences) as well as increasing the effort and costs needed to get and trade in the horn thus shifting the cost:benefit ratio away from poachers.

The rhino-poaching crisis affecting South Africa's protected areas is complex and needs to involve many players across several countries with concerted action to address all levels of the illegal trade chain, and it is recognized that the GEF intervention cannot tackle all of the problems on its own, especially over a short 4-year period. Consequently, the project does not attempt to address all areas but seeks to fill the gaps where action has so far been limited and to complement and support other parallel existing or proposed initiatives that seek to address rhino poaching in South Africa's PA network and other parts of the chain such as those being implemented by WWF, TRAFFIC, EWT⁴³. Some of these activities, such as consumer demand reduction campaigns in user countries (particularly Vietnam) and possible legalisation of trade to allow sale of horns from dehorned rhinos (so without killing the animal), which is being considered at the moment⁴⁴, etc, require a longer period before approval or results can be seen. The GEF project aims to make difference by improving rhino crime intelligence and crime scene investigations in PAs that will give immediate support to the conservation of these species and help buy more time to deliver on the other longer time efforts.

The project has been designed to complement existing Government-led and other initiatives to combat rhino poaching within the Protected Areas network. Policies and legislation exist that support the efforts envisaged and various key stakeholders have vocalized their commitment to rhino conservation. Although South Africa has an extensive network of Protected Areas, coupled with considerable resources for their management, the rise in poaching activity has seen valuable biodiversity conservation resources being diverted to anti-poaching efforts but these are still inadequate to address the current threat facing rhino populations in the country's protected areas. The funding from the GEF will assist with covering critical short-falls in funding through targeted activities under the Project.

⁴² Du Toit, R. (ed.), Guidelines for Implementing SADC Rhino Conservation Strategies. SADC Regional Programme for Rhino Conservation, Harare (Zimbabwe), 2006.

⁴³ For example, the EWT and Education for Nature (ENV-VN) have joined forces to develop an anti-poaching campaign and have produced a poster with the message 'say no' to rhino horn, together with other media outreach activities in South Africa and also Vietnam. The campaign is published in both English and Vietnamese and complements activities being carried out in terms of EWT's Rhino Project. Activities will include: contributing to the standardization of anti-poaching training; promoting the consistent and effective implementation of legislation around rhino; providing awareness raising and support to the judiciary involved in rhino poaching cases; and influencing the legal framework to contribute to enforcement. Also see Annex T.

<http://www.ewt.org.za/media/2013/SA%20and%20Vietnam%20Rhino%20Campaign%20Final.pdf>

⁴⁴ See <http://www.bbc.co.uk/news/science-environment-21615280>, and <http://www.guardian.co.uk/environment/2013/mar/25/south-africa-rhino-horn-trade>

A.2.5. Project Goal and Objective

The overall project Goal, which the project contributes to but cannot by itself achieve, is to: *Improve the conservation status of wildlife populations in protected areas in Southern Africa threatened by the illegal wildlife trade, and by extension other species and protected areas suffering a similar fate elsewhere.*

The specific Project Objective is to: *Improve the effectiveness of efforts to combat wildlife crime in South Africa's Protected Area system, focused on Rhinoceros, through improved forensic technologies and capacity, strengthened data gathering, sharing and analysis systems at national level, and enhanced cooperation structures and mechanisms at international level to support law enforcement efforts along the whole trafficking chain.*

The main focus of the GEF project is to improve the forensic capabilities, particularly DNA-based forensics, and data sharing and coordination systems of relevant groups to better control the recent upsurge in poaching of rhinoceros in South Africa's protected area network.

A.2.6 Project Components and Expected Results⁴⁵

Component 1: Use of forensic technology to combat rhino poaching and the illegal rhino horn trade

Outcome 1.1: Improved and more effective forensic capacity (techniques, procedures, training, equipment and institutional arrangements) to combat rhino poaching in South Africa's protected areas and the associated illegal trade in rhino horn, with service providers put onto a sustainable financial and institutional footing

Rationale

Forensic evidence has become increasingly essential for successful prosecution of those involved in wildlife crime, but there is limited forensic capacity in South Africa, and there is no standardised mechanism or procedural pathway across the Protected Area network for the investigation of wildlife crime and collection of forensic evidence. Although efforts and resources are currently being channeled into linking forensic information with known criminals, there is a recognized gap in human and technical resources that needs to be filled to keep pace with the increasing rate of rhino poaching and associated illegal rhino horn trade. The imperative is for South Africa to apply resources (human, financial and technical) to improve crime scene investigation and integrity of evidence so that forensic information can be fully used in courts and convictions obtained. Consequently, a significant part of the GEF funding is focused on maximizing the ability of relevant agencies to provide forensic evidence and analyses.

For rhino crime, the most important evidence is that gathered from DNA samples of the rhinos killed or horns collected and any human DNA associated with the crime scene or confiscated horns, and ballistics evidence as most poached rhinos killed have been shot. However, capacity for DNA forensic evidence is very limited and problematic in South Africa, and other areas of wildlife forensics including entomological, photographic and information technology (IT) forensics are underdeveloped in the country. IT forensics, for instance, is becoming increasingly important as checks of electronic media (email, mobile phones, social network sites) allow connections between participants/crime groups in the rhino horn trade to be identified, and potentially to track and map their movements, but there are no resources with the police service for this and such analyses need to be contracted out, which are expensive. As mentioned above there is limited human capacity (including knowledge and resources) within DEA, SANParks, SAPS and among private protected area staff to collect, share and use forensic evidence. In addition, there is still a need to keep members of the legal profession up-to-date in the latest forensic technologies and approaches for combating wildlife crime so they can properly evaluate forensic evidence and its analysis when it is presented in court.

⁴⁵ Please also refer to Section A.1 above for the full Logical Framework of the project.

An increase in the use of wildlife forensic technology and an expansion of the existing service with better development and piloting of new approaches, such as isotope analysis, would help to ensure that critical evidence can quickly be brought before a court, and the use of forensic technology will make efforts to address the entire criminal prosecution chain much more effective. For instance, those organising the illegal transit of rhino horn to overseas markets (levels 3 and 4) are more difficult to identify and prosecute than those individuals who kill the animals in the field or are local couriers (levels 1 or 2), but the use of the DNA evidence can be particularly helpful in bringing those involved higher up in the illegal trade chain⁴⁶ court and a successful prosecution. Evidence from tackling of other crimes, such as drug smuggling, shows that disrupting the higher levels of illegal supply chains can bring significant benefits and greatly reduce crime.

Thus, this project component aims to improve forensic investigation and delivery that will ultimately lead to enhanced prosecution and sentencing of criminals along the illegal rhino horn trade chain.

The following outputs will contribute to the delivery of this Outcome.

OUTPUT 1.1.1: Critical resources (equipment, personnel, etc) at key public- and private-sector wildlife forensics facilities, notably the Veterinary Genetics Laboratory (VGL) at the University of Pretoria and SAPS Forensics Laboratories, are provided to improve identification and traceability of rhino horns for enforcement purposes

This output will focus on delivering improved capacity for DNA, photographic and IT forensics. For the DNA wildlife forensics, the focus will be on supporting and expanding the service currently provided by the VGL at the University of Pretoria, and includes purchase of new and upgraded equipment, ensuring dedicated staff and training and establishment of a secure offsite backup system for DNA samples and profiles. With WWF-SA co-financing, a business and sustainable financing plan is currently being developed for the RhODISTM system and the activities under this Output will be set within this framework and (based on the business plan) help meet some of its recommendations.

Activity 1.1.1.1: Expand processing and storage facility for rhino DNA samples

Given the current rate at which forensic and stockpile DNA samples are being received by the VGL and its current capacity constraints to process these samples, a significant back-log has arisen. In order to deal with this backlog, the Project will provide (i) support for a task force, comprising senior and junior staff, and (ii) additional equipment, so that at the end of the 4-year Project period, the backlog will be cleared, incoming samples will be processed in a timely manner and the RhODIS database will be up-to-date.

Processing samples more efficiently will require a forensically validated and dedicated genetic analyzer that will also back-up the current genetic analyzer that is currently about 5 years old and will need to be discontinued within the next year, if it does not break down beforehand. The VGL currently has a 3130xl Genetic Analyzer (Life Technologies) and will require an additional 3500xl Genetic Analyzer (Life Technologies) to maintain and expand capacity and ensure that equipment break-down does not impact efficiency. Additional equipment requirements in the extraction phase include a Kingfisher Magnetic Bead Particle processor to ensure sufficient capacity and prevent disruptions due to breakdowns. Extra sample and evidence storage (freezers and storage cabinets) and other essential laboratory equipment will also be funded through the GEF project as part of this activity. Additional dedicated staff will be required to support the RhODIS project including a skilled and qualified veterinary technologist (at least a BTech Veterinary Technology diploma) and an IT specialist to maintain and upgrade the RhODIS database and ensure security and data sharing with partner laboratories. The long-term funding for these positions has been examined as part of the WWF-SA Business Plan process.

⁴⁶ For instance, use of DNA analysis can be used to link blood found in a car, on clothes or on recovered horns to the poaching of a specific individual rhino, or to show that two couriers were working together through DNA linking the front horn of a specific rhino found in one shipping consignment with the back horn from the same rhino found in a different shipping crate.

Activity 1.1.1.2: Obtain validation and laboratory accreditation of the RhODIS process. ISO accreditation of laboratories performing testing under the ISO 17025 guidelines has become essential for providing a DNA test and particularly forensic DNA testing service. SANAS (South African National Accreditation System) provides the structure through which this accreditation is done in South Africa. However, additional equipment, space, reagents and staff time is required for development and validation of new and updated techniques and accreditation procedures. All processes related to forensic testing in the VGL will be documented and a quality manual produced, which must be submitted to SANAS for evaluation and, after approval, a formal external audit team is sent to the laboratory for evaluation of the ISO 17025 procedures. This activity will include redesign of the current STR panel used to obtain the DNA profiles of rhinos to improve efficiency and the re-designed test validated according to SWGDM guidelines (<http://www.swgdam.org/>).⁴⁷ Part of the validation process will include the sequencing of individual alleles, additional profiling of a large representative dataset of the various Black and White Rhino subspecies and populations including routine (non-forensic) sample sets to provide statistically sufficient data for the calculation of match probabilities and inbreeding values. This activity will be supported through co-financing from the VGL.

OUTPUT 1.1.2: New wildlife forensic approaches and techniques to tackle rhino poaching and associated illegal sale of rhino horn developed and piloted for adoption in South Africa's PAs

This output will be coordinated jointly by the DEA and the SAPS Forensic Laboratory and focus on the development and testing of new techniques to better estimate the time since death of a rhino carcass in the field within target PAs, notably the forensic use of entomological and fatty acid residues evidence, as well as carrying out an examination of the efficacy of isotope and elemental analysis (rhino horn chemical fingerprinting) to establish the geographic origin of rhino horn within target PAs. The usefulness of using 'low-copy' human DNA (that is trace human DNA samples collected from rhino carcasses) at crime scenes will also be examined, and a human DNA database related to rhino poaching which would allow identification of links between individuals and a better understanding of poaching networks will be established if the technique proves effective. The latter will complement measures under the new DNA Bill, which allows authorities to retain this human DNA and associated information. All these techniques will be tested in selected PAs, e.g. KNP, to ensure that they are effective under 'real life' conditions, and, again, ways to link the different analyses e.g. rhino DNA with low level human DNA, will be examined.

This research will build on work undertaken through the AfRSG in the early 2000s, which itself built on earlier work by others (Dr Richard Emslie, AfRSG, *pers.comm.*). IUCN has software (Artificial Intelligence) that can aid with data analysis if needed and will provide this to the SAPS FSL. Rhino horn chemical fingerprinting showed initial promise but lack of funding, delays in processing by commercial labs and other problems have meant that this technique has not been pursued. The aim of the GEF funding would be to refine protocols for sample preparation and analysis and undertake further analyses to build on the earlier AfRSG work to determine the spatial level at which rhino horn chemical fingerprinting is sufficiently accurate to be used forensically in future investigations, e.g. whether horn can be placed at a specific protected area. Adding in associated RhODIS data could also help increase the accuracy of source determination and this will be investigated. All the chemical analyses and further development will take place at the SAPS FSL in Pretoria. The AfRSG has provided the Laboratory with all of its samples and associated metadata to facilitate this activity.

Activity 1.1.2.1: Develop and enhance new forensic techniques to enable the collection of more comprehensive forensic evidence at rhino crime scenes

⁴⁷ SWGDAM – Scientific Working Group on DNA Analysis Methods – comprises a group of scientists from federal, state and local forensic DNA Laboratories in the US and Canada that meets regularly and produces guidelines for forensic casework analyses, low-level DNA sampling, etc.

The DEA and SAPS will jointly develop a field research programme to be carried out by internal or external researchers in collaboration with SANParks and private rhino owners, focusing on developing new techniques to better estimate the time and date of a rhino death. Funding will be issued by the DEA either through their established bursary system or through hiring external research consultants, with SAPS FSL and DEA providing joint supervision to grantees. The results of the research programme will be published in peer-reviewed journals and will contribute to improve standard operating procedures in the field at rhino crime scenes.

Research will also include: (i) entomological and fatty acid residues evidence; (ii) use of isotope and elemental analysis (rhino horn chemical fingerprinting) to establish the geographic origin of rhino horn within target PAs and investigate possible link up with DNA data; and (iii) collection and use of low-level (touch) DNA techniques from the horns and bodies of rhinos to identify human suspects.

OUTPUT 1.1.3: Wildlife crime scene investigation protocols (Standard Operating Procedures) and other relevant procedures reviewed, revised and formalized, and essential wildlife crime scene and forensics equipment provided

The focus of this Output will be on reviewing, refining and/or developing Standard Operating Practices (SOPs) to collect and retain evidence that will cover all relevant wildlife forensic techniques (e.g. DNA, photography, IT, ballistics, footprints, blood sampling for drug analysis). Following this, specific training on these will be offered to crime scene personnel to ensure common standards are applied across crime scenes, e.g. how to detect and preserve a crime scene, with specific assistance for Grade 5 EMIs (field rangers) and PA staff (both state and private). Codes of Practice (CoPs) and Crime Scene Risk Assessment methods and procedures will also be reviewed and revised to minimize dangers at a crime scene. Existing 'crime scene manuals' need to be revised and expanded to better tackle wildlife crimes, particularly rhino-related offences. The revised SOPs would incorporate the findings from the research carried out under Output 1.1.2, particularly with regard to the order in which forensic data is collected. Once a procedure or case resulting from activities under this Output has been successfully used in a prosecution, it could then be 'benchmarked' for reference in other similar crime investigations.

National legislation, notably NEMA, requires all government officials that are responsible for monitoring compliance with, and enforcement of, SEMAs to be designated as Environmental Management Inspectors (EMIs), and as such support needs to be provided to these EMI institutions with capacity and budgetary constraints to deliver approved EMI Grade 5 Basic Training. The Grade 5 EMI is usually a field ranger, based in a PA, and many have a limited formal education background. However, they are often the first to come across a rhino carcass and so it is essential that they receive adequate training to ensure that they preserve a crime scene. Although there has been some training in the treatment of crime scenes and forensic sampling in the field for some areas in the last couple of years, notably the use of the DNA sampling kits provided by the VGL, there is a turnover of personnel and consequently a need to train new staff and run regular training courses.

Another major product of this Output will be the development, piloting and deployment of standard Wildlife Crime Scene Investigation and Forensics Collection Kits and Mobile Wildlife Forensic Units for use at target PAs. A common wildlife crime scene 'toolkit' for use in PAs would have application in other countries facing similar wildlife crime issues and be of high replication value.

Activity 1.1.3.1: Develop Standard Wildlife Crime Scene Investigation and Forensics Collection Kits (Wildlife Crime Scene and Forensic Collection Kits) and Mobile Forensic Units for use in the field

An initial review of the Local Criminal Record Centre's Standard Operating Practices (SOPs) covering all relevant wildlife forensic techniques (e.g. DNA, photography, IT, ballistics, footprints, blood sampling for drug analysis), Codes of Practice (CoPs) and Crime Scene Risk Assessment methods and procedures, will be carried out to ensure common

standards and practices across crime scenes. This will provide the basis for the development of standard wildlife crime scene investigation and forensic collection kits for use in the field.

The Kits will combine the VGL forensic kits for RhODIS sampling of crime scenes⁴⁸, with an agreed, standard set of field equipment for other forensic sampling including ballistics, photographic, IT, entomological, and associated equipment and materials, e.g. spoor protection covers, metal detectors, rods to show and follow bullet paths, cameras, material for lifting footprints, little numbers on sticks for exhibit photos, gloves, tweezers, evidence bags, tape to keep people out of crime scenes, GPSs, etc and be based on a review of current equipment used by those currently involved in crime scenes (most are likely to have a list but these are not standardized).

The Mobile Wildlife Forensic Units are likely to take the form of a bush-trailer (4x4 vehicles will be provided through co-financing) kitted out with a full complement of forensic crime scene equipment (the Wildlife Crime Scene and Forensic Collection Kits). The trailers would serve as self-contained off-road 'command centres' that are relatively easier to place directly at the crime scene than a 4x4 vehicle and would be purchased equipped with roof-top tents, canopies providing shelter from the elements, lighting and freezer facilities, back-up generators, and work space for collection and packaging of forensic evidence. At least four of these mobile units will be developed and it is expected that they will be piloted initially with Environmental Management Inspectorates (EMI) in Mpumalanga, Limpopo, North West and KZN Provinces (including, for example, at Kruger National Park, Pilanesberg National Park in North West Province, Hluhluwe-Imfolozi Park in KZN Province and at Private Rhino Owner facilities).

An aim of this Output is to ensure that wildlife forensics is better embedded within PA management systems across South Africa. With this in mind, the experiences gained in the use of DNA, photography and IT forensics (under Output 1.1) together with the results of the pilots of new techniques (Output 1.1.2) and experiences of capacity development and equipment design, delivery and operation in the field (Output 1.1.3), will be fully documented and presented in a specific GEF project publication - '*Good practice guidelines for field forensics to address wildlife crime in PAs in South Africa*' which will be produced in the final year of the project under Output 1.1.3. This will have particular value for replication and dissemination of project results, and is likely to be of interest to PA managers and those dealing with wildlife forensics in many other countries.

OUTPUT 1.1.4: Targeted training and awareness-raising programmes on the relevance and collection of forensic evidence for tackling wildlife crime in South Africa delivered to specific groups dealing with criminal cases involving rhinos

Whilst there has been some targeted training on crime scene procedures and practices for those attending rhino crime scenes, e.g. on the use of the DNA sample kits provided by the VGL, as well as courses directly to some prosecutors and magistrates on the relevance and importance of forensic evidence in rhino crime cases, organized through DEA, these activities need to be expanded and made available to more individuals, and particularly target regions where rhino poaching is highest. Based on current statistics the focus regions would include North-West, Limpopo and Mpumalanga Province, and Gauteng due to many detections being made at Johannesburg's OR Tambo International Airport. These activities will assist with court appearances where the integrity of the crime scene investigation process and chain of custody issues can be validated.

Two main capacity development initiatives will be addressed through the GEF project: a) support towards relevant institutions to deliver EMI Grade 5 basic training to ensure that field rangers are legally eligible for EMI designation; and b) identification of essential skills that EMIs and other relevant law enforcement authorities (for example, SAPS, Customs etc.) require to execute their mandate and develop short specialised courses to address these areas. Training

⁴⁸ There are three kits produced for the RhODIS project – a stockpile or horn kit, routine live sampling kit and forensic kit.

will also include the use and maintenance of the Wildlife Crime Scene and Forensic Collection Toolkit and Mobile Units (developed under Output 1.1.3).

Given that the field of wildlife forensics is developing rapidly there is also a need to ensure that police and legal professionals are kept up to date of all the latest techniques and the implications and limitations of their use in court scenarios. Training will include background on the DNA analysis process, which ensures that participants have a basic understanding of the process and requirements.

Activity 1.1.4.1: Support funding and delivery of EMI Grade 5 Basic Training for field rangers stationed within Protected Areas (PA). DEA will undertake an initial needs analysis; and roll out of applicable training initiatives that focus on crime scene procedures and practice during the inception period to identify specific needs and areas for support in relation to EMI Grade 5 capacity building. DEA has developed a training DVD in support of the EMI Grade 5 capacity building that serves as a baseline reference for attendees. This will be revised and expanded through the GEF project.

Activity 1.1.4.2: Develop and deliver specialised Rhino Crime Scene Courses (linking with SANParks). A specialized Rhino Crime Scene Management Course will be developed for EMIs and other relevant law enforcement authorities (for example, SAPS, Customs etc.), linking with and building on a similar (limited) course run by SANParks. This would provide an ideal platform to teach EMIs new collection techniques together with increasing the number of certified rhino DNA sampling collectors. A DVD on the relevant specialised EMI courses (similar to that produced for the Basic Training course) will be developed and made available to field rangers to serve as a refresher. It will also serve as a training reference for other grades of EMIs. A professional filming company will be employed to produce the multimedia training DVDs. Courses will be presented by external service providers, VGL staff⁴⁹ or through in-house staff where skills are available, depending on the specialised nature of the topic. Courses would be hosted at a specific central protected area within a province, e.g. Kruger National Park with logistical support from SANparks (preferably Skukuza Camp).

This course could be supplemented by additional courses aimed at delivering training in the revised SOPs, CoPs and risk assessment procedures and the use and maintenance of the Wildlife Crime Scene and Forensic Collection Kits and Mobile Forensic Units to relevant individuals, in order to keep EMIs and other law enforcement officials updated with the latest developments and procedures in wildlife crime forensics. Where required, the production of audiovisual reference material, for example DVDs may be considered for priority SOPs/CoPs.

Activity 1.1.4.3: Undertake annual Judicial Officer Awareness Workshops. Current training workshops provided through DEA to magistrates will be expanded and rolled out across all of South Africa with focus initially on provinces with protected areas supporting the most important and/or vulnerable populations of rhinos. The course would be dedicated to issues surrounding rhino poaching, CITES and related topics. The Judicial Officer Association of South Africa (JOASA) would be responsible for drawing up the attendee list, with DEA responsible for programme development, course materials and organization of the course.

Activity 1.1.4.4: Undertake annual Advanced Prosecutor Training workshops. A similar training programme to 1.1.4.3 will be developed for prosecutors, again with the focus initially on provinces with the most important and/or vulnerable populations of rhinos and PAs to ensure that cases are brought to magistrates and judges who understand and have knowledge of the problem. DEA will focus one of its existing advanced courses on the requirements and

⁴⁹ The VGL team has trained more than 220 local Environmental Management Inspectorate (EMI) personnel, protected area rangers, veterinarians, police investigators, prosecutors and magistrates involved in cases of rhino crime on the system of DNA testing of wildlife and rhinoceros specifically, the crime scene investigation process, the prosecution of wildlife crime and general information on the rhinoceros and its value to the African continent, in separate courses held in various locations around South Africa.

limitations of the various forensic techniques and how the evidence can be utilized most efficiently. The exact content of the training courses will be determined during the Inception period, but will include background on the DNA analysis process, again to ensure that participants have a basic understanding of the process and requirements. Each potential attendee will be interviewed to determine individual challenges and training needs, and help focus the course. The DEA will also ensure that each existing National Prosecuting Authority (NPA) member assigned to deal with these cases will nominate a colleague from the same office to ensure further skills development and transfer (training of trainer approach).

Activities 1.4.3 and 1.4.4 will ensure that magistrates and judges who have to assess rhino crime cases understand and have detailed knowledge of the problem and the importance and relevance of forensic data presented. Providing targeted training/awareness-raising for legal professionals is considered a practical alternative to re-establishing the former specialized rhino poaching prosecutors and dedicated courts for these crimes. Amongst specific products resulting from activities 1.4.2 and 1.4.3 will be a brochure on established and new wildlife forensic techniques e.g. DNA, produced and distributed to legal professionals, and further development of the South African Prosecutors' Guidelines and Magistrates' Benchmark Book.

OUTPUT 1.1.5: Initial steps taken for the establishment of a dedicated joint structure between DEA and SAPS (provisionally an Environmental Forensic Section) to coordinate and analyse all wildlife forensic evidence, initially focused on rhinoceros

There is a clear need to establish a dedicated institutional structure to deal with all wildlife forensics in South Africa. At present DNA samples for rhino are sent to the VGL, ballistic samples are sent to the Ballistics Lab at the SAPS Forensic Lab, IT analysis is done by various other bodies, including the University of Pretoria, and photographic analysis at yet another institution. At present these analyses are undertaken separately and results forwarded to the Police authorities for use in criminal cases. The lack of connection between institutions and separate analyses means that potentially important linkages between the results from different types of samples which might reveal a relationship between different crime scenes demonstrating, for instance, that the same gang killed rhinos in two different areas or that the same weapon was used by different individuals at different crimes (suggesting the gun, probably with a silencer and scope, was 'hired out' to the gangs), cannot be made. Consequently, this Output aims to bring all the forensic samples initially to one location before they are then distributed to other facilities for analysis and then to collate all the data from these analyses at the SAPS FSL to examine linkages between samples. The long-term aim is to create a dedicated, well-financed Environmental Forensic Section within one institution, with 'ring-fenced' budget, personnel and equipment that are not available for human crime priorities, where all the various forensic analyses – DNA, ballistics, digital and information technology (IT), entomological, chemical fingerprinting, etc – would be undertaken. Such a facility would greatly improve the efficiency and timeliness of analysis of rhino (and other wildlife) crimes.

This Output focuses on the initial steps required for the creation of the necessary institutional arrangements, initially as a collaborative effort between DEA, SAPS FSL and VGL. This would take the form of a small dedicated Section within the existing SAPS FSL in Pretoria, but with the long-term aim to build this into a functional Environmental Forensic Section (EFS). In the long term, the EFS would probably require institutional changes within SAPS as well as specific legislation/regulations governing its establishment, operation and maintenance. The Project will therefore operate on two fronts: assisting with the establishment of the initial 'nucleus/embryo' institutional; and laying the foundations for the subsequent institutional and legal changes required for the fully-fledged EFS.

Activity 1.1.5.1: Develop a proposal for an Environmental Forensic Section at SAPS and secure high-level political support and sign-off for its establishment, including identifying necessary operating space and resources such as dedicated personnel (not available for human forensics)

The SAPS Forensic Science Laboratory (FSL) has already identified the need to separate the handling of human DNA from wildlife DNA within the FSL. SAPS FSL plans to carry out an internal feasibility study regarding the establishment of a dedicated Environmental Forensic Section. This will also take stock of the recent studies carried out and capacity available at the recently opened SAPS Forensic Laboratory in the Western Cape. The output from the feasibility study will be a comprehensive proposal for the establishment of the EFS, including a Business Plan outlining costs and resource needs (human and material) and identifying key partners (financial, government, academic, etc). At the end of the 4-year project period, the necessary infrastructure, skilled personnel and necessary equipment will be identified and sources of funding for the purchase and creation of the EFS will be identified (this would be sourced from national government as well as from other donors. The business plan could also assist SAPS in securing endorsement from the Government of South Africa to leverage necessary budget for the establishment and long-term sustainability of the EFS.

Activity 1.1.5.2: Establish the initial, temporary Environmental Forensics Section as a precursor to the future national EFS

The SAPS FSL and the DEA will jointly identify an initial and temporary location for the EFS with the immediate goal to: (i) secure a cost-effective temporary operational facility and (ii) assign dedicated personnel and equipment. The GEF Project will provide support for costs associated with use and upgrading of temporary facilities (renovations, communication systems, essential office supplies and equipment, etc). This will be the working entity for future expansion into the full-grown EFS.

Component 2: Information sharing and analysis for more effective law enforcement among national actors to tackle rhino poaching and the illegal trade in rhino horn

OUTCOME 2.1: Improved gathering and analysis of relevant data and enhanced national coordination platforms for information management and threat forecasting to combat rhino poaching and the associated illegal trade in rhino horn within and outside South Africa's Protected Areas system

Rationale

There is general agreement that the 'war on poaching' in the country's protected areas needs to become more 'proactive' by trying to forecast likely criminal activities (who, when, where, what and how) rather than relying on 'reactive' measures (prosecution of the suspect with long sentences after the crime has been committed) to deter illegal activities.

At the national level, there are suboptimal mechanisms and institutional agreements for sharing of information with a lack of direct communication and information-sharing protocols between relevant agencies that need to work together in wildlife law enforcement (including, for instance, SAPS, Customs Authority, SA National Defence Force, DEA, SANParks as well as private game reserves).

These introduce delays in the response time on wildlife forensic cases and the ability to identify patterns in wildlife crimes such as the use of the same weapon, a similar *modus operandi* being employed across several separate crimes and protected areas, the identification of which is essential for successful intelligence-led operations to break up criminal gangs and disrupt operators particularly at levels 3 and 4 and understanding links between members of a syndicate and possible relations to other syndicates.

Early identification and forecasting of a potential rhino crime in an area is considered to be critical because detection is the only enforcement measure that protects rhino while they are still alive ('t sas Rolfes, 2011). For poachers and traders, the lower the probability of detection, the lower the overall perceived risk cost, (although greater enforcement could be counter-productive if it drives the black market price of rhino horn, thereby raising the incentives for poaching). However, the ability to better predict potential rhino crimes depends on information and

intelligence and linking between sources to enable patterns to be found between apparently disparate data. Current analysis and forecasting tools in use in South Africa are not well-developed, partly because few relevant databases are linked but also because there is no one overarching central IT tool which can undertake such a task. Some experience and systems exist for human-related crimes but they are lacking for wildlife crime.

Many key databases – both those dealing with rhino conservation and management and those hosting crime and law enforcement information - are independent and there is frequently an issue of trust over sharing of information (mistrust partly created by issues over how secure information is, poorly-trained personnel, and participation of locals). In addition, boundaries of responsibility between different agencies over the possession, analysis and sharing of information are often not clear, and it is rare for those providing information at the local level to get feedback which demotivates informers and those operating at field level.

There are a variety of different existing intelligence/investigations databases and applications that can be used to capture, manage and analyse intelligence and case information such as incident recording and the generation of multi-level graphical link charts showing relationships between people, vehicles etc. and other are under development e.g Blackberry are funding work on a system in partnership with WWF-SA and Stoprhinopoaching (see Annex X for review of current options).

However, the existing databases collect slightly different sets of information and there is no agreed standard list of variables that need to be measured that could help improve the analysis and forecasting of potential poaching and illegal trade activities. In addition, most of these tools allow for different levels of access with controllers governing who can enter, edit and analyse identified data. Also, historically such database systems have often suffered from insufficient attention being paid to the analytical component. To get the most value from such systems usually requires having trained staff with analytical skills. Simply capturing information electronically is of no use if the data cannot be queried and analysed to provide new insights, determine patterns and linkages (eg linkage between members of a syndicate) or used to provide guidance on which investigations or suspects to prioritise for attention. It is also important that those providing and entering data get useful practical feedback (helping them do their job and providing incentives to supply more data).

OUTPUT 2.1.1: Systems for gathering key information on individual rhinos, including their DNA, populations, movements (restricted activities) and provenance and relevant crime and law enforcement data are improved, and available to key vetted, national and provincial wildlife and enforcement agencies (DEA, SANParks, SAPS) through secure, linked databases

Key rhino conservation and management databases include those hosted by RhoDIS, Rhino Management Group (RMG), DEA's national electronic permitting system and many held by PAs, as well as databases with information on microchips and horn stockpiles. Key crime and law enforcement databases include those maintained by Interpol, NWCRU, SAPS (i2), SANParks (the MEMEX system), provincial agencies and EMIs, as well as those under development by WWF-SA and Stoprhinopoaching.com (using Blackberry mobiles), and local community based informer networks and local informer hotlines. Many of these need to be reviewed and updated or are in various stages of development and could be adapted to better collect and provide information relevant to tackling rhino crime and to link and work together.

This Output will require meetings between the different database operators to agree on the precise information that needs to be collected to improve analysis and forecasting, and identify specific needs for state and private reserves, probably through a series of round-tables and workshops.

Activity 2.1.1.1: Review and revise as necessary existing legislation/regulations on relevant data collection, storage and analysis

A review will be undertaken to determine whether existing legislation exists to gather and manage all necessary information and whether this needs to be extended, e.g. through Norms and Standards for marking and moving rhinos, and whether there would be a benefit of each individual rhino having a specific 'passport' (where all information on an individual is held centrally in one data file).

Activity 2.1.1.2: Review existing relevant rhino conservation and management databases and crime and law enforcement databases and strengthen as necessary

A review of all current rhino conservation and management databases and crime and law enforcement databases, including the incident reporting data collected at crime scenes, being used in the fight against rhino poaching and illegal trade in horn will be undertaken to determine how they can be improved and made to work better together. This will include identification of which software systems are in use, who owns and controls the data, who has permission to access and use each database, and how information is currently gathered, managed and analysed. There is a particular need for simple systems that are usable in the field and designed with the individual who collects the data in mind (who often has little formal education), rather than more complex systems aimed at the more highly educated analyst based in Pretoria who will take the collected information and analyse it (conclusions from data analysis are only as good as the quality of the data the analysis is based on).

Activity 2.1.1.3: Develop national data information management and analysis strategy for tackling rhino crime.

The results of Activities 2.1.1 and 2.1.2 will be used as the basis for developing a national data information management and analysis strategy for tackling rhino crime, including how best to gather, manage and analyse rhino crime data within the existing constraints, and identify resources needed to improve the current system. The strategy will also consider feedback systems to ensure that when local information leads to an arrest feedback on how the information has been used is provided to informants so they feel their contribution is valued and has an effect.

Activity 2.1.1.4: Revise and update selected databases to improve inter-compatibility as a basis for the development of a Wildlife Crime Analysis and Forecasting Tool WCAFT (ref. Output 2.2 below)

Based on the outcomes of reviews from Activities 2.1.1.1, 2.1.1.2 and 2.1.1.3, key existing database systems will be revised and updated where appropriate, with the design and integration of 'add-on' components to ensure they can provide critical information that can be linked to (and are compatible with) the project's proposed Wildlife Crime Analysis and Forecasting Tool (WCAFT).

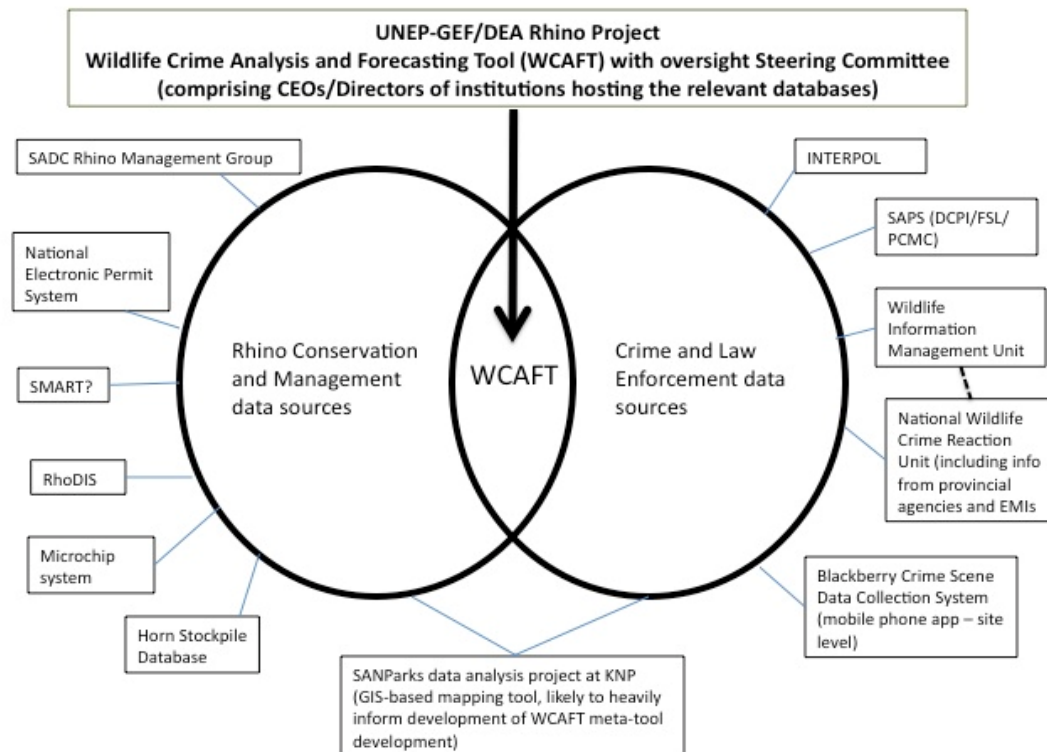
OUTPUT 2.1.2: A Wildlife Crime Analysis and Forecasting Tool (WCAFT) that links the key rhino management and conservation and crime and law enforcement databases, developed to analyse restricted activities⁵⁰ related to rhinos, e.g. poaching and illegal trade, and to better forecast and prioritise action against potential future restricted activities, which can then be mapped within PAs

A key component in the fight against wildlife crime is the analysis of intelligence, looking for patterns and links between different sets of information leading to new insights, and using this to try to predict where crime is likely to take place, who will be involved, when it will occur, etc, and thus help prioritise law enforcement operations. A key to forecasting is access to details on the management of the rhinos, including their movements, and relating this to crime and law enforcement data and patterns. Central challenges identified during the PPG process by the PDWG were: integrity of those holding information (which relates to security of information and issues of trust), communication between stakeholders (generally poor), and centralization and distribution of information (some information is restricted and difficult to access). Initial discussions with key stakeholders during the PPG phase indicated that there is a need for a specific tool that: a) allows access to existing databases; b) has an analysis component; c) has a web-based

⁵⁰ These are defined under South African National Environmental Management: Biodiversity Act 10 of 2004

application; d) is a secure system; e) allows different users different levels of access; and f) provides some form of feedback to those who supply information at the field level (reciprocity).

In order to best use the improved existing databases (Output 2.1.1), the project will therefore establish a ‘database connectivity tool’ (or ‘meta-tool’) that will be able to extract specific information from data fields from the different databases and use this for analysis and forecasting of rhino poaching and the illegal trade in rhino horn. This meta-tool – termed the Wildlife Crime Analysis and Forecasting Tool (WCAFT) - will bridge the gap between the two main sets of databases – those dealing with rhino conservation and management and crime, and those with crime and law enforcement information - enabling far more information to be pooled and analysed to fight rhino poaching in South Africa’s protected areas and the trade in illegally-sourced rhino horn. A simplified schematic is given below, the arrangements for which will be fully developed during the Inception phase.



As the issue of trust and confidentiality of information is key to the successful operation of the WCAFT, a set of clearly defined rules will be established on access to the WCAFT and contributing databases with a set of Standard Operating Procedures (SOPs) defining working relationships between the different database players developed. In addition, a high-level oversight committee will be established, comprising the CEOs and/or Director Generals of each of the institutions hosting the different databases to ensure that access to the various databases and operation of the WCAFT is properly monitored. Terms of Reference for this Committee will be discussed with all stakeholders and

agreed during the Project's Inception phase. The project will also draw on the experiences and lessons learned from new spatial mapping system being developed for KNP⁵¹.

The aim is to link existing databases - not to design and promote new ones - to allow predictive threat analysis and the project will result in improved gathering and analysis of relevant data and enhanced cooperation between government agencies.

Activity 2.1.2.1: Undertake stakeholder workshops to identify agreed objectives and needs for Wildlife Crime Analysis and Forecasting Tool (WCAFT). A series of stakeholder workshops, comprising owners and operators of the relevant databases and IT experts, will be undertaken, led by the National Wildlife Information Management Unit (NWIMU) of DEA and the Directorate for Priority Crime Investigation (DPCI) of SAPS, to identify agreed objectives and needs for Wildlife Crime Analysis and Forecasting Tool (WCAFT), and how best to integrate the information from across the various databases. These meetings will help identify the kinds of information in the existing databases that need to be extracted and/or brought together to make forecasting and fighting poaching and illegal trade more efficient.

Activity 2.1.2.2: Establish WCAFT Steering Committee. A steering committee, with representation of main database holders, e.g. DEA, SANParks, SAPS, VGL, etc., will be established to drive the development and manage the operation of the WCAFT and agree on the physical location within which WCAFT will be based (the WCAFT is likely to be housed either within the NWIMU of DEA or DPCI of SAPS, both of which are located in the centre of Pretoria and only a few blocks from one another).

Activity 2.1.2.3: Develop the WCAFT meta-tool and its operating procedures and mechanisms. The project will identify and develop the database linking, analytical and forecasting software (the meta-tool) that will form the WCAFT, agree on operating arrangements including the development of formalised Standard Operating Practices (SOPs) for data sharing between relevant agencies and stakeholders, and systems/protocols to ensure integrity of data, including user buy-in. This activity will also establish communication and cooperation networks between personnel using the various systems to ensure optimal functioning and that the requirements of the different data user groups can be met. It is likely that the software development for the WCAFT itself will need to be contracted out to a company with previous relevant experience of security-related contracts with the Government of South Africa.

Activity 2.1.2.4: Build capacity to ensure effective operation of the WCAFT. A series of training workshops will be delivered to build capacity for use of the WCAFT and cover the rules governing its operation, including security procedures. The necessary resources for its operation will be identified and delivered (personnel, hardware, office space, communication equipment, etc). This activity links with the results of Activity 2.1.1.2, which will review existing databases and their ability to connect with WCAFT, and where capacity is considered insufficient, this will be built to enable efficient linkage between individual databases and the WCAFT.

This output represents a major innovative element of the GEF project and experience and lessons learned from establishing the meta-tool are likely to be of great interest to other countries with similar wildlife crime issues. The initial focus will be on sharing of forensics related data (linking a limited number of databases to the WCAFT) but build in additional information for forecasting during the second half of the GEF project. A two-tiered approach will be applied with those databases immediately able to link with the WCAFT forming the initial focus, with others that require more development able to join later on.

⁵¹ The Spatial Mapping System for KNP uses available (but limited) biological and non-bio information associated with rhino and rhino crimes to better predict where threats are likely to take place, as a way of directing law enforcement resources appropriately (system is still under development)

Component 3: Cooperation and exchange at the international level to tackle poaching and the illegal trade along the whole trafficking chain

OUTCOME 3.1: Improved cooperation and exchange between South Africa and other relevant countries to tackle poaching of rhinos and the illegal trade in rhino horn along the whole trafficking chain

Rationale

The rhino horn trade is becoming increasingly organized and transnational in nature and therefore enhanced international coordination and cooperation is needed to address this crime. One area that needs specific attention is improving the gathering, exchange and analysis of relevant forensic data and samples between relevant government agencies in compliance with recently developed and any future MoUs that seek to combat rhino poaching in South Africa's PA system, and recent international agreements to tackle the rhino horn trade, notably related to CITES⁵².

There is a particular need to develop and/or improve protocols and mechanisms for better and timelier information sharing and cooperation at the regional and international levels, with a particular focus on the exchange of forensic data and samples, and capacity to implement these needs to be strengthened. For instance, there is a lack of an international standard for rhino DNA sample profiling or agreed protocols for international exchange, and sharing of DNA samples at the international level that can help support prosecutions along the whole trafficking chain often poses a challenge (and there have been few recent successes). Also, there is a need for increased use of Interpol and World Customs Organization systems to ensure timely and secure information exchange.

Another important issue is the development of a standard international system for analyzing rhino DNA (the RhODIS system) that can be utilized by various laboratories to perform similar testing for comparison with and upload to a single database is seen as particularly important and will make the tracking of wildlife products and particularly rhino horn at an international level far more efficient.

The most effective ways to address these problems need to be identified and implemented. Internationally, activities associated with Outcome 3 will be coordinated and facilitated by DEA in collaboration with the CITES Secretariat. This will ensure continued coordination with all other ICCWC partners including the INTERPOL, the United Nations Office on Drugs and Crime (UNODC), the World Bank and the World Customs Organization (WCO).

OUTPUT 3.1.1: Sections of the Action Plans (APs) for the Memoranda of Understanding (MoUs) and other appropriate agreements between South Africa and other relevant countries dealing with rhino poaching and illegal trade in rhino horn implemented

Activity 3.1.1.1: Work with Countries dealing with rhino poaching and illegal trade in rhino horn to either a) implement parts of MoUs or (b) implement priority areas of collaboration as identified

⁵² For instance, the need for increased international cooperation is recognized in recent (2013) CITES Conference of the Parties (CoP) decisions, notably in CoP 16 Comm II.24 document, decision 16.AA which states all Parties should: a) 'immediately bring every seizure of illegal rhinoceros horn made within their territories to the attention of authorities in countries of origin, transit and destination, as applicable, and to the attention of the Secretariat. Information on the seizure should be accompanied by available associated information, to enable follow-up investigations to take place'; and d) 'submit rhinoceros horn samples from specimens subject to criminal investigation, to designated accredited forensic laboratories as described in Document CoP16 Doc. 54.2 (Rev.1), for DNA analysis, in accordance with relevant legislation regulating the exchange of such specimens'. Such improved cooperation will also support the outcomes of the May 2011 CITES Ivory and Rhinoceros Enforcement Task Force meeting (see document SC61 Doc. 45.1), during which participants agreed that greater communication, collaboration and coordination were needed at national and international levels. They also committed to increasing exchanges of information, in particular regarding persons who travel to other countries to engage in purportedly legal hunting, but whose actual intention is to obtain animal body parts that can be sold on the black market.

A Memorandum of Understanding (MoU) covering joint activities and support on biodiversity and environmental management issues was signed between the Governments of South Africa and Vietnam in December 2012. A similar agreement is under development between South Africa and China, Thailand and the People's Democratic Republic of Laos and further agreements are envisaged with other countries in the next few years, notably Mozambique. Each of these will be implemented through a specific Action Plans, which for those countries which are either transit or destination countries for rhino horn, will include sets of activities to address the illegal trade and particularly to address exchange of information and samples as well as capacity building for cooperation at the international level. The GEF project will help DEA in its efforts to identify and implement parts of these Action Plans relevant to tackling the illegal trade in rhino horn and provide support for training and technical assistance. For instance, the possibility of DNA typing all African rhinos currently held in China will be explored as part of the implementation of the AP. In situations where no MoU or agreements exist, selected priority actions may be identified and defined by the Government of South Africa with partner countries and the GEF Project will assist with their implementation.

The DEA will lead on the implementation of this activity, in cooperation with the VGL for DNA sampling, with SAPS for training on other forensic areas, and DIRCO, the Department of Justice and the National Prosecution Authority with regard to exchange protocols and other relevant legal issues.

This activity will also help support implementation of CITES resolutions relating to the illegal trade in rhino horn. For example through implementation of the MoU and AP, the GEF project will support CITES CoP Decision 16CC that Viet Nam *'make progress with the development and implementation of the South Africa - Vietnam 2012 to 2017 Joint Action Plan including strengthening management of imported rhino horn trophies and to improve investigations and prosecutions of Vietnamese nationals suspected of illegally trading in rhino horn, as referenced in document CoP16 Inf.24; and specifically to include: development of legislation on the domestic management of imported hunting trophies; and establish a secure registration database to track legal rhino horn trophies'*. The project will also help support implementation of a key Resolution of the CITES CoP 16 that if a seizure of rhino horns is above a certain weight, the country must inform the South African authorities immediately.

Activity 3.1.1.2: Identify and deliver relevant activities to address rhino poaching and the illegal trade in rhino horn and derivatives in APs for target MoUs and other relevant agreements

The Action Plan (AP) with Viet Nam was signed in May 2013 but details of its implementation have yet to be fully finalised. Although the AP is aimed at reinforcing efforts that would assist in addressing rhino poaching, and promotes cooperation in law enforcement, compliance with CITES and other relevant legislation and conventions, specific activities to address rhino poaching and illegal trade-related activities have still to be fully identified (and will be needed for planned MoUs and APs with other countries relevant for the illegal rhino horn trade). The GEF project will provide assistance in defining and implementing some of these. In terms of implementation, the MoU with Viet Nam stipulates that each country will be responsible for its own budget so the majority of activities will be funded through a SA government budget and treated as co-financing, but there are a number of priority areas of cooperation where the GEF project may fast-track finance selected activities and provide support with regard to technology use, transfer and development, as well as strengthening cooperation on best practice, information and research (priority areas 4 and 5 in the MoU).⁵³ Given the sensitivity of some of the activities under the APs, details are not included here in this public document, but will be elaborated on during the Inception Phase of the GEF Project.

In addition, there is a need to help build capacity within South Africa and in partner countries to enable efficient implementation of those elements of the APs related to tackling the illegal rhino horn trade. These will also be defined, as part of the collaboration and/or MoU/APs developed with partner countries. For example, the GEF Project might support training for authorities from other countries to deal with collection and processing of DNA samples

⁵³ <http://www.info.gov.za/speech/DynamicAction?pageid=461&sid=33178&tid=94128>

from confiscated African rhino horns that need to be sent to South Africa (in conjunction with activities envisaged under Activity 1.1.1.1 and Activity 3.1.3.1).

OUTPUT 3.1.2: Procedures established, ‘good practice’ captured and disseminated, and capacity built, for the exchange of relevant data and samples of illegally traded wildlife parts and derivatives (with a focus on rhinos) between South Africa and relevant national and international enforcement agencies, such as ICCWC members and other relevant organisations, to assist with forensic investigations

The project will assist the DEA to develop mechanisms and strategies to improve international cooperation over information exchange and the use of forensic evidence, and help identify and share ‘good practice’ on these issues (including results and experiences captured from the GEF project under Outcomes 1 and 2). This will also support the work of the CITES Rhinoceros Enforcement Task Force, which consists of representatives from Parties affected by rhino poaching and the illegal trade in rhino horn, ICCWC partner organizations, EUROPOL and, as appropriate, other Parties and experts.

Activity 3.1.2.1: Develop and implement mechanisms to ensure information held at international level on illegal trade is shared with South Africa in a timely fashion

This will include the development of Standard Operating Protocols between South Africa and other relevant countries, particularly those in the SADC region and those not covered through a specific MoU and Action Plan (Output 3.1.1). ICCWC members, particularly Interpol, the World Customs Organisation and CITES, will help facilitate these communication channels through their existing partnerships with the various rhino horn transit and destination countries.

Activity 3.1.2.2: Collaborate in ICCWC initiatives relating to information sharing relevant to rhino horn trafficking

ICCWC helps countries to fight wildlife crime through provision of various forms of assistance, such as the Wildlife and Forest Crime Analytic Toolkit⁵⁴ produced by the UNODC (although application of the Toolkit is not needed for South Africa as it already has an advanced system for dealing with wildlife crime).. ICCWC members themselves will provide support to the GEF project and DEA through their participation in technical training workshops and other capacity building measures. For example, UNODC (a member of ICCWC) can provide specific training support on how to combat organized and syndicated crime, which has a direct bearing on rhino trafficking, and their activities will be mostly covered through co-financing.

Activity 3.1.2.3: Capture and disseminate lessons learned and experiences on ‘good practice’ for use of forensics through information sharing to fight poaching and the illegal rhino horn trade

A key decision taken at CITES CoP16 was that CITES would develop, in conjunction with relevant institutions and experts, a manual containing guidelines on best practices, protocols and operational procedures, that will promote the use of wildlife forensic technology. In order to support this Decision, the expected results and experiences of the GEF project will be captured in a specific publication – a ‘*Good practice guidelines for information and sample exchange in fighting international wildlife crime*’- to be produced towards the end of the project and will be made freely available through the DEA website. This will complement the - ‘*Good practice guidelines for field forensics to address wildlife crime in PAs in South Africa*’ that will be produced under Output 1.1.3.

OUTPUT 3.1.3: RhODIS upgraded to become the global standard and database for storage of rhino DNA and profiles

⁵⁴ The ICCWC Wildlife and Forest Crime Analytic Toolkit is a technical resource that assists government officials in wildlife and forestry administration, customs and other relevant agencies to conduct a comprehensive analysis of the strengths and weaknesses of their preventive and criminal justice responses related to the protection of wildlife and forest products. Based on the results of the analysis, tailored evidence-based capacity-building and technical assistance programs will be designed and implemented through ICCWC partner agencies.”

Given the international nature of the trade in rhino horn, a single facility that contains all or most of the world's rhino DNA profiles would considerably speed up the processing of forensic evidence, enabling a much faster identification of a confiscated rhino horn and its provenance, as well as allowing investigators to better 'track' the horn as it passes along the market chain, and help provide intelligence on the international gangs involved, which would be particularly important if the current transit routes shift.

In addition to being seen as one of the key 'tools' to fight the illegal trade, a large DNA database will help support rhino conservation management, particularly with respect to decisions on where best to translocate animals to maximize genetic variability and long-term survival of the White and Black rhino.

The VGL currently hosts the single largest collection of rhino DNA in the world (through its RhODIS system), with samples from South Africa, some other SADC countries and Kenya. In conjunction with Output 1.1.1, Activity 1.1.1.1, the GEF project will also help to establish the RhODIS system as the international standard and expand the facilities sufficiently that the VGL can become the repository for (eventually) DNA information or samples for all Black and White Rhinos globally.

CITES will help support this initiative through facilitating communication between key Parties to the Convention and current holders on rhino DNA profiles/samples and development of protocols and agreements on ownership and exchange of information held in the database. Initially, the project would focus on South Africa and other significant range states to ensure as many rhinos as possible are on the database (the greater the number of Africa's rhinos that have DNA profiles on the RhODIS database the greater the intelligence gains from seizures in Vietnam, China, Mozambique, etc), building on the existing protocols and agreements already in place.

Activity 3.1.3.1: Develop, promote and adopt RhODIS as the international standard for rhino DNA typing This activity will entail three main elements: (a) initial gap analysis and system requirements, (b) promoting the international adoption of the system (c) support system adoption through capacity building for additional users.

Support will be sought internationally for the establishment of RhODIS as the international standard for DNA typing of rhinos. In order to develop RhODIS as the international standard for rhino DNA profiling, it must be assessed by selected international laboratories to ensure that it is robust and can be standardized under various conditions and for different types of template material. The VGL has recently published an article that demonstrates that the methods used by RhODIS are appropriate for use in investigations (Harper *et al* 2013).⁵⁵ Primer sets and control samples will be sent to various laboratories and the data collated and evaluated and published. Other laboratories currently identified to act as external proficiency testing laboratories for the system include the Kenya Wildlife Services Forensic Laboratory and the Forensic Laboratory of the Veterinary Genetics Laboratory of the University of California, Davis. Following this, discussions will be held with other relevant labs which currently carry out wildlife DNA forensics in focal countries to encourage the establishment of a single RhODIS accredited lab in each of the target countries which would then provide the DNA sample profiles to the VGL with a code number retaining their metadata, to populate the international RhODIS database. Training will be offered to other laboratories and laboratory staff in the processes of sample handling, storage, DNA extraction, PCR and analysis and RhODIS systems to accredit the laboratory to perform part of the process or to produce profiles that can be uploaded and compared to RhODIS and the supply of method and procedure documentation to these laboratories under an appropriate MOU.

Standard DNA sample field kits (produced by the VGL) will be provided through the GEF project to relevant target country law enforcement agencies and PA personnel with training in their use. Some training has already taken place in Swaziland, Namibia and Kenya (funded through separate non-GEF schemes) and this activity will build on previous

⁵⁵ Extraction of nuclear DNA from rhinoceros horn and characterization of DNA profiling systems for White (*Ceratotherium simum*) and Black (*Diceros bicornis*) rhinoceros. Harper, C.K., Vermeulen, G.J., Clarke, A.B., de Wet, J.I. & Guthrie, A.J. Forensic Science International: Genetics 7 (2013): 428-433

initiatives. Training will include background and technical aspects of rhino DNA testing, sample collection from a poaching scene, live animals, rhino horn that has been recovered from an arrest or is part of a stockpile, and a certificate issued after a practical evaluation of the individual.

Activity 3.1.3.2: Develop protocols related to the sharing of rhino DNA samples and profiles held outside of South Africa

Exchanging samples is likely to require specific Mutual Legal Assistance agreements between countries, which will be developed through the project.

Activity 3.1.3.3: Increase data storage capacity at the VGL to establish a global rhino DNA database

The current data storage capacity at the VGL is limited and needs to be expanded with additional computers and personnel in order to establish and maintain the international rhino DNA database. This is linked directly to activities under component 1 that will also strengthen VGL capacity.

ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

B1. Response to comments in the GEF review Sheet

GEF review Sheet (18 April 2012): “By the time of CEO endorsement, please comprehensively address the following issues:”

Comment in GEF Review Sheet	How it is addressed in the CEO Endorsement Request
<p>1. Please clearly explain what “Rapid response mechanisms for prosecuting wildlife crimes” actually consist of. What are the parts, how they work, and what are the roles and responsibilities of the institutions participating in these</p>	<p>In the case of this project, ‘rapid response mechanisms’ refers to improving and the collection and analysis of forensic data and use of intelligence information to speed up and enhance the effectiveness of prosecutions for poaching of rhinos and the illegal trade in their horn.</p> <p>Addressed in detail in Annexes A1 and A2 of the CEO ER document (project rationale and detailed description of project components and activities) and particularly under components 1 and 2</p>
<p>2. Please clearly state the goods and services that the GEF and co-financing will pay for to build the institutional and human capacity (i.e. labs and scientific capabilities), to strengthen forensic capabilities in SA</p>	<p>Most institutional and human capacity to strengthen forensics will be focused on the VGL, DEA and SAPS, with the provision of forensic equipment, training and increased staffing. This is addressed in detail in Annex A1 and A2 (project rationale and description of project components and activities). Goods and services to be procured with GEF funds are outlined in more detail the outline Procurement Plan (ref. Annex U to the CEO ER)</p>
<p>3. Please Clearly explain the nature of the “enforcement schemes” that will be used to reduce poaching by 50%. What are the components of these schemes, how will they work, and what are the roles and responsibilities of the institutions participating in these</p>	<p>The enforcement part of the schemes pertains to co-financing and falls mainly under the responsibility of the DEA, SAN Parks and SAPS that are investing significant resources (ref. letter of co-financing from DEA) in law enforcement on the ground in priority PAs.</p> <p>The GEF will support enhanced forensic capacity mainly within the framework of the legal prosecution system in South Africa (i.e. to enhance DNA samples collection, handling and forensic prosecution capacity). These aspects are comprehensively addressed in Annex A1 and A2 (project rationale and description of project components and activities) and particularly under components 1 and 2.</p> <p>The project no longer has an indicator stating that poaching will be reduced by 50% as the Project Development Working Group, comprising rhino experts from WWF-SA and IUCN’s AfRSG, considered this would be a) unrealistic and b) impossible to separate out the contribution of the GEF project from other anti-poaching and anti-rhino horn trade initiatives under implementation.</p>
<p>4. Please clearly state the nature of the PPPs to support Rhino conservation. What are the incentives for the</p>	<p>Around 25% of the rhino population in South Africa is held on privately owned land (mostly private game</p>

Private Sector to participate and what would be their role and responsibilities if the schemes are to become functional	reserves) and owners are under particularly pressure from poaching due to the expense of security. They will benefit from improved forensics and information exchanges (Outcomes 1 and 2) and will participate in training courses organized through the project. This is addressed in more detail in Annex T (Stakeholder Mapping and Analysis, e.g. see under PROA SA) and in section B.1.2 of the CEO ER document (see under Private Sector in the table).
5. Please clarify how the project will work with neighboring countries and technical specialists in these countries given the obvious regional reach and interaction that will be part of this project's implementation and success	This is addressed in Annex A2, under the description of component 3 (particularly activities under output 3.1.3) and also in component 1 (activity 1.1.1.1).

B.2 Response to STAP review

STAP Scientific and Technical screening of the Project Identification Form (PIF) - Date of screening: May 15, 2012; Screener: Thomas Hammond; Panel member validation by: Thomas Lovejoy; Consultant(s): Paul Grigoriev; Brian Huntley - **STAP Advisory response: CONSENT**

STAP comment	Response by UNEP and Partners
The project framework is logical although one point should be clarified. The primary focus of the project is the conservation of rhinoceros, primarily in Kruger National Park and to a lesser extent in five other large protected areas, through the strengthening of law enforcement capacity. However, improving management effectiveness of protected areas and increasing coverage of unprotected threatened species (2,130,077 ha) are the expected outcome and output. It is understood that conserving the Rhino is to be accomplished through improved management capability. This, however, is only one element of the larger issue of overall PA management effectiveness. Using the area of Rhino habitat where law enforcement capacity is to be increased is not the same as increasing PA coverage. Moreover, the Rhino and other threatened species present on the targeted territory are already "protected" as such, although not as well as before in the face of an increase in poaching pressure.	The STAP comments is valid, however this stems from a problem in reconciling the only available target/outputs listed in the GEF Focal Area Strategic Framework (i.e.: "improving management effectiveness of protected areas and/or increasing coverage of unprotected threatened species in X ha"), with the actual and very specific targeted contribution provided to the above targets by this GEF project (which has a very specific and technical focus, contributing to wider law-enforcement efforts). The GEF project will improve a key element of the management effectiveness of the target PAs, namely their ability to deliver more effective law enforcement. Wildlife forensics and information/intelligence sharing and analysis are two key aspects of law enforcement that are particularly weak in SA and seen as critical 'gaps' that need to be addressed to tackle poaching and the illegal trade in rhino horn that is occurring in the country's PA system. This is reflected in a number of indicators in the project's logframe.
...While improving forensic capacity is clearly needed, a significant aspect of the problem concerns prosecution and its effectiveness and the constraints that existing laws, rules and procedures present in that regard (e.g. 48 hours to produce sufficient evidence). The legal dimension of the overall problem should receive additional attention in the course of further project development.	The '48-hour' limit to produce sufficient evidence cited in the PIF was incorrect, and this statement is not included in the CEO ER. The legal dimension is now well covered in the CEO ER and its national as well as international legal dimensions are elaborated in Annex A2, mainly under components 2 and 3. Annex O also analyses the legal and institutional framework underpinning rhino conservation in SA.
... The project should therefore present specific measures to be taken by government conservation agencies to assist private landowners to better achieve rhino conservation goals. This includes measures to resolve the conflict	Valid point and the results of this project will also partly contribute to addressing this issue, through the expected outputs of components 1 and 2. However, tackling the broader conflict between legal and illegal trophy hunting

<p>between legal and illegal trophy hunting to which reference is made in the PIF.</p>	<p>falls beyond the limited scope and budget of this specific GEF project on forensic technology, although the DEA has, independently recently begun to address this issue.</p>
<p>With regard to the use of DNA forensic approaches and increased capacity to significantly reduce losses of rhino and other species from poaching (an important Global Biodiversity Benefit), more detail will be needed during project development on both the specific technologies to be developed and their cost effective application across the species' range in southern Africa. The PIF gives extensive detail on the poaching problem, but is very vague on technological aspects.</p>	<p>Technological aspects have been elaborated during the project preparation phase, and are now described in detail in Annex A2, and particularly under components 1 and 2.</p> <p>Also, the efficacy and effectiveness of the RhODIS™ system has recently been independently assessed and its methodology published in a peer-reviewed international journal (See Annex A2, activity 3.1.3.1), and has been assessed robust and sensitive enough to be able to distinguish individual rhinos even though the overall population sizes and genetic diversity among both Black and White Rhino is not high.</p>
<p>The baseline activities and investments are only briefly described. During project development, more detail should be presented.</p>	<p>Baseline activities now further described in section A.5.1 and in Annex A2, section A.2.1</p>
<p>Given the detailed information already available on rhino populations both within formal PAs and on private land in South Africa, and the recorded trends and rates of poaching impact, these trends should be monitored within an experimental design that allows objective measures of the impact and cost-effectiveness of the proposed interventions (please see Ferraro 2012,..) . This case study should be used to test the assumptions that technological innovation will provide a better return on investment than traditional wildlife protection approaches. The baseline vis a vis the targeted rhinoceros populations, the populations of other species that are to benefit, and PA management effectiveness scores will also need to be established during further project development.</p>	<p>It is expected that existing DEA and SANParks monitoring programmes will provide the required data through the constant monitoring of rhino poaching (e.g. numbers of rhino killed).</p> <p>Unfortunately the inclusion of an experimental design goes well beyond the scope and resources of this project. However, Output 1.1.2 and the project M&E component will provide important insight as to the impact of new methodologies and forensic capacity implemented with GEF support.</p> <p>With regards the assumption that <i>“technological innovation will provide a better return on investment than traditional wildlife protection approaches”</i>: it is not applicable to this project. On the contrary, the project is based on the assumption that combating wildlife crime requires a multi-pronged approach and a concerted effort involving a wide range of stakeholders at national and international level. These include i.e. traditional conservation approaches (e.g. local community awareness-raising campaigns, and anti-poaching patrolling efforts on the ground) as well as increased forensic prosecution capacity, improved international collaboration, addressing demand issues, looking at the entire supply chain or rhino-related products, etc. The GEF will provide incremental contributions to finance only some key technical aspects of the above efforts.</p> <p>The project results are expected to affect PA METTPAMETT (Protected Areas Management Tracking Tools) scores for most PAs hosting Rhino populations and subject to poaching. However: (a) only a few elements of the PA METT criteria will be affected by project results and (b) the target PAs in South Africa already have</p>

	<p>maximum scores for law enforcement framework (a reflection of the limited number of measures associated with law enforcement in the PA METT). Therefore it is anticipated the project impact will not be adequately monitored through the PA METTs.</p> <p>The project logical framework (ref. Annex A1) strives to identify suitable SMART indicators that can provide such information. These will also be improved and revised at inception and during project implementation. Some of these indicators may provide useful insight for the design of future impact monitoring of similar GEF funded projects and several indicators in the logframe may prove valuable as additional measures of management effectiveness that could be included in future revisions of the PA METT.</p>
<p>It is noted that the project's title and objective differ somewhat in terms of their focus. The title stresses the strengthening of forensic capabilities whereas the objective highlights the improvement of law enforcement capacity. Clearly the two are closely related but the phrasing of the objective is more in line with the overall scope of the proposal which is broader than just strengthening forensic capabilities as the title suggests. The title could be modified to reflect this more accurately.</p>	<p>Title and Objective are now slightly revised addressing this point.</p>
<p>The expected risks are well considered, however the exclusion of climate risk is questioned. While this decision may be understandable from the perspective of the technical aspects of the project's intended outputs, projected ecological changes from future climate change in southern Africa should be considered in terms of potential impacts on project expected outcome.</p>	<p>Climate change risk now discussed in section A.6.1</p>

B.3 Response to council comments

**Sender: Frank Fass-Metz, GEF Council Member, Head Division, Climate Policy and Climate Financing
BMZ (Federal Ministry for Economic Cooperation and Development), Email: Frank.Fass-Metz@bmz.bund.de - Advisor:
Matthias Seiche, Email: Matthias.Seiche@bmz.bund.de - Ref.No.: 312 K8185-0040/94/002 - Date: 28 June 2012**

Comment #19: South Africa. UNEP – Strengthening Wildlife Forensic Capabilities to Combat Wildlife Crime for Conservation and Sustainable Use of Species (target: Rhinoceros) - GEF ID = 4937

Council Comment	How it is addressed in the CEO Endorsement Request
<p>(a) Under component 2 the project aims at enhancing cooperation and coordination in the SADC region to share intelligence, scientific information and best practices. It is recommended that the SADC Secretariat with its Office for Trans-frontier Conservation Areas (TFCA) under the Directorate of Food, Agriculture and Natural Resources is included as a key stakeholder (under B.5).</p>	<p>The SADC Secretariat's TFCA is included as a key stakeholder in the table in section B.1.2 of the CEO endorsement request (stakeholder involvement plan).</p>

<p>(b) A cross reference should be included to the support to anti-poaching efforts proposed by UNDP (Improving Management Effectiveness of the PA Network [GEF ID = 4943]).</p>	<p>Cross Reference is now included in section A.7 and B.1.1 of the CEO Endorsement Request (where a specific reference is included: “<i>The DEA will also ensure that proper coordination is maintained with the proposed UNDP/GEF project “Improving Management Effectiveness of the Protected Area Network” (GEF ID 4848), which will also be implemented through SANParks and other partners, thus optimizing synergy and complementarity of efforts. ..</i>”). Note: project is referred in our document to as ID 4848 which should be the correct GEF ID, however we are referring to the same project as in the Council comment</p>
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ANNEX C: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS⁵⁶

A. PROVIDE DETAILED FUNDING AMOUNT OF THE PPG ACTIVITIES FINANCING STATUS IN THE TABLE BELOW:

PPG Grant Approved at PIF: 36,818 USD			
<i>Project Preparation Activities Implemented</i>	<i>GEF/LDCF/SCCF/NPIF Amount (\$)</i>		
	<i>Budgeted Amount</i>	<i>Amount Spent To Date</i>	<i>Amount Committed</i>
Stakeholders consultations	16818	16,818	0
Preparation of complete project documentation	20,000	20,000	0
Total	36,818	36,818	0

ANNEX D: CALENDAR OF EXPECTED REFLOWS (if non-grant instrument is used) – Not Applicable

⁵⁶ If at CEO Endorsement, the PPG activities have not been completed and there is a balance of unspent fund, Agencies can continue undertake the activities up to one year of project start. No later than one year from start of project implementation, Agencies should report this table to the GEF Secretariat on the completion of PPG activities and the amount spent for the activities.

ANNEX E – CONSULTANTS TO BE HIRED

UNEP Budget Line (ref. GEF budget Appendix 1)		Ref. to relevant Output	Total GEF Budget	Total co-financing	TOR
1101	Project Manager (DEA)	all	280,000	480,000	Hired by DEA as long-term consultant dedicated to manage the GEF project. Ref. TOR for Project Manager provided in Annex V Co-financing includes mainly staff time and operational costs by DEA and SANParks will be supporting the project
1201	Legal Advisors (DEA - VGL)	Outputs 3.1.1-3.1.2	40,000	80,000	TOR for required consultancies will be developed by the DEA Project Manager at project inception. TOR will be included as part of the updated procurement plan to be approved by UNEP (at project inception). Co-financing includes mainly technical support from DEA and VGL personnel
1301	Administrative and Technical Support staff (DEA)	All	60,000	510,000	Hired by DEA as long-term consultants dedicated to support the project manager on technical and administrative tasks for the execution of the GEF project. Ref. TOR for Project Administrator provided in Annex V Co-financing includes mainly staff time and operational costs by DEA and SANParks will be supporting the project
Total			380,000	1,070,000	

ANNEX F-1 – DETAILED GEF BUDGET
ANNEX F-2 – DETAILED CO-FINANCE BUDGET

See separate excel files

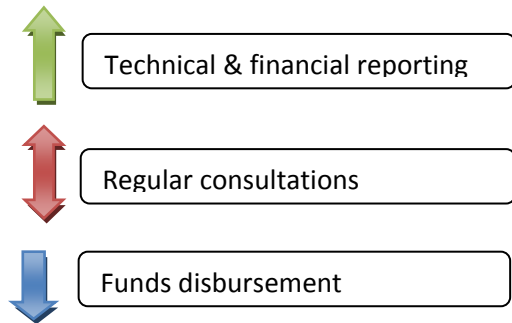
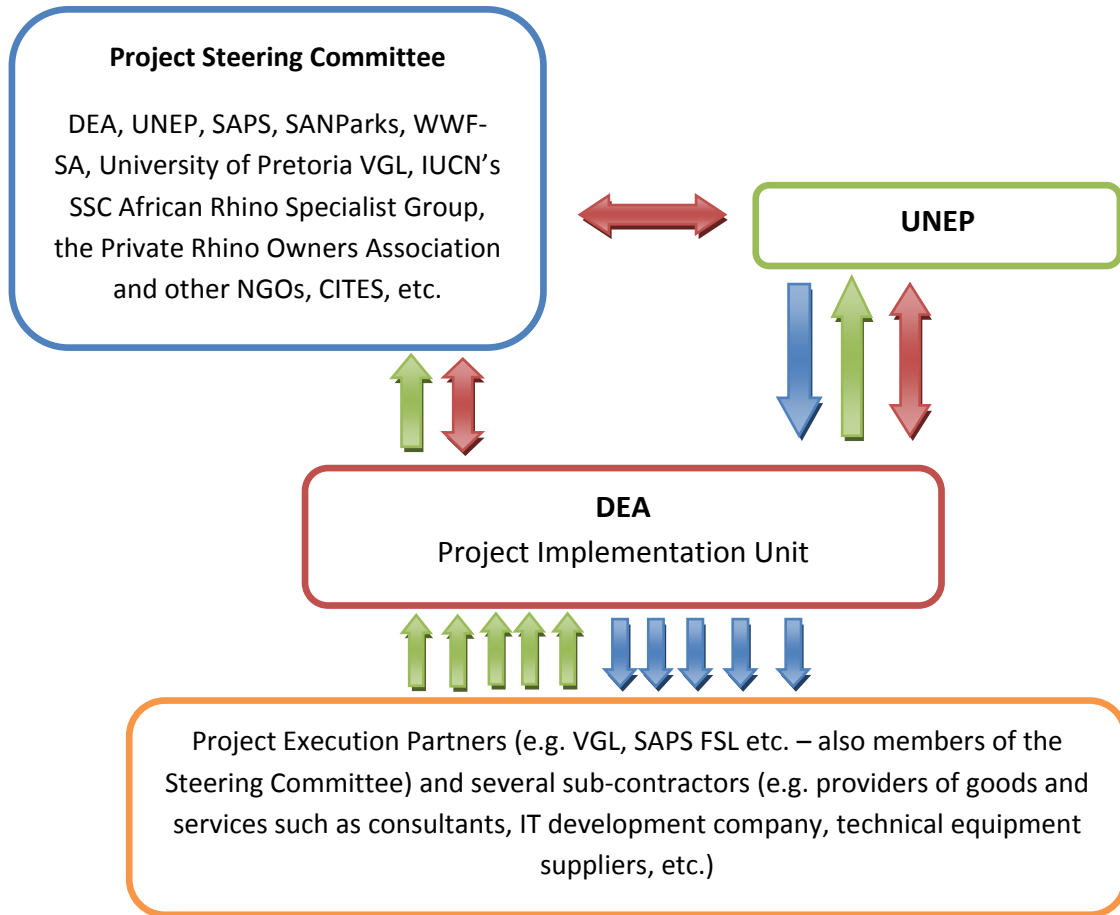
ANNEX G – M&E BUDGET AND WORKPLAN

Type of M&E activity	Responsible Parties	Budget from GEF (US\$)	Budget co-finance	Time Frame
Measurement of project indicators (outcome, progress and performance indicators, GEF tracking tools) at national and global level	- Project Manager will oversee the hiring of consultants and institutions for specific studies, and delegate responsibilities to relevant project partners	Indicative cost (staff time): 13,000	Unknown but expect project partners to contribute staff time as co-financing	Outcome indicators: start, mid and end of project Progress/perform . Indicators: annually
Semi-annual Progress/ Operational Reports to UNEP	- Project Manager will compile reports with information from project partners	None	Partner staff time to review draft reports	Within 1 month of the end of reporting period i.e. on or before 31 January and 31 July
Project Steering Committee meetings and National Steering Committee meetings	-Project Manager will organise project's SC meetings with support of DEA	None	Team and Partner staff time to participate in meetings	Once a year minimum
Reports of PSC meetings	- Project Manager, acting as Secretary to SC	None	Partner staff time to review reports	Annually
PIR	- Project Manager - UNEP TM -Steering Committee members	None	Partner staff time to review draft report	Annually, part of reporting routine
Monitoring visits to field sites	- Project Manager - Partner staff implementing components of project - UNEP TM on annual visits	none (10,000)	Partner staff time to participate in field visits (UNEP staff travel costs to be charged to IA fees)	As appropriate
Mid Term Review/Evaluation	- Project Manager - Project partners - UNEP TM - UNEP EO - Independent external consultant (i.e. evaluation team)	30,000	Partner staff time to participate in interviews and field visits	At mid-point of project implementation
Terminal Evaluation	- Project Manager - Project partners - UNEP TM - UNEP EO - Independent external consultant (i.e. evaluation team)	30,000	Partner staff time to participate in interviews and field visits	Within 6 months of end of project implementation
Audit	- Independent auditors - Project Manager - DEA as executing agency - UNEP DEPI (finance	7,000	DEA admin staff time	Annually

Type of M&E activity	Responsible Parties	Budget from GEF (US\$)	Budget co-finance	Time Frame
	department)			
Project Final Reports	- Project Manager - UNEP TM - External Consultant	(3,000)	Partner staff time to review and/or input into draft report	Within 2 months of the project completion date
Co-financing report	- Project co-financiers - Project Manager	none	Partner staff time to provide information	Within 1 month of the PIR reporting period, i.e. on or before 31 July
Publication of Lessons Learnt and other project documents	- Project Manager - UNEP EO - Independent consultant (guidance on formats for document best practices) - Project partners	(37,000)	Partner staff time to provide information and review draft documents	Annually, part of Semi-annual reports & Project Final Report
Total M&E Plan Budget <i>Including project staff time</i>	83,000 (ref M&E component budget in appendix 1)			

* The budget of 83,000\$ is the direct budget for the project M&E component (ref project budget in Annex 1). The budget in parenthesis is additional and from other project components (total 50,000\$) and it also contributes to the delivery of the M&E plan – though more indirectly.

ANNEX H – PROJECT IMPLEMENTATION ARRANGEMENTS - DIAGRAM



ANNEX I – DETAILED PROJECT WORKPLAN SHOWING DELIVERABLES AND BENCHMARKS

Output and activities descriptions	Year 1 ⁵⁷				Year 2				Year 3				Year 4			
	1 st quarter	2 nd quarter	3 rd quarter	4 th quarter	5 th quarter	6 th quarter	7 th quarter	8 th quarter	9 th quarter	10 th quarter	11 th quarter	12 th quarter	13 th quarter	14 th quarter	15 th quarter	16 th quarter
Project Inception Phase																
Recruitment of PIU team																
Essential Procurement																
Legal Instrument with partners and sub-contractors established																
Project Inception Workshop and 1 st Steering Committee Meeting																
COMPONENT 1 Use of forensic technology to combat rhino poaching and the illegal rhino horn trade																
Output 1.1.1: Critical resources (equipment, personnel, etc) at key public- and private-sector wildlife forensics facilities, notably the Veterinary Genetics Laboratory (VGL) at the University of Pretoria and SAPS Forensics Laboratories, are provided to improve identification and tracking of rhino horns for enforcement purposes																
Activity 1.1.1.1: Expand processing and storage facility for rhino DNA samples																
Activity 1.1.1.2: Obtain validation and laboratory accreditation of the RhODIS process																
Output 1.1.2 New wildlife forensic approaches and techniques to tackle rhino poaching and associated illegal sale of rhino horn developed, piloted and adopted in South African PAs																
Activity 1.1.2.1: Develop and enhance new forensic techniques to enable the collection of more comprehensive forensic evidence at rhino crime scenes																
Output 1.1.3 Wildlife crime scene investigation protocols (SOPs) and other relevant procedures reviewed, revised and formalized, essential wildlife crime scene and forensics equipment provided																
Activity 1.1.3.1: Develop Standard Wildlife Crime Scene Investigation and Forensics Collection Kits (Wildlife Crime Scene and Forensic Collection Kits) and Mobile Forensic Units for use in the field																
Output 1.1.4 Targeted training and awareness-raising programmes delivered to specific groups dealing with criminal cases involving rhinos on the relevance and collection of forensic evidence for tackling wildlife crime in South Africa																
Activity 1.1.4.1: Support funding and delivery of EMI Grade 5 Basic Training for field rangers stationed within Protected Areas (PA)																
Activity 1.1.4.2: Develop and deliver specialised Rhino Crime Scene Courses (linking with SANParks)																
Activity 1.1.4.3: Undertake annual Judicial Officer Awareness Workshops																
Activity 1.1.4.4: Undertake annual Advanced Prosecutor Training workshops																
Output 1.1.5 Initial steps taken for the establishment of a dedicated joint structure between DEA and SAPS (provisionally an Environmental Forensic Section) to coordinate and analyse all wildlife forensic evidence, initially focused on rhinoceros																
Activity 1.1.5.1: Develop a proposal for an Environmental Forensic Section at SAPS and secure high-level political support and sign-off for its establishment, including identifying necessary operating space and																

⁵⁷ start of Year 1 may be aligned with the beginning of DEA/Government financial year (April)

Output and activities descriptions		Year 1 ⁵⁷				Year 2				Year 3				Year 4				
resources such as dedicated personnel (not available for human forensics)																		
Activity 1.1.5.2: Establish the initial, temporary Environmental Forensics Section as a precursor to the future national EFS																		
COMPONENT 2	Information sharing and analysis for more effective law enforcement among national actors to tackle rhino poaching and the illegal trade in rhino horn																	
Output 2.1.1 Systems for gathering key information on individual rhinos, including their DNA, populations, movements (restricted activities) and provenance and relevant crime and law enforcement data are improved, and available to key national and provincial wildlife and enforcement agencies (DEA, SANParks, SAPS) through secure, linked databases																		
Activity 2.1.1.1: Review and revise as necessary existing legislation/regulations on relevant data collection, storage and analysis																		
Activity 2.1.1.2: Review existing relevant rhino conservation and management databases and crime and law enforcement databases and strengthen as necessary																		
Activity 2.1.1.3: Develop national data information management and analysis strategy for tackling rhino crime																		
Activity 2.1.1.4: Revise and update selected databases to improve inter-compatibility as a basis for the development of a Wildlife Crime Analysis and Forecasting Tool WCAFT (ref. Output 2.2 below)																		
Output 2.1.2 A Wildlife Crime Analysis and Forecasting Tool (WCAFT) that links the key rhino management and conservation and crime and law enforcement databases, developed to analyse restricted activities⁵⁸ related to rhinos, e.g. poaching and illegal trade, and better forecast and prioritise action against potential future restricted activities, which can then be mapped within PAs																		
Activity 2.1.2.1: Undertake stakeholder workshops to identify agreed objectives and needs for Wildlife Crime Analysis and Forecasting Tool (WCAFT)																		
Activity 2.1.2.2: Establish WCAFT Steering Committee																		
Activity 2.1.2.3: Develop the WCAFT meta-tool and its operating procedures and mechanisms																		
Activity 2.1.2.4: Build capacity to ensure effective operation of the WCAFT																		
COMPONENT 3	Cooperation and exchange at the international level to tackle poaching and the illegal trade along the whole trafficking chain																	
Output 3.1.1 Sections of the Action Plans (APs) for the Memoranda of Understanding (MoUs) and other appropriate agreements, between South Africa and other relevant countries dealing with rhino poaching and illegal trade in rhino horn implemented																		
Activity 3.1.1.1: Work with Countries dealing with rhino poaching and illegal trade in rhino horn to either a) implement parts of MoUs or (b) implement priority areas of collaboration as identified																		
Activity 3.1.1.2: Identify and deliver relevant activities to address rhino poaching and the illegal trade in rhino horn and derivatives in APs for target MoUs and other relevant agreements																		
Output 3.1.2 Procedures established, 'good practice' captured and disseminated, and capacity built, for the exchange of relevant data and samples of illegally traded parts and derivatives (with a focus on rhinos) between South Africa and relevant national and international enforcement agencies, such as ICCWC members and other relevant organisations, to assist with forensic investigations																		

⁵⁸ These are defined under South African National Environmental Management: Biodiversity Act 10 of 2004

Output and activities descriptions	Year 1 ⁵⁷				Year 2				Year 3				Year 4			
Activity 3.1.2.1: Develop and implement mechanisms to ensure information held at international level on illegal trade is shared with South Africa in a timely fashion																
Activity 3.1.2.2: Collaborate in ICCWC initiatives relating to information sharing relevant to rhino horn trafficking																
Activity 3.1.2.3: Capture and disseminate lessons learned and experiences on 'good practice' for use of forensics through information sharing to fight poaching and the illegal rhino horn trade																
Output 3.1.3 RhODIS upgraded to become the global standard and database for storage of rhino DNA and profiles																
Activity 3.1.3.1: Develop, promote and adopt RhODIS as the international standard for rhino DNA typing																
Activity 3.1.3.2: Develop protocols related to the sharing of rhino DNA samples and profiles held outside of South Africa																
Activity 3.1.3.3: Increase data storage capacity at the VGL to establish a global rhino DNA database																

ANNEX J – FOCAL AREA TRACKING TOOLS

The outcomes of the project will benefit the entire population of rhino in South Africa, as well as in the neighboring SADC region. The baseline PAME TT score for the 5 representative protected areas selected for this project (i.e. hosting significant rhino populations) is presented in a separate annex - see excel files attached with (i) the TTs for the project target sites and (ii) an overview and comparison with rest of PAs in SA. However the adoption of TTs scores to assess project results is not regarded as the most appropriate mean to assess/monitor the specific impact of this specific project, because:

1. Only a few TT assessment questions/criteria and scores relate indirectly to the scope of this project, and namely:

#2. Protected area regulations: Are appropriate regulations in place to control land use and activities (e.g. hunting)?

#3. Law Enforcement: Can staff (i.e. those with responsibility for managing the site) enforce protected area rules well enough?

#14. Staff training: Are staff adequately trained to fulfill management objectives?

2. The scores of 1-3 for the above criteria do not allow for a sufficiently sensitive monitoring of changes over time (i.e. only major changes would be recorded)

3. All 5 protected areas already score very high on all these criteria (2 or 3), as they have relatively comprehensive and strong regulations and protection measures in place compared to the rest of the country and SADC Region. Even considering the recent surge in rhino poaching, PAMETT scores remain high. Hence any improvements in the anti-poaching effort, possibly resulting from the GEF project, would not be captured by the PAMETT scores.

Therefore the main avenue for assessing project impact will be the M&E logical framework that was developed specifically for this project (ref. annex A.1).

ANNEX L – CO-FINANCING LETTERS

Letters of co-financing:

DEA/SAN Parks - in
Veterinary Genetics Laboratory University of Pretoria (VGL) - in
WWF South Africa - in
CITES/ICCWC - in
UNEP – pending

Possible additions:

SAPS – pending
PROA SA – pending

Other Support Letters:

US AID - in

ANNEX M – ENVIRONMENTAL AND SOCIAL SAFEGUARDS CHECKLIST

<i>Project Title:</i>	Strengthening Law Enforcement Capabilities to Combat Wildlife Crime for Conservation and Sustainable Use of Species in South Africa (target: Rhinoceros)		
<i>GEF project ID and UNEP ID/IMIS Number</i>	<i>GEF ID 4937</i> <i>UNEP ADDIS # 856</i>	<i>Version of checklist</i>	<i>PPG stage completed - Submission of Documents for CEO Endorsement</i>
<i>Project status (preparation, implementation, MTE/MTR, TE)</i>	<i>Submission of Document for CEO Endorsement</i>	<i>Date of this version:</i>	<i>10 September 2013</i>
<i>Checklist prepared by (Name, Title, and Institution)</i>	<i>Edoardo Zandri, BD Task Manager, UNEP, DEPI/GEF</i>		

In completing the checklist both short- and long-term impact shall be considered.

Section A: Project location:

If negative impact is identified or anticipated the Comment/Explanation field needs to include: Project stage for addressing the issue; Responsibility for addressing the issue; Budget implications, and other comments.

	<i>Yes/No/N.A.</i>	<i>Comment/explanation</i>
- Is the project area in or close to -		
- densely populated area	No	Areas affected by the project are protected areas and/or areas identified as a priority for Rhino habitat conservation and not densely populated
- cultural heritage site	n/a	
- protected area	Yes	Yes several globally important PAs are included in the project intervention areas, including Kruger National Park and Pilanesberg National Park. Their status will be improved through the project by helping to reduce poaching.
- wetland	No	Some small wetlands occur within the target protected areas e.g. Kruger National Park, although this is not normally part of the African Rhino habitat and consequently will not be negatively impacted by the project activities.
- mangrove	No	
- estuarine	No	
- buffer zone of protected area	Yes	There are buffer zones surrounding some of the project target areas. Project activities may impact local communities though these will be surveyed at project inception. Reduced hunting in the PA would probably help improve the security situation for local communities.
- special area for protection of biodiversity	Yes	Several nature protection sites exists within the target areas as outlined in the main text – their status will be improved through the project
- Will project require temporary or permanent support facilities?	No	Not envisaged as the project will be executed by existing national institutions
If the project is anticipated to impact any of the above areas an Environmental Survey will be needed to determine if the project is in conflict with the protection of the area or if it will cause significant disturbance to the area.		

Section B: Environmental impacts

If negative impact is identified or anticipated the Comment/Explanation field needs to include: Project stage for addressing the issue; Responsibility for addressing the issue; Budget implications, and other comments.

	<i>Yes/No/N.A.</i>	<i>Comment/explanation</i>
- Are ecosystems related to project fragile or degraded?	No	The majority of rhinos in South Africa occur within state protected areas or private game reserves where their habitat is protected
- Will project cause any loss of precious ecology, ecological, and economic functions due to construction of infrastructure?	No	On the contrary, the project is not engaged in the construction of infrastructure
- Will project cause impairment of ecological opportunities?	No	On the contrary, the project is expected to contribute to positively addressing this issue
- Will project cause increase in peak and flood flows? (including from temporary or permanent waste waters)	No	
- Will project cause air, soil or water pollution?	No	
- Will project cause soil erosion and siltation?	No	
- Will project cause increased waste production?	No	
- Will project cause Hazardous Waste production?	No	
- Will project cause threat to local ecosystems due to invasive species?	No	
- Will project cause Greenhouse Gas Emissions?	No	On the contrary, the project is expected to contribute to positively addressing this issue through the enhanced conservation of natural habitats of the rhino and the protected areas which support them
- Other environmental issues, e.g. noise and traffic	No	
<i>Only if it can be carefully justified that any negative impact from the project can be avoided or mitigated satisfactorily both in the short and long-term, can the project go ahead.</i>		

Section C: Social impacts

If negative impact is identified or anticipated the Comment/Explanation field needs to include: Project stage for addressing the issue; Responsibility for addressing the issue; Budget implications, and other comments.

	<i>Yes/No/N.A.</i>	<i>Comment/explanation</i>
- Does the project respect internationally proclaimed human rights including dignity, cultural property and uniqueness and rights of indigenous people?	Yes	Not envisaged as an issue for this project
- Are property rights on resources such as land tenure recognized by the existing laws in affected countries?	Yes	Yes the land tenure system in SA is well established
- Will the project cause social problems and conflicts related to land tenure and access to resources?	No	Not anticipated as an issue
- Does the project incorporate measures to allow affected stakeholders' information and consultation?	Yes	A full stakeholder implementation plan, and a communication and outreach strategy will be developed during the inception phase and there has been widespread stakeholder consultation

		during the project design and development, particularly PPG, phase
- Will the project affect the state of the targeted country's (-ies') institutional context?	Yes	The project is expected to significantly improve the capacity of targeted national institutions in SA, particularly in forensics and information sharing and analysis
- Will the project cause change to beneficial uses of land or resources? (incl. loss of downstream beneficial uses (water supply or fisheries)?	No	On the contrary, the project is expected to contribute to positively addressing this issue
- Will the project cause technology or land use modification that may change present social and economic activities?	Possibly	The project is expected to contribute to positive change in social and economic activities in and around the selected target areas in the long term through a reduction in poaching activities and its negative impacts on local communities. However the extent and timing of this is not easy to predict and will be monitored during project implementation.
- Will the project cause dislocation or involuntary resettlement of people?	No	Not anticipated
- Will the project cause uncontrolled in-migration (short- and long-term) with opening of roads to areas and possible overloading of social infrastructure?	No	Not anticipated
- Will the project cause increased local or regional unemployment?	No	
- Does the project include measures to avoid forced or child labour?	No	Not foreseen as an issue
- Does the project include measures to ensure a safe and healthy working environment for workers employed as part of the project?	Yes	Most project activities will take place in government institutions or will be undertaken by government staff, consequently the rules and regulations of the host government institution will apply
- Will the project cause impairment of recreational opportunities?	No	On the contrary, the project's aim to reduce poaching is likely to further encourage recreational activities e.g. wildlife watching due to improved security situation.
- Will the project cause impairment of indigenous people's livelihoods or belief systems?	No	
- Will the project cause disproportionate impact to women or other disadvantaged or vulnerable groups?	No	
- Will the project involve and or be complicit in the alteration, damage or removal of any critical cultural heritage?	No	
- Does the project include measures to avoid corruption?	No	The project includes specific and tight financial monitoring procedures, and anticorruption measures as part of the project execution set-up
<i>Only if it can be carefully justified that any negative impact from the project can be avoided or mitigated satisfactorily both in the short and long-term, can the project go ahead.</i>		

Section D: Other considerations

If negative impact is identified or anticipated the Comment/Explanation field needs to include: Project stage for addressing the issue; Responsibility for addressing the issue; Budget implications, and other comments.

	Yes/No/N.A.	Comment/explanation
- Does national regulation in affected country (-	No	The project Executing Agency and national lead

ies) require EIA and/or ESIA for this type of activity?		partners in South Africa will have the responsibility to ensure that all relevant laws are adhered to at all stages
- Is there national capacity to ensure a sound implementation of EIA and/or SIA requirements present in affected country (-ies)?	Yes	Capacity in SA is strong in this field but an EIA is not required
-Is the project addressing issues, which are already addressed by other alternative approaches and projects?	No	Some initiatives are addressing similar issues in other rhino range countries within the framework of the CITES, and also for other species that are facing similar illegal trade problems (e.g. gorilla, elephant etc.). These are outlined in the main text (section 2.7) and the project has been designed taking these into account and establishing appropriate coordination mechanisms where relevant
- Will the project components generate or contribute to cumulative or long-term environmental or social impacts?	Yes	The project is expected to generate positive environmental and social impacts. These are listed in section 2.5. Actual impact will be monitored as part of the project M&E plan and indicators have been included in the Logframe
- Is it possible to isolate the impact from this project to monitor E&S impact?	No	It is anticipated that several E&S impacts will only occur after the project has achieved its objectives. It is likely that some impacts may be more difficult to isolate than others, e.g changes in the number of rhinos can be easily determined but these changes may be due to a number of reasons and not just a result of the project activities. Project impacts are being monitored during project implementation as part of the project M&E plan.

ANNEX N – ACRONYMS AND ABBREVIATIONS

AfRSG	African Rhino Specialist Group
AP	Action Plan
BMP	Biodiversity Management Plan
BTech	Bachelor of Technology
CEO	Chief Executive Officer
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CoP	Conference of the Parties
COP	Codes of Practice
CSO	Civil Society Organisation
DCPI	Directorate for Priority Crime Investigation
DEA	Department of Environmental Affairs
DNA	Deoxyribo-Nucleic Acid
DVD	Digital Versatile Disc
EC	Eastern Cape
EFS	Environmental Forensic Section
EKZNW	Ezemvelo Kwa-Zulu Natal Wildlife
EMI	Environmental Management Inspectorate
ENV-VN	Education for Nature Viet Nam
EOU	Evaluation and Oversight Unit
EUROPOL	European Police Office
EWT	Endangered Wildlife Trust
FS	Free State
FOCAC	Forum on China-Africa Cooperation
FSL	Forensic Science Laboratory
GEF	Global Environment Facility
GP	Gauteng Province
GPS	Global Positioning System
ICCWC	International Consortium on Combating Wildlife Crime
INTERPOL	International Criminal Police Organisation
ISO	International Organisation for Standardisation
IT	Information technology
IUCN	International Union for Conservation of Nature
JOASA	Judicial Officer Association of South Africa
KNP	Kruger National Park
KZN	Kwa-Zulu Natal
LACE	Legal Authorisations, Compliance and Enforcement Branch
LDCF	Least Developed Countries Fund
LIM	Limpopo
M&E	Monitoring and Evaluation
MEMEX	Memory Index
METT	Management Effectiveness Tracking Tool
MLA	Mutual Legal-assistance Agreement
MOU	Memorandum of Understanding
MP	Mpumalanga Province
NAPAS	National Air Pollution Assessment Services
NBSAP	National Biodiversity Strategies and Action Plans
NC	Northern Cape

NEMA	National Environmental Management Act
NEM:BA	National Environmental Management : Biodiversity Act
NEM:PAA	National Environmental Management: Protected Areas Act
NCSA	National Capacity Self Assessment
NGO	Non-Governmental Organisation
NIP	National Implementation Plans
NP	National Park
NPA	National Prosecution Authority
NPFE	National Portfolio Formulation Exercise
NPIF	Nagoya Protocol Implementation Fund
NW	North-West Province
NWCRU	National Wildlife Crime Reaction Unit
NWIMU	National Wildlife Information Management Unit
OCU	Organised Crime Unit
PA	Protected Area
PCR	Polymerase Chain Reaction
PDWG	Project Development Working Group
PIF	Project Identification Form
PIR	Project Implementation Review
PM	Project Manager
PPG	Project Preparation Grant
PROA	Private Rhino Owners Association
PRSP	Poverty Reduction Strategy Paper
RhODIS™	Rhino DNA Index System
SA	South Africa
SADC	Southern African Development Community
SANAS	South African National Accreditation System
SANDF	South African National Defence Force
SANParks	South Africa National Parks
SAPS	South Africa Police Service
SAR	Special Administrative Region
SC	Steering Committee
SCCF	Special Climate Change Fund
SOP	Standard Operating Procedures
SSC	Species Survival Commission
STAP	Scientific and Technical Advisory Panel
TF	Trust Fund
TRAFFIC	Wildlife Trade Monitoring Network
UNEP	United Nations Environment Programme
UNODC	United Nations Office on Drugs and Crime
USA	United States of America
USD	United States Dollar
VGL	Veterinary Genetics Laboratory
WC	Western Cape
WCAFT	Wildlife Crime Analysis and Forecasting Tool
WCO	World Customs Organisation
WWF	World Wildlife Fund
WWF-SA	World Wide Fund for Nature – South Africa

Annex O – Institutional, legal and policy background

A. Institutional frameworks

A number of national bodies and institutions are involved in rhino conservation in South Africa, ranging from environmental bodies, to police and enforcement/control authorities. The cooperation between the three spheres of government – national, provincial and local – is stipulated in the Constitution.⁵⁹ The national government is responsible for the development of policies and legislation regarding international agreements concerning the conservation and use of biodiversity. However, it should be noted that only the national and provincial spheres have executive powers with regard to implementation of legislation for nature conservation, with the national legislation prevailing over provincial legislation in the event of any conflict arising. The Institutions most relevant to the GEF Rhino Project include the Department of Environmental Affairs (DEA), the SANParks, the SAPS and the SANDF.

Department of Environmental Affairs (DEA)

DEA is responsible for the coordination and monitoring of implementation of the South Africa Black Rhino Biodiversity Management Plan (2011-2020). Within the DEA and other provincial environmental departments, Environmental Management Inspectors (EMIs) are responsible for implementing the NEMA 1998 Act and all specific environmental management Acts (including the National Environmental Management: Biodiversity Act). Other departments within DEA deal specifically with CITES implementation and information management. Provincial government agencies are constantly acquiring rhino horns from natural mortalities and from poaching incidences and thus, together with SANParks and DEA, have a responsibility for management of rhino stockpiles.

A degree of corporate governance is provided through a Ministerial Technical Committee (MINTEC), which facilitates coordination between national DEA and provincial environmental departments. Working Group 4 (WG4), which reports through to MINTEC, is responsible for compliance and enforcement activities, and both the National Biodiversity Investigators Forum and the National Wildlife Crime Reaction Unit report to WG4. Additionally, a Committee on Environmental Coordination (CEC) was created under NEMA in 2006 with a function to promote implementation of Environmental Management Plans and coordinate the environmental activities of national and provincial authorities.

South African Police Service (SAPS)

The Directorate of Priority Crime Investigations (DPCI) within SAPS deals with rhino poaching and illegal trade in rhino horn. SAPS has a specialized crime division, the Hawks, that deals with serious organized crime and is made up of several Units, including the Organised Crime Unit which deals with rhino poaching and illegal trade in rhino horn and has an Endangered Species Section (ESS) within the Unit. Standard Operating Procedures (SOPs) have been developed for rhino poaching incident scenes and training is provided for such situations to ensure that criminals are brought to justice.

Forensic investigations are coordinated through the SAPS Forensic Science Laboratory and an Assets Forfeiture Unit is responsible for the seizure of assets from suspected criminal gangs involved in illegal activities concerning rhinos. A Provincial Commissioner is appointed in each of South Africa's nine Provinces; each Commissioner reports directly to the National Police Commissioner.

South Africa National Parks (SANParks)

SANParks is under the jurisdiction of the National Environment Management: Protected Areas Act 57 of 2003, and the Public Finance Management Act, Act 1 of 1999 (where it is listed as a Schedule 3 Part A: 25 public entity). As South Africa's leading conservation authority, it is responsible for 3,751,113 hectares of protected land across 22 national

⁵⁹ <http://www.info.gov.za/documents/constitution/index.htm>

parks. The operational component of SANParks is split into 2 divisions - Kruger National Park, which is the largest of the country's protected areas, and the Parks Division (responsible for 21 national parks). SANParks Rangers have the power to arrest poachers and are working with the SANDF and SAPS on a joint anti-poaching initiative in the Kruger National Park. SANParks has allocated ZAR 25 million to combat rhino poaching during 2013-2014, with an additional ZAR 8 million to combat wildlife crime.⁶⁰

National Prosecuting Agency (NPA)

The NPA, which sits within the Department of Justice, is a key partner in the criminal justice system, and has an important role in ensuring that criminals in rhino-related incidents are charged for their crimes. The NPA structure is headed by the National Director of Public Prosecutions (NDPP), and includes four Deputy National Directors of Public Prosecutions, Directors and Special Directors and members of the Prosecuting Authority appointed to the office. Dedicated prosecutors are appointed in each DPP (Director of Public Prosecutions) office to deal with all rhino poaching and illegal rhino horn trade cases.

National Wildlife Crime Reaction Unit (NWCRU)

The NWCRU was established in 2010 to tackle the escalation in rhino poaching. NWCRU has developed a Rhino Action Plan to mitigate the increase in rhino poaching which includes the creation of a national coordination structure for information management, law-enforcement response, investigation and prosecution that bring together the key institutions (SAPS, SANParks, NPA, etc). Through the establishment of environmental courts, the NWCRU aims to institutionalize the seriousness of rhino crimes so that they are dealt with effectively and also to improve information management and develop pro-active databases linking crime-related information with scientific data (Milliken & Shaw, 2012). The NWCRU is gradually being replaced by the National Wildlife Information Management Unit (NWIMU), which is housed within the DEA.

SADC Rhino Management Group (RMG)

This includes the Chair of the Rhino & Elephant Security Group/Interpol Environmental Crime Working Group as well as the DEA and all 9 provincial conservation authorities. It functions as an advisory body and has helped to develop South Africa's Black Rhino Conservation Plan. Surveys of Black and White Rhinoceroses in South Africa are carried out under the RMG banner (Milliken and Shaw, 2012).

The development or amendment of any legislative provisions or strategies, relating but not limited to, rhinos are submitted for approval to Working Group 1, a Committee responsible for biodiversity matters and consisting of entities such as the nine provincial conservation authorities, the SANParks and the South African National Biodiversity Institute), MINTECH, and MINMEC, after which a compulsory public consultation process is followed in terms of Section 100 of NEMBA.

Relevant international relations

Under CITES, a national Management Authority, a Scientific Authority and an Enforcement Authority are designated by each Party. DEA is the designated Management Authority and the focal point for CITES. South Africa's Scientific Authority was established in terms of Section 60 of NEMBA and is responsible for, *inter alia*, monitoring legal and illegal trade in TOPS-listed species and making non-detriment findings on the impact of international trade on threatened species. A non-detriment finding for the white rhinoceros was published for public comment in Gazette No. 36117 on 1 February 2013.

B. Legal and policy frameworks

South Africa's policy regarding rhinoceros conservation and management is governed by the Constitution, which is the highest law in the country. The protection of the environment and the sustainable use of natural resources are

⁶⁰ From SANParks' Annual Performance Plan, available online at http://www.sanparks.org/assets/docs/about/annual_performance_plan_2013-2014.pdf

contained in the Bill of Rights, and Section 24 of the Constitution provides that everybody has the right "...to have the environment protected...through reasonable legislation and other measures that...secure ecological sustainable development

International Environmental Agreements

South Africa ratified the United Nations Convention on Biological Diversity (CBD) on 2 November 1995 and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) on 15 July 1975. In South Africa, CITES is implemented in terms of both National Law and Provincial Ordinances, with a National CITES Regulations promulgated in terms of Section 97 of NEMBA and published in March 2010.⁶¹ With regard to international trade in rhinos, the provision relating to transit shipments such as rhino horn needs to be reviewed in order to strengthen the provision as far as it relates to accompanying documents and seizure of specimens.

At the recent Conference of the Parties (CoP) to CITES held in Bangkok (3-14 March 2013), a draft Decision⁶² was adopted by the Plenary which included, inter alia, a directive to the CITES Secretariat to convene a CITES Rhinoceros Enforcement Task Force (RETF). One of the intentions of the RETF is to develop strategies to improve international cooperation, with particular reference to the MoU between South Africa and Vietnam. In addition, the Directive includes the recommendation to develop a manual with guidelines on best practices, protocols and operational procedures that will promote the use of wildlife forensic technology. The draft Decision also directed South Africa and Mozambique to enhance bilateral cooperation to combat illegal killing of rhinoceroses and illegal trade in rhino horn, and to provide a comprehensive report to the CITES Secretariat by 31 January 2014.

Regional Agreements⁶³

Regional African Rhino conservation initiatives for both Black and White Rhino include:

- the South African Development Community (SADC) Regional Programme for Rhino Conservation;
- the SADC Rhino Management Group; and
- the Southern Africa Rhino and Elephant Security Group.

Regional initiatives for the conservation of the White Rhino include a recently established

- East African Rhino Management Group; and
- the Southern Africa Rhino and Elephant Security Group/Interpol Environmental Crime Working Group.

In addition, the Lusaka Agreement Task Force (LATF) has been set up as an inter-governmental association to facilitate cooperation in and among Party states with regard to investigations into '*violations of national laws pertaining to illegal trade in wild fauna and flora.*'⁶⁴ At an LATF meeting in Nairobi in 2011, participants agreed that whilst greater communication, collaboration and coordination were needed at the national and international levels to increase exchange of information, it was also important that enforcement agencies should '*consider whenever possible to delay releasing news of significant seizures until the information has been forwarded to relevant counterpart in countries of origin and destination and to international enforcement bodies. This will enable action to be taken against those along the chain of criminal activity.*'⁶⁵

National legislation and regulations

⁶¹ <http://www.environment.co.za/legislation-law/nema-national-environmental-management-biodiversity-act-10-2004-convention-international-trade-endangered-species-cites-regulations-gazette-33002-9240-volume-537-south-africa.html>

⁶² Draft Decision can be found online at <http://www.cites.org/common/cop/16/com/E-CoP16-Com-II-24.pdf>.

⁶³ the SADC Protocol on Wildlife Conservation and Law Enforcement is also relevant but not listed here, as it does not only focus on rhino

⁶⁴ More information can be found online at <http://www.lusakaagreement.org/about.html>

⁶⁵ http://www.lusakaagreement.org/cites_ivory.html.

South Africa has a large number of environmental statutes,⁶⁶ the most important being the overarching National Environmental Management Act 107 of 1998 (NEMA). The NEMA provides, among other things, a system for the training and appointment of Environmental Management Inspectors (EMI), who are responsible for monitoring compliance with and enforcement of the provisions of the NEMA.

The Project is aligned with other national legislation, including the following:

- White Paper on the Conservation and Sustainable Use of South Africa's Biological Diversity of 1997;
- National Environmental Management: Biodiversity Act (NEM:BA), Act 10 of 2004;
- Threatened or Protected Species (TOPS) Regulations, 2007
- National Strategy for the Safety and Security of Rhinoceros Populations
- Black Rhino Conservation Plan
- Strategy for the Conservation and Sustainable Use of Wild Populations of Southern White Rhino
- National Biodiversity Strategy Action Plan (NBSAP)
- Norms and Standards for the Marking of Rhinoceros and Rhinoceros Horn
- National Environmental Management: Protected Areas Act (NEM:PAA), Act 57 of 2003;
- Protected Areas Amendment Act, Act 15 of 2009.

The requirements under NEMA are in line with the Constitution of South Africa Act 108 of 1996.

Some Provinces in South Africa have not updated their species law and are still using old legislation. Whilst species lists may have been developed by each Province, the categories and contents are not equivalent across the country. In addition, there is poor coordination between Provinces, which has led to 'province-hopping' by offenders. Provincial legislation that currently applies to both species of rhino includes the following:

- Nature and Environmental Conservation Ordinance 19 of 1974 (Western Cape),
- Ciskei Nature Conservation Act 10 of 1987 (Eastern Cape),
- Nature Conservation Ordinance 8 of 1969 (Free State)
- The Environmental Conservation Decree No. 9 of 1992 (Republic of Transkei),
- Qwaqwa Nature Conservation Act 8 1976 (Free State),
- Nature Conservation Ordinance 12 of 1983 (Gauteng),
- Mpumalanga Nature Conservation Act 10 of 1998 (Mpumalanga).

NEM:BA

The NEM:BA's stated objectives include provision for the "management and conservation of biological diversity within the Republic and the components of such diversity". Chapter 4 of the Act deals with Threatened or Protected Ecosystems and Species (TOPS), the purpose of which includes provision for the protection of species that are threatened or in need of protection to ensure their survival in the wild. Important and relevant sections of NEM:BA include the following:

- Section 56 of NEM:BA - provides for the listing of species that are threatened (critically endangered, endangered or vulnerable) or protected. Black rhinoceros is currently listed as endangered (meaning it is facing a high risks of extinction in the wild in the near future), whereas White Rhinoceros is listed as protected (meaning it is not facing extinction, but is of high conservation value or of national importance, and therefore is in need of national protection).

⁶⁶ A list of environmental legislation can be found online at <http://www.capetown.gov.za/EN/ENVIRONMENTALRESOURCEMANAGEMENT/PUBLICATIONS/Pages/EnvironmentalLegislation.aspx>

- Section 57 provides that “a person may not carry out a restricted activity involving a specimen of a listed threatened or protected species without a permit issued in terms of Chapter 7” of NEM:BA. It further provides that the Minister may prohibit the carrying out of a restricted activity that is “of a nature that may negatively impact on the survival” of rhinoceros.
- Section 97 provides the Minister with a mandate to make regulations relating to, among others, listed Threatened or Protected Species (TOPS).

If a person is convicted of an offence involving a Black or White rhinoceros specimen, they are liable to a fine not exceeding R10 million (or equal to three times the commercial value of the specimen involved, whichever fine is greater), or imprisonment for a period not exceeding ten years, or to both the fine and imprisonment.

The regulatory and enforcement provisions of NEM:BA have been reviewed to prevent abuse of the permit system. The National Environmental Management Laws Amendment Act (No. 14 of 2013) (“Amendment Act”) came into operation on 24 July 2013. It was drafted to make provision for prosecution of individuals involved in illegal activity despite not physically committing the restricted activity. Presently, professional hunters, hunting outfitters and trainers only register in individual provinces and if they are non-compliant in one province, they can apply to operate or continue to operate in another province. To address this loophole, the Amendment Act compels the national registration of professional hunters, hunting outfitters and trainers involved in the hunting industry. In this way, action can be taken against those professional hunters who facilitate the illegal hunting of rhinoceros by their clients.

The Amendment Act further prescribes that all specimens in transit through the country must be accompanied by the necessary documentation. This important provision will assist in addressing the movement of illegal specimens e.g. rhinoceros horn in transit through South Africa. While it is acknowledged that the Amendment Act alone will not stop rhino poaching, it is expected to assist in addressing activities associated with poaching and closing the loopholes in terms of the abuse of the permitting system.

Threatened or Protected Species (TOPS) Regulations (2007)

The TOPS Regulations provide for: compulsory registration of facilities and persons, and the voluntary registration of game farms; the prohibition of restricted activities in certain circumstances; and the regulation of a specific restricted activity. In the case of rhinos, the TOPS Regulations prohibit the following restricted activities:

- Hunting in a controlled environment;
- Hunting of rhinoceros while the latter is under the influence of a tranquiliser or similar agent;
- Hunting of rhinoceros by making use of a gin trap;
- Hunting by means of bow and arrow.

Under TOPS Regulations, the Black Rhinoceros is listed as an Endangered Species⁶⁷ and the White Rhinoceros as a Protected Species⁶⁸, and any person who possesses rhinoceros horn must apply for a possession permit and, if the rhino horn, or part thereof, is longer than 10 cm in length, the horn must also be marked by means of a microchip. The penalties for an offence involving a Black or White rhinoceros are a fine not exceeding R5 million, or imprisonment for a period not exceeding 5 years, or both a fine and imprisonment.

TOPS Regulations are currently under amendment by the DEA and it is anticipated that additional provision will be included for the compulsory collection of DNA tissue samples from rhinos, as well as documentation from foreign hunters applying for a permit to hunt rhinos attesting to their *bona fide* status as a hunter.

⁶⁷ *Endangered Species* – an indigenous species facing a high risk of extinction in the wild in the near future, although it is not a critically endangered species.

⁶⁸ *Protected Species* – an indigenous species of high conservation value or national importance that requires national protection.

Norms and Standards for the Marking of Rhinoceros and Rhinoceros Horn

New 'Norms and Standards for the Marking of Rhinoceros and Rhinoceros Horn, and For the Hunting of Rhinoceros for Trophy Hunting Purposes' were issued on 10 April 2012. These include reference to a national rhinoceros horn database and were updated in order to put in place stricter controls for the issuing of rhinoceros hunting permits, hunting of rhinoceros, the transportation of the horn, DNA sampling, and the marking and registering of stockpiles of rhinoceros horn. Compliance with the Norms and Standards is enforceable through a mandatory permitting arrangement. Under the Norms and Standards for the Marking of Rhino Horn, all rhinos and rhino horns in South Africa must be sampled using the RhODIS™ kits and be included in the RhODIS™ database. The purpose of DNA testing kits is to enable full traceability of DNA from samples in the RhODIS™ database to any evidence (such as recovered horns) presented in poaching cases and, ultimately, result in more effective prosecution and sentencing.

Protected Area Legislation

The Protected Areas Act provides for several categories of protected areas, including Special Nature Reserves, National Parks, Nature Reserves and Protected Environments. The existence, governance and functions of the South African National Parks (SANParks) are provided for under the National Environmental Management: Protected Areas Act 57 of 2003.⁶⁹

C. National Strategies and Plans

National Strategy for the Safety and Security of Rhinoceros Populations

The National Strategy for the Safety and Security of Rhinoceros Populations in South Africa (2010) notes that 'successful breakthroughs in rhino poaching investigations by the many law enforcement agencies' had previously kept rhino poaching 'under control'. However, from 2008 onwards, the escalation in rhino poaching was accompanied by a 'leakage of both legal and illegal rhino horns held in various private and government stockpiles'. Key elements of the Strategy include: *supporting the establishment of a national coordination structure for information management, law-enforcement response, investigation and prosecution and the development of an integrated and coordinated national information management system for all information related to rhino species in order to adequately inform security-related decisions.*

Biodiversity Management Plans (BMPs)

A revised National Black Rhino Biodiversity Management Plan (BMP) and a draft White Rhino BMP have been produced, with an anticipated final White Rhino BMP sometime during 2013. Both these BMPs have a long-term vision and shorter-term measurable goals, and both outline a series of strategies and actions that will be required to achieve each Key Component objective.

Black Rhino Biodiversity Management Plan

The BMP for the Black Rhinoceros *Diceros bicornis* in South Africa 2011-2020 was published by the DEA on 25 January 2013. The long-term Vision for the South Africa black rhino population is to:

'Contribute to the recovery and long-term persistence of the global black rhino population by having viable populations of the indigenous subspecies in natural habitat throughout their former range within South Africa and managed as part of a regional meta-population.'

With a meta-population goal of:

⁶⁹ The Protected Areas Act 57 of 2003 is available online at: <http://www.sanparks.co.za/docs/general/ProtectAreasAct.pdf>

'At least 3,000 D. b. minor and 500 D. b. bicornis in South Africa, with at least four D. b. minor populations greater than 100 and another 10 greater than 50; and at least one D. b. bicornis population greater than a 100 and one greater than 50.'

One of the six Key Components required to deliver the BMP's vision and goal is the *'Protection ...to minimise losses of rhinos from illegal activities...through effective law enforcement, improved neighbour relations, effective criminal investigations and prosecutions, and securing and monitoring rhino horn stockpiles.'*

The Black Rhino BMP does not set out a detailed Action Plan as it notes this is 'best done annually by each management authority.' Rather, the BMP provides strategic direction and guidance based on lessons learned and recommended best practices.

Both rhino BMPs highlight the need for effective protection of rhinos, including proactive and reactive enforcement actions, improved investigation techniques, cooperative intelligence management and effective prosecution.

Black Rhino Conservation Plan and Strategy for the Conservation and Sustainable Use of Wild Populations of Southern White Rhino

The conservation plan for the Black Rhino was jointly developed by South African members of the SADC Rhino Management Group to promote the development and long-term maintenance of viable populations of the various sub-species of Black Rhinoceros in the wild. This conservation plan was developed essentially to coordinate directional action to clearly identify goals within an approved policy framework, with mechanisms for achieving the goals, and to allow success to be evaluated.

The **Long-term Vision** of the Black Rhino Conservation Plan is to: "Contribute to the recovery and long-term persistence of the global black rhino population by having viable populations of the indigenous subspecies in natural habitat throughout their former range within South Africa and managed as part of a regional meta-population."

This Plan, together with South Africa's White Rhino Strategy, identifies several Key Components with associated objectives, actions, strategies and indicators of success necessary to achieve stated Goals.

National Biodiversity Strategy Action Plan (NBSAP)

South Africa's NBSAP identifies the need for management plans for species of special concern in order to ensure their long-term survival in the wild. The NBSAP also identifies the need to develop Norms and Standards for Biodiversity Management Plans (BMPs). Unfortunately, BMPs in terms of Section 56 of NEMBA (2004) are not enforceable by law.

Annex P: Linkages to UNEP and other non-GEF initiatives

i. UNEP programmes

The project will also link with a number of existing UNEP initiatives, listed below, that will also support the project technically.

- UNEP/DELIC (Division of Environmental Law and Conventions) hosts the CITES programme for Monitoring the Illegal Killing of Elephants (MIKE). MIKE is a monitoring tool used by CITES in the complex business of assessing policies for trade in elephant products. This team is based in Nairobi and has extensive expertise on monitoring illegal activity in African protected areas, and is implementing ranger-based law enforcement and threat-monitoring systems in 30 elephant range States, including all rhino range States (and including many sites hosting rhino populations). Together with six international NGOs, MIKE is a member of the SMART Consortium, which is developing a new-generation, open-source and multi-platform ranger-based monitoring platform (relevant to Output 2.1). One of the applications to be developed under this platform will enable the monitoring of known individuals of threatened species listed under CITES, such as rhinos. MIKE also works closely with IUCN and TRAFFIC to develop methods to map and analyze the dynamics of illegal trade in endangered species (relevant to Output 2.2). In addition, the MIKE program has developed close links with the Nairobi-based United Nations Office on Drugs and Crime (UNODC), and together they have made a number of well-researched proposals to the ICCWC for the use of DNA from ivory and rhino horn to determine the geographic origin of seized products e.g. to determine the origin of those confiscated in Asia (relevant to Output 1.2). These proposals are likely to be integrated into the program of work of ICCWC. MIKE also collaborates with the University of Mainz (Germany) on the development of isotope-based methods for aging and assigning seized ivory to area of origin (again relevant to Output 1.2).
- The UNEP/UNESCO Great Apes Survival Partnership (GRASP) is a unique alliance of over 75 member nations, UN agencies, conservation NGOs and private donors that works to protect great apes and their habitat in Africa and Asia. Established in 2001, GRASP is the only species-specific conservation programme within the United Nations. The GRASP Secretariat is hosted within the United Nations Environment Programme (UNEP) and the United Nations Educational, Scientific and Cultural Organization (UNESCO), and its five-member staff (also based at UNEP HQ in Nairobi) monitors a wide variety of projects that are designed to conserve chimpanzees, gorillas, orangutans and bonobos. At present, the GRASP portfolio includes over 20 projects in eight countries. Increasingly, GRASP has placed an emphasis upon law enforcement and address the growing illegal trade in great apes, and recently published a rapid response assessment on the black market⁷⁰ which represents the first comprehensive analysis of the illegal trade (and estimated 2,972 great apes are captured from the wild for illegal trade each year). In addition, GRASP is working with Interpol to establish a database on the illegal trade, which will be an open-source resource to help identify, track and close down black markets (so relevant to Outputs 2.1 and 2.2). The database is being designed to specifically support existing law enforcement programmes utilized by Interpol, CITES, MIKE and others, in order to promote efficacy and reduce duplication of efforts.
- UNEP's work on Biosafety issues also entails existing linkages with a broad range of national and international public and private sector partners and research institutions working on the same DNA-analysis technology as the one used in forensics to combat wildlife crime.

In addition to the above, the UNEP-hosted Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) Secretariat in Geneva will provide significant support to the project. CITES is an international

⁷⁰ Stiles, D., Redmond, I., Cress, D., Nellemann, C., Formo, R.K. (eds). 2013. Stolen Apes – The Illicit Trade in Chimpanzees, Gorillas, Bonobos and Orangutans. A Rapid Response Assessment. United Nations Environment Programme, GRID-Arendal. www.grida.no

agreement between governments whose aim is to ensure that international trade in specimens of wild animals and plants does not threaten their survival. The CITES Secretariat has been working since 1975 to help countries combat illegal cross-border trade in animals and plants.

The project is also consistent with the objectives and expected outcomes of the current UNEP Program of Work (2012-2013) and fits under the Ecosystem Management and Environmental Governance sub-programs.

ii. Linkage with non-GEF initiatives

The proposed project is closely linked with the priorities, action plans and programs of a number of non-GEF organization working to achieve conservation of rhino populations in South Africa and the region, and/or improve law enforcement effectiveness in protected areas. Key initiatives that the project will look to link to are outlined below.

- WWF South Africa 's Rhino Conservation strategy and programme⁷¹ identifies five 'response areas' for action: (1) Understanding Trade and Influencing Demand; (2) Improving Bi-lateral co-operation with rhino horn importing countries; (3) Tightening the Forensic and Judicial chain; (4) Developing supportive communities around key rhino populations; and (5) Building resilient rhino populations, which shape WWF-SA's rhino programme. Areas 2 and 3 connect directly with the GEF project's aims and activities, and coordination and collaboration with the WWF-SA programme will be a key activity during project implementation. Preliminary linkages have been explored during the PPG phase, WWF-SA staff were active members of the Project Development Working Group (PDWG) that advised on the development of the project during the PPG phase, and are to be included in the project's SC during implementation. Furthermore, WWF-SA is providing in-kind co-financing to the project (see Table C in main text). More generally, WWF has long experience in tackling poaching and wildlife trade issues in Africa (often in partnership with TRAFFIC). It also recently received a US\$5 million grant as part of Google's new Global Impact Awards. This is to test advanced but easily replicable technologies and create an overarching system to curb poaching, and integrate remote aerial survey systems, wildlife tagging technology and ranger patrolling guided by analytical software such as the Spatial Monitoring and Reporting Tool (SMART) to increase the detection and deterrence of poaching in vulnerable sites in Asia and Africa, with the overall goal to create an efficient, effective network that can be adopted globally.
- TRAFFIC, the wildlife trade monitoring network, works to ensure that trade in wild plants and animals is not a threat to the conservation of nature. TRAFFIC is a joint programme of IUCN and WWF. TRAFFIC, in partnership with IUCN Washington DC, has recently been successful in securing a grant from the US Agency for International Development (USAID) to implement the 'Wildlife Trafficking, Response, Assessment, Priority Setting' (Wildlife-TRAPS) initiative, which aims to protect wildlife by strengthening the knowledge base and cooperation of governments, inter-governmental organisations, private sector and NGOs to tackle illegal wildlife trade between the two continents (see http://sa.usaid.gov/southern_africa/content/usaid-missions-africa-and-asia-launch-new-proposal-stop-wildlife-trafficking). Wildlife TRAPS is likely to focus on achieving a high impact with a tightly focused group of species products (i.e. including ivory and rhino horn) traded between Central and East and Southern Africa and East and South East Asia. Activities will be delivered through a three phase 'Framework Approach': Phase I will focus on 'Assessment and Priority Setting'; and activities will include scoping studies, desk based research, semi-structured interviews and stakeholder mapping. Phase II will focus on 'Collaborative Action Planning' with Wildlife TRAPS stakeholders in order to identify the trade routes and species products that will be tackled through a suite of 'non-traditional approaches' delivered during Phase III. The TRAPS Project Manager will be based at the IUCN offices in Pretoria. TRAFFIC has also recently been awarded a US\$1.5 million grant to research the market for rhino horn in Asia to try to understand and influence demand.

⁷¹ Document titled *Towards WWF South Africa's Framework Strategy for Rhino Conservation* (dated March 2012).

- IUCN African Rhino Specialist Group (AfRSG) AfRSG's mission is to promote the development and long-term maintenance of viable populations of the various sub-species of African rhinos in the wild. Its membership consists of official country representatives from the main range states and a number of specialist members covering a wide range of skills. The AfRSG routinely develops and promotes recommended best practices for a range of rhino conservation activities and has produced an Action Plan for the conservation of rhino species. AfRSG members have for many years been actively involved in a number of regional rhino conservation bodies such as the SADC Regional Programme for Rhino Conservation, the SADC Rhino Management Group and the SADC Rhino and Elephant Security Group, and the AfRSG has been promoting the formation of an East African Rhino Management Group. AfRSG members have to date assisted conservation agencies in Botswana, Democratic Republic of Congo, Kenya, Namibia, South Africa, Swaziland, Zambia and Zimbabwe develop national or organizational rhino conservation plans, strategies and policies. Every two years (funding permitting), the AfRSG meets to share knowledge and information, collate and update rhino numbers at a continental level and workshop specific issues. Key AfRSG services cover a wide range of subjects including: CITES issues (including drafting background review documents for CoP); providing specialist advice and contributing to a number or regional forums/committees/meetings that enhance cooperation, security and meta-population management; compiling the official continental rhino statistics every two years acting as the IUCN Red List Authority for African rhinos; assisting range states and management agencies develop rhino conservation plans and strategies (including South Africa); providing guidance, advice, training and tools to help field conservationists monitor their rhinos and enable them to use the data collected to make more informed biological management decisions and assisting range states and agencies with capacity building in the form of provision of materials and software and holding of training courses (including to personnel in South Africa); enhancing rhino protection through facilitation and promotion of effective investigation and prosecution of rhino crimes (including in South Africa); and the development of specific management tools/software e.g. for population estimation, managing intelligence information (notably in South Africa).
- The International Consortium on Combating Wildlife Crime (ICWC), which was formed from the United Nations Office on Drugs and Crime (UNODC), the Secretariat of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), INTERPOL, the World Customs Organization (WCO) and the World Bank, in November 2012, aims at bringing coordinated support to governments, national wildlife and forest law enforcement agencies and sub-regional networks that work to protect the world's natural resources from criminal exploitation. The CITES Secretariat chairs the alliance. Each of the international organizations involved offers specialized expertise that can support national enforcement agencies and sub-regional and regional networks, and extensive experience in developing and delivering comprehensive training and capacity-building packages for law enforcement officers, at sub-regional and regional levels. Each has extensive experience of providing technical assistance. Several have communication channels that allow real-time dissemination of intelligence to help national enforcement bodies in their risk-assessment, targeting and profiling activities and to facilitate investigations in different countries. They have experience in coordinating multi-national operations targeting illegal trade and smuggling. Several of the organizations have already developed close working relationships on a bilateral or trilateral basis. ICWC has developed the *Wildlife and Forest Crime Analytic Toolkit* to aid governments in identifying challenges and strengthening their criminal justice responses to wildlife and forest crime. Relevant joint activities that have been executed within the framework of the Consortium since its foundation, include the *'Ivory and Rhinoceros Enforcement Task Force Meeting'*, held in Nairobi in May 2011 which served to exchange law enforcement intelligence and to develop strategies for combating illegal trade in the two pachyderms; a senior-level seminar for Police and Customs officers of the Tiger Range States (TRSs) in February 2012 in Bangkok, Thailand that aimed to deliver technical assistance in support of law enforcement as related to wildlife trafficking; and a workshop on *'Establishing a Network of Controlled Delivery Units for Forest and Wildlife Law Enforcement'* in Shanghai, China, in December 2011 which brought together 50 participants from 18 African and Asian countries (officials from the police, Customs or judiciary) and covered forest and wildlife crime and law enforcement in China, global wildlife and timber smuggling routes, wildlife and timber methods of detection, controlled delivery

techniques (including financial aspects), prosecution, as well as group activities aimed at building a network of practitioners.

- DNA Barcoding Pilot Project for CITES Enforcement. The Google Global Impact Award Program has awarded US\$3 million to the Consortium for the Barcode of Life (CBOL), Smithsonian Institution in Washington, DC, for a two-year pilot project to test the use of DNA barcoding for investigating and prosecuting wildlife crime. DNA barcodes are short, standardized gene regions that provide a cost-effective and scalable way to identify species. CBOL will be working with CITES Authorities, enforcement officials, and biodiversity scientists in museums and other research institutions in South Africa, Kenya, Nigeria, Brazil, Mexico, and a Southeast Asian country. The project has three goals to: (1) create a public, free-for-use DNA barcode reference library of 2,000 CITES-listed species and 8,000 closely related and look-alike species. The library would be available to identify confiscated material using standard laboratory methods; (2) provide the training and technical support needed by laboratories, investigators and other enforcement officials as they test the use of DNA barcode evidence in their work; and (3) support efforts by partner countries to institutionalize the use of DNA barcodes and other DNA evidence as standard tools in their efforts to fight wildlife crime.

Communication systems, linkages and coordination with individual projects will be established by the project management team during the inception period, facilitated by UNEP, CITES and others, in order to optimize synergies, examine the potential for cost sharing and ensure efforts are complementary. However, at a strategic level, the project Steering Committee (SC) will play an important role in ensuring coordination and synergies between projects.

Annex Q – Incremental Costs Analysis Table

Baseline Scenario	GEF Incremental Contribution	Key Expected Outcomes under the Alternative Scenario
<p>Component 1 - Use of forensic technology to combat rhino poaching and the illegal rhino horn trade</p> <p>The material and human capacities for efficient and timely DNA profiling and analysis of forensic evidence related to wildlife crimes are not sufficient to cope with the recent dramatic increase in the number of rhino poaching incidents. Existing institutional capacity includes the SAPS Forensic Science Laboratory and the University of Pretoria’s Veterinary Genetic Laboratory; analytical equipment requires upgrading but is expensive and there is a lack of funds, and there is a need for additional training and to increase staffing levels, as well as a long-term sustainable funding arrangement.</p> <p>Currently analysis of all relevant rhino crime forensic data (including results of DNA profiling, ballistics, IT and photographic evidence) is routed through the central Forensic Laboratory of the South African Police in Pretoria but human crimes are given a higher priority than wildlife-related cases. Consequently, rhino-related crimes do not receive sufficient attention and suffer from a lack of sufficient and dedicated human resources (essential equipment is available), and there is no dedicated wildlife forensics facility in South Africa.</p> <p>The current level of capacity and timeliness of response to support wildlife forensic cases is therefore way below requirements, and the time factor can be critical: e.g. in the case of capture by the police of a poacher with illegal rhino horn material in his possession,</p>	<p>Critical equipment, material and human resources at wildlife forensic facilities are provided in order to improve identification and traceability of rhino horns for enforcement purposes.</p> <p>New wildlife forensic approaches and techniques are developed, piloted and adopted in South Africa’s Protected Areas to tackle rhino poaching and associated illegal sale of rhino horn.</p> <p>Standard Operating Procedures for wildlife crime scene investigation are revised and formalised.</p> <p>Targeted training and awareness-raising programmes on the relevance and collection of forensic evidence are delivered to specific groups dealing with rhino-crime cases as a means of tackling wildlife crime in South Africa.</p> <p>A dedicated institutional structure is established and operational in South Africa to coordinate and analyse rhinoceros forensic evidence, in the first instance, and ultimately all wildlife forensic evidence.</p>	<p>Improved and efficient forensic capacity in terms of techniques, procedures, training, equipment, staffing and institutional arrangements in order to combat rhino poaching in South Africa’s Protected Areas and private game reserves and the associated illegal trade in rhino horn.</p> <p>In addition, forensic service providers are put onto a sustainable financial and institutional footing.</p> <p>A significant portion of GEF funding will be focused on maximising the ability of relevant agencies to provide forensic evidence and analysis, which will lead to more successful and quicker prosecutions, removing key individuals from the engaging in criminal activity and acting as a deterrent to others against poaching and illegal trading in rhino horns.</p>

Baseline Scenario	GEF Incremental Contribution	Key Expected Outcomes under the Alternative Scenario
<p>there is currently a significant delay before sufficient evidence can be produced for the Court. This situation significantly constrains law-enforcement efforts and is negatively affecting the effectiveness and impact of anti-poaching campaigns.</p> <p>Other weaknesses include the need to standardise forensic operations in the field to ensure chain of custody and robustness of forensic evidence to ensure it is defensible in court. Also, key groups involved in collecting, handling or interpreting forensic data e.g. magistrates and Environmental Management Inspectors, need additional training and/or educational programmes.</p> <p>In addition, forensic evidence tends to focus on DNA evidence and ballistics, but it is recognised that development of other techniques, such as isotope analysis, would provide additional support and may be essential in cases where DNA and ballistics evidence is poor or non-existent.</p> <p>Without the GEF project, SA and countries in the SADC region would not be in a position to make full use of forensic technologies to complement their ongoing efforts to combat Rhino poaching and other wildlife crimes in Protected Areas.</p> <p>(a) Baseline funding: 11,800,000 USD</p>	<p>(b) GEF Increment: 1,481,001 USD</p>	<p>Alternative Scenario: 13,281,001 USD (a+b)</p>
<p>Component 2 - Information sharing and analysis for more effective law enforcement among national actors to tackle rhino poaching and the illegal trade in rhino horn</p> <p>There is suboptimal coordination and information sharing among all actors involved in the law enforcement and</p>	<p>Systems for gathering key information on individual rhinos, their conservation and management (including their DNA, population data, movements and provenance) are improved.</p> <p>Relevant crime and law</p>	<p>Improved gathering and analysis of relevant data.</p> <p>Enhanced national coordination platforms exist for information management and threat forecasting to combat rhino poaching and illegal trade in rhino horn</p>

Baseline Scenario	GEF Incremental Contribution	Key Expected Outcomes under the Alternative Scenario
<p>anti-poaching effort.</p> <p>The IT hardware needed to support the establishment of a national coordination structure for information management on wildlife law enforcement is partly in place and it is being enhanced, with government funding. The DEA is also in the process of developing a new “Electronic Permits System” which will include a business management system that can be used as an information management system. There are also a number of other databases holding rhino conservation and management data and law enforcement and crime information hosted by government agencies and NGOs, but most are not linked, collect different sets of information and were designed on different (mostly incompatible) systems. Consequently, the effectiveness and timeliness of response of the current system is constrained by the lack of direct connections, IT information sharing protocols and formal agreements on sharing information between relevant agencies that need to be working together in wildlife law enforcement (including i.e. Police, Customs Authority, SA Defence Force, possibly Private Game Reserves, etc.).</p> <p>(a) Baseline funding: 6,750,000 USD</p>	<p>enforcement data are also improved and made available to key national and provincial wildlife enforcement agencies (such as the DEA, SANParks, SAPS) through secure linked databases.</p> <p>A Wildlife Crime Analysis and Forecasting Tool (WCAFT) is developed to analyse poaching and illegal trade activities related to rhinos. The WCAFT links key rhino management and conservation, and crime and law enforcement databases for enhanced forecasting and prioritisation of actions against future potential illegal activities, which are then mapped within PAs.</p> <p>With the GEF project, the required additional resources and highly specialized technical support will be mobilized through an expanded partnership at the national and international level. This will rapidly enhance DEA’s response capacity in wildlife forensics and SAP’s and SANParks’s ability to predict wildlife crime and boost the effectiveness of anti-poaching efforts in Protected Areas, with a consequent positive impact on the conservation status of populations of rhinos in SA and the whole SADC region.</p> <p>(b) GEF Increment: 652,000 USD</p>	<p>within and beyond SA’s PA system.</p> <p>Early identification and forecasting of potential rhino crimes which protects rhinos while they are still alive (proactive rather than simple reactive law enforcement).</p> <p>The WCAFT meta-tool is particularly innovative and experiences and lessons learned from establishing the WCAFT are likely to be of great interest to other countries with similar wildlife crime issues. The initial focus will be on sharing of forensics related data (linking a limited number of databases to the WCAFT) but build in additional information for forecasting during the second half of the GEF project.</p> <p>Alternative Scenario: 7,402,000 (a+b)</p>
<p>Component 3 - Cooperation and exchange at the international level to tackle poaching and the illegal trade</p>	<p>Action Plans, MOUs, MLAs and other appropriate agreements regarding rhino poaching and</p>	<p>Improved cooperation and exchange between South Africa and other relevant</p>

Baseline Scenario	GEF Incremental Contribution	Key Expected Outcomes under the Alternative Scenario
<p>along the whole trafficking chain</p> <p>Various MoUs and associated Action Plans are being developed or are planned between the Government of South Africa and governments of other countries that are either transit or recipient countries for the trade in illegal rhino horn, such as Vietnam. However, specific activities to tackle address the issues have yet to be developed or implemented.</p> <p>No international standard exists for rhino DNA sample profiling, and there is a lack of standard operating protocols on the exchange and sharing of information and samples between key countries and international agencies and a lack of capacity to implement them, which is hampering the speed at which forensic evidence is processed and used to identify individual rhinos and their provenance and restricts the tracking of rhino horn particularly along the international segments of the trafficking chain.</p> <p>(a) Baseline funding: 3,500,000 USD</p>	<p>illegal trade are implemented between South Africa and relevant countries (such as Viet Nam, China, Mozambique, Thailand, Kenya, etc.).</p> <p>A global Standard and Database for Rhino DNA is created, which provides a valuable tool in the fight against illegal trade in rhinos and rhino horns.</p> <p>Procedures are established, good-practices are captured and disseminated, and capacity is enhanced for the exchange of relevant data and samples of illegally traded parts and derivatives of rhinos between South Africa and national/international enforcement agencies, to assist with forensic investigation and criminal prosecutions.</p> <p>The GEF will catalyze involvement of the ICCWC and other partners to mobilize the latest technology, know-how and IT information sharing networks</p> <p>(b) GEF Increment: 329,000 USD</p>	<p>countries and relevant international organizations to tackle poaching of rhinos and illegal trade in rhino horn along the entire trafficking chain.</p> <p>The GEF incremental support will address the above critical issues through its three components in support of key priorities of the SA Rhino Strategy (outcomes 1, 2, 3 and 5), thus fully complementing ongoing efforts to address important missing links to stem the tide of rhino poaching.</p> <p>Alternative Scenario: 3,829,000 USD (a+b)</p>

Annex R: Rhinos and their conservation in South Africa and the fight against poaching and the illegal trade

(Most of the following information is based on a review undertaken by Dr Richard Emslie, AfRSG, as part of the background studies for the development of this GEF project)

White Rhinoceros in South Africa

The White Rhinoceros *Ceratotherium simum* is Africa's second largest land mammal, after the elephant. It is a grazing mega-herbivore with a historically more restricted distribution than its browsing relative, the Black Rhino *Diceros bicornis*. It is listed as Near Threatened by the IUCN Red List (Emslie., 2011b) and the South African population was down-listed to CITES Appendix II in 1994 to allow for trade in live animals to 'approved and acceptable destinations' and for export of hunting trophies. There are two subspecies of African White Rhino, the Southern White Rhino *C. s. simum*⁷² and the Northern White Rhino *C. s. cottoni*.⁷³

Historically, the Southern White Rhino was found across large parts of southern Africa but by the end of the 19th century due to hunting and poaching the population had been reduced to around 20-50 animals in what is now Hluhluwe-iMfolozi National Park in the KwaZulu-Natal Province of South Africa. In 1960, the sub-species was still restricted to this one population. The then Natal Parks Board launched Operation Rhino in 1961 and the first White Rhino was trans-located to Kruger National Park (KNP) that year, with 320 animals moved to KNP between 1961 and 1973. The two largest populations in Kruger National Park and Hluhluwe-iMfolozi Park accounted for an estimated 53% and 13% of South Africa's 18,800 white rhinos in 2010, respectively. This population increase is one of the world's conservation success stories, but the recent escalation in poaching threatens this success (Emslie, 2013).

Black Rhinoceros in South Africa

The Black Rhino *Diceros bicornis* is listed as Critically Endangered by the IUCN SSC Red List (Emslie, 2012), is on Appendix I of CITES, and in South Africa is listed as an endangered species according to the TOPS regulations (under NEM:BA). The greatest number and proportion of Black Rhino are now conserved in areas managed by South Africa's National Parks (SANParks). Population growth in KNP has resulted in this becoming the largest Black Rhino population in the country. Populations in KZN have provided over 300 founder black rhino to other (non-EKZNW⁷⁴) areas in southern Africa, which have led to increasing numbers under management by other authorities and the private sector. As a result, the proportion of the country's Black Rhino managed by EKZNW has declined. The Eastern Cape Parks (ECP) and North West Parks and Tourism Board (NWPTB) each conserve less than 10% of the country's Black Rhino, with smaller numbers conserved in other Provinces (Table 1).

South Africa's role in Black Rhino conservation was initially relatively small as the national population was reduced to about 110 animals in 1935 in two surviving breeding *D.b.minor* populations in KwaZulu-Natal (Hluhluwe-iMfolozi and uMkhuze). At the time these rhino represented less than 0.1% of the continent's population. However, due to major national and international conservation efforts, the recovery in numbers had been dramatic and by the end of 2010, South Africa conserved more Black Rhinos (1,915) in the wild than any other range State and accounted for approximately 39% of the continental total. Thus the global importance of the South African Black Rhino population has increased dramatically over the past 30 years. This is largely the result of successful conservation measures combining protection on the one hand with monitoring, and the use of translocations to set up new populations

⁷² Occurs in southern Africa with sizeable populations in South Africa, a small number in Mozambique and small reintroduced populations in Botswana, Namibia, Swaziland and Zimbabwe

⁷³ A single confirmed population exists in the Kenyan Reserve Ol Pejeta (four Northern White Rhinos were translocated from Dvur Králové Zoo in the Czech Republic in 2009)

⁷⁴ Ezemvelo KZN Wildlife

(preventing overstocking, managing populations for growth and also offering financial opportunities) on the other. Declining populations in some other African range states have also increased the relative importance of South African populations. With the exception of Hluhluwe-iMfolozi and uMkhuze, all other South African black rhino populations have been created through translocations. As of December 2010 re-introduced and introduced populations conserved 87.2% of South Africa's Black Rhino.

Table 1: Numbers of black rhino conserved by management agency/private sector by subspecies by the end of 2010.

	<i>D.b.minor</i> Dec-10	<i>D.b.michaeli</i> Dec-10	<i>D.b.bicornis</i> Dec-10	Total
Eastern Cape	160		9	169
KwaZulu-Natal	368			368
SANParks	683		100	783
Limpopo	20			20
North West	127			127
Free State	3			3
Private - Owner	212	60	62	334
Privat - Cust.	111			111
Total	1684	60	171	1915

Overall importance of South Africa for rhino conservation

The populations of White and Black rhinos in selected countries in the region are shown in Table 2. South Africa is the premier rhino range State globally, conserving 83% of Africa's rhinos and 73% of wild rhinos in the world.

Table 2: Estimated numbers of African rhino by country as of 31 December 2010

Country	White Rhino	Black Rhino		
	<i>C. s. simum</i>	<i>D. b. bicornis</i>	<i>D. b. michaeli</i>	<i>D. b. minor</i>
Angola	-	1	-	--
Botswana	135	-	-	7
Kenya	361	-	594	-
Malawi	-	-	-	24
Mozambique	6	-	-	1
Namibia	469	1,750	-	-
South Africa	18,796	171	60	1,684
Swaziland	88	-	-	17
Tanzania	-	-	88	25
Uganda	9	-	-	-
Zambia	7	-	-	27
Zimbabwe	290	-	-	431
Totals	20,160	1,920	740	2,220

Source: IUCN/SSC/AfRSG report to CITES CoP16

Current efforts to address poaching in South Africa

The rhino-poaching crisis has escalated to the extent that the South Africa Government has now drafted in the South African National Defense Force (SANDF) to assist SANParks in Kruger National Park with their anti-poaching effort, albeit to little effect evidenced by the continued increase in numbers of rhinos poached per day. Terms more akin to military crises are now being used in the 'war' against rhino poaching and prosecutions for rhino-related crimes are moving beyond contraventions of the National Biodiversity Act and other legislation is being invoked to enact charges (e.g Prevention of Organised Crime Act, racketeering, money laundering, corruption, tax evasion).

The DEA and SANParks are currently focusing anti-poaching efforts in the KNP, paying particular attention to patrolling, surveillance and reinforcing trans-boundary collaboration with Mozambique. The Park's anti-poaching unit is assisted by the South African Police Service (SAPS), the SA Air Force (SAAF) as well as SANDF. During 2013, air space patrol was augmented by the addition of two drones provided by State-owned company Denel⁷⁵ as well as 2 Aérospatiale Gazelle helicopters. In addition, military aircraft equipped with surveillance technology such as thermal imaging, have been donated to the SANParks by the Ichikowitz Family Foundation⁷⁶ to detect rhino horn poachers. SANParks has been stepping up other anti-poaching efforts in a number of ways including: deployment of 58 new field rangers into poaching "hot spots" within the KNP, upgrading radio communications facilities and equipment, assessing feasibility of deploying tracker dogs in anti-poaching work, development of new specific safety and security plans, and adjustment in work schedules of field rangers to facilitate adequate deployments over weekends and public holidays. A similar focus on increasing security and surveillance is taking place at many of South Africa's other PAs supporting significant rhino populations, including on private games reserves, with spending on rhino security in some national parks or reserves representing up to 80% of the site's entire operational budget. Human and financial resources remain the major constraints on the conservation of rhino in the field.

Role of private sector in rhino conservation and impact of poaching on it

In 1994, at the 9th Meeting of the Conference to the Parties to CITES, the South African population of Southern White Rhino was transferred to CITES Appendix II with an annotation that allowed for the "exclusive purpose of allowing international trade in live animals to appropriate and acceptable destinations and hunting trophies". Since then the South African White Rhino population has increased from approximately 6,380 animals in 1994 to over 18,800 individuals in 2012, with breeding on private land and translocations between state and private land providing an important contribution to this total.

While the majority of White Rhino still occur in public State Reserves and Parks, the private sector has played a major role in its conservation, providing an additional 22,274 km² of extra habitat and accounting for about 24% (estimated 4,500) of the national White Rhino population. At a national level, the proportion of Black Rhino managed by the private sector also continues to increase; private owners and custodians now conserve the second largest population of Black Rhino after SANParks.

Indeed, the private game ranching industry in South Africa, often described as a 'conservation revolution' (TRAFFIC Rhino Report, pg 31), has contributed significantly to the conservation management of both Black and White rhino, including improvements in large game veterinary practices associated with translocation, and is a key part and stakeholder in the implementation of the national rhino conservation strategy. Private game ranches in South Africa cover an area of 20.5 million hectares, accounting for 16.8% of the country, which is almost three times the area of national and provincial Protected Areas (amounting to 7.5 million hectares or 6.1% of the country) and there is a large market in the sales of live animals. Overall, the game ranching and sport hunting industries account for the employment of some 70,000 people, many of whom live in the rural areas of South Africa (TRAFFIC Rhino Report, Pg 33) where there are relatively few employment opportunities.

Prior to 2009, very few private reserves in South Africa had a significant need for rhino security as the biggest threat they faced was from illegal hunting for bush meat, which was carried out using snares and hunting dogs. However, the first private reserves began to be targeted by poaching syndicates during November and December in 2008, and a number of Black and White Rhino were killed and wounded in North West and Limpopo Provinces. Private reserves

⁷⁵ Denel is South Africa's leading manufacturer of defense equipment <http://www.denel.co.za>. In November 2012, Denel and SANParks entered into an MoU to 'build the ability to detect and deter would-be poachers' as well as to provide early warnings to law enforcement officials deployed on the ground (see <http://www.sanparks.org/about/news/default.php?id=55361>). Details of the type of interventions taking place and in planning are not released for security reasons and operational sensitivities.

⁷⁶ <http://ichikowitzfoundation.com/>

are now on the 'front line' of the rhino 'Bush War', with a constant needs to monitor for and anticipate rhino crime. Calculations of the security costs involved range from ZAR 250,000 to ZAR 2.5 million annually, depending on the size of the reserve and the risk analysis. None of the private rhino owners receive any assistance from the Government for these new additional rhino security costs. Consequently, many owners have started to disinvest in rhinos given the risks involved and a recent survey carried out by the Private Rhino Owners' Association (PROA) found that over 40 private reserves no longer support rhinos. Consequently, there has been a reduction in the rhino distribution range.

The continued increase in numbers and range of the White Rhino is contingent upon private landowners and local communities making additional land available for rhino conservation. State Reserves that already have rhino populations need to find 'homes' for surplus animals and private game ranches and community managed reserves provide this option. However, with the upsurge in poaching and security concerns (poachers have robbed farms while poaching rhinos on occasion), the financial costs of protecting rhino have soared. Recently, and worryingly, incentives for rhino conservation, such as live sale prices, have been declining and some private owners are liberating their stock of live rhino. If these trends continue, this will threaten continued increases in numbers of rhino and the extent of suitable habitat under rhino management as well as reducing funds available for field conservation action.

Annex S – Rhino BMPs

Available from DEA upon request

Annex T - Stakeholder mapping and analysis

A number of stakeholders are involved in the management and conservation of Rhinos in South Africa, ranging from government departments to the private sector. A detailed assessment of stakeholder views on rhino conservation and the poaching/trade issues, carried out in 2012, has recently been published (RIM Report 2013). During the Rhino Information Management (RIM) process, numerous stakeholder engagements were held to identify the interests and concerns of rhino stakeholder constituencies. As the RIM Report notes, 'rhinos have value to different stakeholders for different reasons,' including the value of rhinos to biodiversity and earnings from tourism. Milliken and Shaw (2012) also provide an overview of rhino stakeholders. The key stakeholder groups from government, civil society and the private sector involved with the GEF project are presented below, as well as brief details of other stakeholders who will take part in project activities, and an overview of the international stakeholders involved in tackling the illegal trade in rhino horn.

A. Government

There are three spheres of governance in South Africa: National, Provincial and Local, each with a stake in environmental management issues.

Department of Environmental Affairs (DEA)

The DEA is housed within the Ministry of Water and Environmental Affairs and is responsible for implementation of the National Environmental Management: Biodiversity Act of 2004 (NEM:BA). The DEA plays an overarching role in establishing policy on rhino conservation and management and has recently created a small unit to focus on law enforcement at the national level. Each of South Africa's nine Provinces has an environmental body responsible for wildlife conservation and a dedicated law-enforcement unit. Within the DEA and other provincial environmental departments, it is the Environmental Management Inspectors (EMIs) or 'Green Scorpions', that are responsible for implementing the relevant terms of the NEMA and SEMAs that relate to law enforcement, and these officials are appointed upon completion of a specific training qualification.

Within the DEA, enforcement is undertaken within the Legal Authorisations, Compliance and Enforcement Branch (LACE), specifically the Chief Directorate: Enforcement. Within this Chief Directorate, a Directorate: EMI Capacity Development and Support (CD&S) carries out a capacity development programme focused on providing specialised training to EMIs. Discussions have commenced between DEA and SANParks regarding the development and roll-out of a Rhino Crime Scene specialised course for relevant EMIs.

A National Wildlife Information Management Unit (NWIMU) has been established under the Biodiversity Branch of the DEA. The Unit has been created 'mainly to gather information on rhino crimes.'⁷⁷ The NWIMU has three objectives: i) to establish a centre for gathering information; ii) to support law enforcement agencies to enhance case management; and iii) to implement and review the national strategy, although there is currently little official information on its purpose, operation, resources or how it integrates with other rhino stakeholders.

The DEA also plays an important role at the regional level as a lead partner in the implementation of the Regional Rhino Conservation Strategy for the SADC Region, and is thus already working closely with all other countries hosting remaining populations of rhinos.

South Africa National Parks (SANParks)

⁷⁷ Parliamentary Monitoring Group report on <http://www.pmg.org.za/report/20130320-update-rhino-poaching-convention-international-trade-endangered>

The SANParks is South Africa's leading conservation authority in all national parks, responsible for 3,751,113 hectares of protected land across 20 national parks. Since the democratic elections in 1994, its focus has been to make national parks more accessible to the general public to ensure that conservation remains a 'viable contributor to social and economic development in rural areas'. SANParks generates at least 75% of its operating costs from its own activities and focuses its rhino conservation efforts in the Kruger National Park due to the high level of poaching activity in the park.

South African Police Service (SAPS)

The SAPS has a specialised crime division known as the "Hawks", which was established to focus on serious organized crime, corruption and commercial crimes. Formally established as the Directorate of Priority Crime Investigations (DPCI), the division comprises several Units: Commercial Crime Unit, Financial Investigation and Assets Forfeiture Unit, Organised Crime Unit, Priority Crime Management Centre and Support Services. The Endangered Species Section (ESS) within the Organised Crime Unit (OCU) deals with rhino poaching and the illegal trade in rhino horn which are identified as 'serious national threats'. The SAPS DPCI has appointed a specific team to focus on rhino poaching at the national level. Standard Operating Procedures (SOPs) have been developed for rhino poaching incident scenes and training is provided for such situations to ensure that criminals are brought to justice. In addition, together with the SANDF and the Asset Forfeiture Unit, the Hawks carry out joint operations to tackle rhino poaching and have seized assets worth tens of millions of South African Rand from suspected poaching gangs.

The SAPS Forensic Science Laboratory (FSL) was set up in 1971 and comprises several units: Ballistics, Scientific Analysis (physical matches, soil, paint, glass, metallurgy, filaments, etc), Biology (DNA, trichology, CSI & support), Chemistry and Explosives. The SAPS FSL carries out high-volume forensic human DNA analysis and profiling and, together with the University of Pretoria's Veterinary Genetic Laboratory, has developed a RhODIS sample collection kit for use at rhino crime scenes.

Recognising the illegal killing of rhinos and illegal trade in rhino horn as priority crimes, the SAPS responded to requests from the DEA to bring the issue to the National Joint Security Committee (NATJOINTS), resulting in the creation of a national project called 'Operation Rhino' and all rhino-related investigations and cases are dealt with by a NATJOINTS Priority Committee. Participating agencies in the Committee include: SAPS, SANDF, SSA (State Security Agency), SA Civil Aviation Authority, DEA, SANParks, South Africa Veterinary Council, South African Revenue Service (SARS), the Department of Agriculture, Forestry and Fisheries, the Department of Health (Medicines Control). Other stakeholders are co-opted if relevant.

South African National Defence Force (SANDF)

The SANDF became involved in rhino protection in 2011 when SANDF rangers were appointed to the Kruger National Park to assist with monitoring and protection of the national border shared between South Africa and Mozambique. Cooperation between the SANDF, SAPS, provincial conservation agencies, LeadSA⁷⁸ and the DEA was formalised as a joint intervention to address the illegal killing of rhinos.⁷⁹ SANDF carries out aerial patrols of the KNP through Operation Rhino, a joint effort with SAPS, provincial conservation agencies, LeadSA⁸⁰ and the DEA to address the illegal killing of rhinos (see above).

To date, approximately 400 SANDF rangers have been trained and appointed to complement the SANParks's anti-poaching staff. While SANParks Rangers have the power to arrest, SANDF rangers do not. The SANDF has acknowledged that prosecution of rhino poachers 'is often hampered by irregularities in the justice system',⁸¹ with lost

⁷⁸ LeadSA is a private initiative that enables citizens to contribute to the anti-poaching campaign.

⁷⁹ A statement is available at the Ministry of Environmental Affairs website:

https://www.environment.gov.za/sites/default/files/docs/interventionto_adressillegal_killingofrhinos.pdf

⁸⁰ LeadSA is a private initiative that enables citizens to contribute to the anti-poaching campaign.

⁸¹ See Ministry of Defence website <http://www.dod.mil.za/operations/poaching/rhino.htm> for details

dockets (legal documents detailing the crime and official schedule of proceedings in lawsuits pending in a court of law) resulting in suspects being released without charge. The SANDF continues to 'use its intelligence arm to counter syndicates' and others who assist rhino poachers.⁸²

National Wildlife Crime Reaction Unit (NWCPU)

The NWCPU was created in 2010 as an interim unit by the DEA. It consists of representatives from SAPS, SANParks, national and provincial nature conservation officials, NPA, the Asset Forfeiture Unit and INTERPOL. The NWCPU has implemented an Action Plan aimed at mitigating the escalation in rhino poaching, as well as the rising illegal trade in rhino horn. A key element of this Action Plan includes creation of a national coordination body for the management of information, law enforcement response, investigation and prosecution. The NWCPU aims to improve information management to develop pro-active database structures that link crime-related information with applied scientific research data and other available information. Since its creation, a number of high-profile law enforcement actions have occurred that demonstrate a collaborative effort between various authorities.

National Prosecuting Agency (NPA)

The NPA is a key partner in the Criminal Justice system, playing an important role in ensuring that criminals in rhino-related incidents are charged for their crimes. Milliken & Shaw (2012) report that a dedicated prosecutor in each DPP (Director of Public Prosecutions) office is appointed to deal with all rhino poaching and illegal rhino horn trade cases. Prosecutors are aware of cases before the accused appears in court and hence are in a better position to monitor cases, oppose bail and allocate appropriate sentencing. Rhino crimes are prosecuted under the National Biodiversity Act as well as national and provincial conservation ordinances dealing with illegal dealing, trading and possession of rhino horn. The DEA has presented a number of *advanced environmental prosecution courses* to the NPA, including the topic of 'Biodiversity Conservation', as the DEA has provided some limited capacity building to this group in the past.

University of Pretoria, Veterinary Genetics Laboratory (VGL)

The VGL is an independent facility associated with the University of Pretoria, which is a public entity. The VGL is based at the Faculty of Veterinary Science outside Pretoria in Onderstepoort and has been providing a DNA profiling and parentage testing service to the horse, cattle and dog industries since 2000. The VGL performs all microchipping and DNA testing of thoroughbred horses for the National Horseracing Authority of South Africa and handles over 15,000 samples per year of various species. The VGL is self-funded and all staff salaries, equipment and overheads are covered by service income. All additional income or profit is channelled, *inter alia*, into genetic-based research projects.

In 2006, the VGL identified a need to develop expertise in wild animal forensic testing and the following year, a Wildlife DNA Forensic course was held with Trace Wildlife Forensic Network (Trace)⁸³ in the UK. A project was launched during this course to develop a system to identify individual rhinos from horn samples, and from this the Rhino DNA Index System (RhODISTM) was created. This method has been validated and used routinely at the VGL to identify individual rhino horns from stockpiles, as well as to link recovered horns to individual poaching cases, enabling a horn trafficker to be linked to a specific poaching incident. This method has led to convictions and sentencing in the UK and South Africa based on DNA profile testing by the VGL.⁸⁴ Over 800 rhinoceros forensic cases have been received by the VGL since mid-2010.

⁸² Ibid

⁸³ Trace Wildlife Forensic Network in the UK have also been involved in forensic networking in SE Asia <http://www.asean-wfn.org/wp-content/uploads/2012/05/ASEAN-Wildlife-Forensics-seminar-outline.pdf>

⁸⁴ In the UK: a 1-year sentence for Donald Allison, an antique dealer who attempted to smuggle two rhino horns from a deceased zoo rhino to China. In South Africa: the conviction and sentencing to 10 years imprisonment of Xuang Hoang, a Vietnamese man who attempted to smuggle rhino horns, including horns from a poached rhino. Also, two Mozambican citizens were sentenced to 16 years in prison after being apprehended in the KNP with rhino horns that were linked through DNA to a carcass found poached in the Park. Similarly, a 29-year sentence was given to two poachers in the KNP; a 10-year sentence for a Zimbabwean poacher apprehended with horns linked to rhinos poached on a private game farm.

The RhODIS™ database has grown to include over 6,000 individuals. These include samples of Black and White Rhino from South Africa's national parks, provincial parks and private sector as well as rhinos from Namibia, Zimbabwe, Botswana, Malawi and Kenya. The database also includes samples from rhino horn stockpiles. The RhODIS™ database has been used as a forensic tool to support investigation of several poaching incidents in the Kruger National Park, other provincial parks and on private land.

The VGL has developed standardised DNA testing kits and a process that enables full traceability of DNA from samples in the RhODIS™ database to any evidence (such as recovered horns) presented in poaching cases, which has resulted in successful prosecutions and sentencing, and, under new, revised Norms and Standards for the Marking of Rhino Horn published in September 2011⁸⁵, all rhinos and rhino horns in South Africa must now be sampled using RhODIS™ sample kits and submitted to the VGL for inclusion in the RhODIS™ database. Stringent quality requirements for RhODIS™ are applied to the collection of field samples to ensure that the integrity of any data used in court cannot be questioned, which is achieved through the distribution of a RhODIS™ sample collection kit, which was developed in collaboration with the SAPS Forensic Science Laboratory in Pretoria and the Environmental Crime Investigating Unit of SANParks.

The VGL has been a member of ISAG (the International Society of Animal Genetics) for over 30 years and works according to an internationally standardised system with regular proficiency testing. The VGL has infrastructure to run DNA profiling and sequencing tests on various animal species; it also has skilled staff to perform the testing, handle forensic samples and analyse the data required for forensic DNA testing.

B. Civil Society Organisations

NGOs and other civil society organisations in South Africa play an important supporting role to government, particularly in terms of assisting with capacity shortfalls, fund-raising, awareness-raising campaigns, as well as providing information that links policy with science and promoting private-public partnerships around environmental issues. Whilst there are many (for full review see RIM report), the main ones relevant to the GEF project are listed below.

WWF-South Africa (WWF-SA)

WWF-SA has launched a National Rhino Programme (NRP) to strengthen rhino conservation efforts that targets five strategically key areas: (i) building and protecting key rhino population; (ii) developing buffers in local communities around rhinos as a first critical line of defence; (iii) supporting and tightening pro-active law enforcement efforts to break illegal trade chains; (iv) improving cooperation between South Africa and consumer countries; and (v) understanding rhino horn trade in end-user markets and influencing demand. WWF-SA is working with South African wildlife authorities in an effort to increase the number of black rhinos in Kruger National Park. In addition, WWF-SA is assisting with the provision of specialist equipment to enhance rhino security in the Park.

IUCN SSC African Rhino Specialist Group (AfRSG)

The AfRSG's mission is to promote the long-term conservation and maintenance of viable populations of the six sub-species of Africa's rhinos in the wild. Members comprise specialists involved in a range of skills related to African Rhino conservation, including official country representatives from the Range States. The AfRSG has produced an Action Plan for the Conservation of Rhino species and members are involved in regional rhino conservation groups, such as the SADC Regional Programme for Rhino Conservation, SADC Management Group and the SADC Rhino and Elephant

⁸⁵ **Paragraph 4. COLLECTION OF SAMPLES FOR DNA PROFILING** of the Revised Norms and Standards for the Marking of Rhino Horn states that: *4 (1) When live rhinoceros are darted for translocation, treatment or any other management purpose, samples of the horn and blood must be collected by using the DNA kits as provided by the Veterinary Genetics Laboratory contemplated in subparagraph (4).* Published in Government Notice No. 304 of 10th April 2012.

Security Group. The current Chairman of the AfRSG is a member of staff with SANParks and is working actively on rhino conservation in South Africa.

C. Private sector

Private Rhino Owners Association (PROA SA)

The Private Rhino Owners Association (PROA) is a not-for-profit organisation set up in 2008 to promote conservation, protection and proliferation of rhino species on private land in South Africa. In terms of the PROA's Constitution, a private rhino owner is defined as: "a person who is a legal owner of rhino". In 2010, the PROA became a Chamber of Wildlife Ranching South Africa (WRSA), again a not-for-profit organisation representing game ranchers as a national body.⁸⁶

The private sector have played a large role in the conservation of Black and White Rhino in South Africa and own some 25% of the national White Rhino population and the second largest population of Black Rhino after SANParks. The RIM Report noted that best estimates suggest that the State owns approximately 15,000 white rhino while approximately 5,000 are privately owned on 36 state protected areas and nearly 400 private ranches. Private rhino owners have also been targeted by poachers and face increasing security costs, with the result that many owners are beginning to disinvest in rhino, with a consequent reduction in the range for Rhinos in South Africa. A recent survey of PROA members revealed that some 24% of members have experienced poaching incidents at their properties.⁸⁷

Private Rhino Owners will therefore be natural partners of the DEA and SAN Parks in the efforts to combat rhino poaching. In particular, they will benefit directly from the increased capacity of VGL and DEA/SAPS to improve SOP capacity at the crime scene (in relation to illegal rhino kills in both public and private lands), better/faster handling of Rhino DNA samples and improved functionality of the RhODIS database, which also provides services to PROA in the form of DNA-based information on rhino individuals held in private farms (used for population management), issuance of ID certificates required for permits for rhino transport, legal sale, legal hunting for trophy etc. In addition, the project results will benefit private rhino owners through enhanced forensic prosecution capacity by DEA/SAPS, which will positively affect better forensic investigations on illegal rhino kills at private farms as well as public PAs. Finally rangers and veterinary staff from private farms will also be involved and will directly benefit from training programmes implement by the DEA under output 1.1.4, including SOP guidelines and manuals produced by the project. Therefore the private sector has significant direct incentives to participate actively in the project. Indeed, the private sector has been highly vociferous in the media calling for action (particularly government action) to improve law enforcement efforts to reduce rhino poaching and the illegal trade in rhino horn.

Professional Hunters' Association in South Africa

The Professional Hunters' Association in South Africa reported figures of ZAR 650,129,718 (approximately 65,012,972 USD) in declared income for 2009⁸⁸ and noted that the professional hunting industry 'contributes significantly towards the economic viability of game ranching'. The hunting industry contributes to the training of wildlife rangers and field guides, as well as providing funding for anti-poaching efforts.

The above are examples of existing Public Private Partnerships that will be further developed through the GEF project. PROA SA will be involved in the project through membership in the project steering committee and/or technical advisory groups, and these mechanisms will ensure that their perspective is taken into account during the design and

⁸⁶ <http://www.rhinoowners.org/WRAAboutUS.aspx>

⁸⁷ <http://www.wrsa.co.za/news/item/341-private-rhino-owners-will-state-pro-trade-case-at-cop16>

⁸⁸ <http://www.sawma.co.za/images/2011Abstracts.pdf>

implementation of the government's efforts to combat wildlife crime, and that their role and responsibilities are clearly defined as key partners especially in the implementation of components 1 and 2 of the GEF project.

D. Other national stakeholders

Many organisations have arisen in the last few years with the aim to raise funds, campaign on rhino-related issues, or undertake activities to counter rhino poaching and support rhino conservation. A brief note on the main ones, which are likely to benefit from the GEF project, participate directly in project activities, or will support the project through their own parallel projects and programmes are listed below (in no particular order).

SANParks Honorary Rangers

The SANParks Honorary Rangers is a voluntary organisation operating through an official agreement between SANParks and the Honorary Rangers and is registered as a Public Benefit and Non-Profit Organisation.⁸⁹ SANParks Honorary Rangers raises funds for rhino conservation and provides necessary equipment such as GPS units, night-vision goggles, backpacks and tents to assist the counter-poaching teams to carry out surveillance activities. The SANParks Honorary Rangers is the preferred organisation for public donations towards counter-poaching activities in South Africa's National Parks and as such they provide key support to SANParks in the war against poaching.

Endangered Wildlife Trust (EWT)

The EWT was established in 1973 and is registered as a Non-Profit Organisation dedicated to conserving threatened species and ecosystems in southern Africa for the benefit of all people. It is a member of the International Union for Conservation of Nature (IUCN) and deploys field staff throughout southern Africa. The EWT focuses on on-the-ground conservation action and develops innovative methodologies and best practice guidelines to mitigate key threats to biodiversity and 'promote harmonious co-existence and sustainable living for both people and wildlife' (www.ewt.org.za). EWT is carrying out a range of activities related to poaching and illegal rhino horn trade chain, including funding educational activities in Vietnam through partnering with Education for Nature – Vietnam (ENV), a Vietnamese non-profit NGO.⁹⁰ In 2012, EWT was commissioned by the DEA to carry out research into the dehorning of rhinos as a possible intervention strategy to curb rhino poaching.⁹¹

StopRhinoPoaching.com (SRP)

SRP was established in July 2010 in response to the escalation in rhino poaching in South Africa and is 'committed to helping protect and conserve rhinos in South Africa.' The SRP aims to seek, identify and coordinate supportive projects for the safety of larger rhino populations; supports, where possible, existing rhino protection projects which fulfil necessary qualifying criteria; encourages like-minded sponsoring partnerships, and liaises with other respected rhino NGOs to broaden areas of impacts for the greater good of South Africa's rhinos.⁹² One of the key areas of focus of SRP is a 'Training of Field Rangers and Rhino Reserve Managers' course as it is recognised that both groups are facing increasing challenges in the fight against poaching.⁹³

Project Rhino KZN

Project Rhino KZN was launched on World Rhino Day in 2011. Together with the Ezemvelo KZN Wildlife department, the founding members of Project Rhino KZN include conservation trusts, private game reserves, foundations, environmental NGOs and the private sector.⁹⁴ The Project provides a professional investigation process at each rhino poaching incident in order to ensure that 'all relevant forensic information is collected, thus resulting in an improved rate of prosecutions of poachers.' The project aims to protect all rhino in Kwa-Zulu Natal province against poaching

⁸⁹ <http://www.sanparksvolunteers.org/gyrosforrhinos>

⁹⁰ <http://www.ewt.org.za/programmes/LPP/rhinoproject.html>

⁹¹ <http://www.ewt.org.za/papers/position%20statements/EWT%20Position%20Paper%20on%20the%20Dehorning%20of%20Rhinos%20October%202012.pdf>

⁹² <http://www.stoprhinopoaching.com>

⁹³ The February 2013 update on SRP's progress can be found online at http://www.jennaclifford.com/rhino/files/srpupdate_feb2013.pdf

⁹⁴ A complete list of founding members can be found on the website www.projectrhinokzn.org

and pro-actively prevent rhino poaching before it happens. Key priority areas include: increased intelligence (information and informant networks); increased surveillance (such as aerial/GPS/etc technologies); increased field ranger competence (training); and increased communication sharing.

LeadSA Rhino Action Group (RAGE)

The LeadSA⁹⁵ Rhino Action Group (RAGE) was set up as a non-profit company by LeadSA to fight rhino poaching and protect South Africa's Natural Heritage and is supporting a media-driven campaign, raising funds from the public, and focusing on awareness raising education, and supporting Rhino anti-poaching initiatives. Applications for funding from RAGE are considered by an 'expert committee' and are evaluated against a set of priority needs that include: rhino reserve security; staff training; special projects such as DNA capture; electronic equipment for anti-poaching activities; funding for investigations. A 'Needs Analysis' document⁹⁶ accompanies the grant application process and provides a list of recommendations for support that were identified through a consultative process with Government representatives and the Private Rhino Owners Association (PROA).

Other relevant NGOs include the Wildlife and Environment Society of South Africa (WESSA)⁹⁷.

E. Local Community Groups

The National Strategy for Sustainable Development recognises that community-based tourism projects play an important role in biodiversity and natural resource use. Furthermore, during the stakeholder consultations carried out under the RIM study, the involvement of community groups was identified as an important element in rhino conservation given the inevitable benefit of sustainable economic empowerment and the impact that rhino poaching may be having on local community groups living around areas where rhinos occur.

A wide range of local and Indigenous Community Groups, including women groups, are living within and around target PAs. As an example: the Kruger National Park is surrounded by 3 million people within 181 communities (villages), 7 District Municipalities and 68 Tribal Authorities. These groups are already engaged in supporting the implementation of the Rhino Conservation Strategy through existing consultative mechanisms put in place by the DEA and SANParks. For instance, for the KNP, the SANParks has established a Park Forum where all surrounding communities are represented. SANParks interacts with this Park Forum on co-management matters, regular review of management plans, proposed development plans, sustainable use of natural resources and all park-related issues.

Local communities around KNP have been involved in other rhino conservation activities (organised and funded through SANParks at KNP) to try to curb the growing involvement of local people in rhino poaching activities. For instance, the SANParks community liaison officer at KNP has operated a awareness-raising programme with local communities bordering the Park which has had some success in persuading the local medicine men not to give 'magic spells' to poachers to 'make them invisible/invincible' when hunting rhinos, which could help disrupt activities of some poachers (e.g. less active on moonlit nights) although the impact of this is yet to be determined.

E. International Bodies

Various international agencies are playing a role in anti-poaching efforts and will have a stake in the UNEP-GEF Rhino Project. Chief among these is the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which was involved in the development of this GEF Rhino Project.

⁹⁵ LeadSA is a Primedia Broadcasting Initiative that calls upon all South Africans to stand up and Lead South Africa. A Rhino Action Group was established by Lead SA, details of which are found online at <http://leadsa.co.za/?p=7316>

⁹⁶ The full Needs Analysis document can be accessed online at <http://www.rhinorage.org/Downloads/Rhino%20Protection%20and%20Preservation%20Needs%20July%202012.pdf>

⁹⁷ Information on WESSA's Rhino Initiative is available online at <http://wessa.org.za/get-involved/rhino-initiative.htm>

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

CITES is an international agreement between 178 governments or Parties and entered into force on 1st July 1975. The increased volume of rhinoceros horn entering illegal trade was discussed in 2007 at the 14th Conference of the Parties (CoP) to CITES and in response, CITES created a Rhinoceros Enforcement Task Force (RETF) in 2008. The RETF comprises law enforcement officials from Customs, National Parks, Police and Wildlife Authorities in twelve countries. Member States have agreed that the CITES RETF should be tasked to develop strategies to improve international cooperation.

The 16th CoP held in Bangkok (March 2013) requested Parties to prosecute members of organized crime groups implicated in rhinoceros-related crimes with appropriate penalties that will act as an effective deterrent. These countries should submit rhino horn samples from seized specimens to designated accredited forensic laboratories.

Parties to CITES have also highlighted that cooperation between Mozambique and South Africa must improve to combat illegal killing of rhinos and illegal trade in rhinoceros horn. To this effect, South Africa, Vietnam and Mozambique are required to provide a comprehensive report to the CITES Secretariat regarding progress made – the deadline for this report is the 31st January 2014 and needs to include an update on arrests, seizures, prosecutions, and penalties for offenses related to illegal rhinoceros horn trade. In addition, CITES member governments have directed Vietnam to make progress with the development and implementation of the Joint Action Plan (2012-2017) between South Africa and Vietnam; specific actions of importance are the strengthened management of imported rhino horn trophies, and improved investigations and prosecutions of Vietnamese nationals suspected of illegally trading in rhino horn.

The DEA and CITES Secretariat are already working closely to address the illegal trade of rhino horns (as well as on several other species listed under the CITES). The CITES will therefore contribute to the execution of this project with significant in kind support and technical advice to DEA and partners. The CITES will also coordinate and catalyze the technical support from all other members of the ICCWC.

United Nations Office on Drugs and Crime (UNODC)

The United Nations Office on Drugs and Crime (UNODC) is a global leader in the fight against illicit drugs and international crime. Established in 1997 through a merger between the United Nations Drug Control Programme and the Centre for International Crime Prevention, UNODC operates in all regions of the world through an extensive network of field offices. The UNODC office in South Africa covers 11 countries in the southern Africa region.⁹⁸ In 2012, the UNODC produced a report on Rhino Poaching in Southern Africa (Anon, 2012).⁹⁹

International Consortium on Combating Wildlife Crime (ICCWC)

ICCWC is the collaborative effort by five inter-governmental organisations working to bring coordinated support to the national wildlife law enforcement agencies and to the sub-regional and regional networks that, on a daily basis, act in defence of natural resources. ICCWC comprises the CITES Secretariat, which chairs the group, Interpol, the United Nations Office on Drugs and Crime (UNODC), the World Bank and the World Customs Organisation (WCO).

ICCWC was formally launched in November 2010 and aims to work mainly for, and with, the wildlife law enforcement community, since it is frontline officers who eventually bring criminals engaged in wildlife crime to justice. The organisations forming ICCWC have ‘communication channels that allow real-time dissemination of intelligence to help

⁹⁸ Further information on UNODC’s Southern Africa branch can be found online at http://www.unodc.org/documents/southernafrica/UNODC_Southern_Africa_-_E-brochure_-_September_2010.pdf

⁹⁹“Rhino Poaching in Southern Africa” in Bulletin on Organised Crime in Southern Africa, Issue 1, June 2012. Available online at http://www.unodc.org/documents/southernafrica/Bulletin_on_organised_crime_in_Southern_Africa/UNODC_ROSAF_-_Bulletin_on_Organised_Crime_in_Southern_Africa_-_Issue_1.pdf

national enforcement bodies in their risk-assessment, targeting and profiling activities and to facilitate investigations in different countries. They also have experience in coordinating multi-national operations targeting illegal trade and smuggling.’

ICCWC aims to develop programmes that will enhance awareness of wildlife crime, foster coordinated enforcement actions, mainstream wildlife crime across relevant national agencies and build capacity of national institutions, sub-regional and regional enforcement agencies with regard to investigation and prosecution techniques. The Rhino and Elephant Enforcement Task Force meeting held in May 2011 was a joint activity carried out in terms of the Consortium’s framework. The ICCWC has also developed a Wildlife and Forest Crime Analytic Toolkit, based on the technical expertise of ICCWC and consultations with experts worldwide.¹⁰⁰

Over the project period, ICCWC partner agencies will provide significant support to rhinoceros range States and to those that were identified as transit or destination States for illegal rhinoceros horn trade. ICCWC partners will, both individually and collectively, also engage in a number of activities directly related to supporting rhinoceros conservation and the GEF project, in the remainder of 2013. These include:

- Convening a CITES Rhinoceros Enforcement Task Force
- Providing operational training for African and Asian countries
- Delivering a Rhinoceros DNA sampling training workshop in South Africa, in cooperation with the Department of Environmental Affairs (DEA) and the University of Pretoria’s Veterinary Genetics Lab (VGL).
- INTERPOL will host the INTERPOL-UNEP International Environmental Compliance and Enforcement Conference where wildlife crime and illegal rhinoceros horn trade will be discussed throughout a number of meetings.
- The 16th Meeting of the Conference of the Parties to CITES adopted Decision 16.89 paragraph b), directing the CITES Secretariat to develop, in conjunction with relevant institutions and experts, a manual containing guidelines on best practices, protocols and operational procedures, that will promote the use of wildlife forensic technology.
- UNODC is currently developing a project for the development of protocol for the use of wildlife forensics to combat illegal ivory trade. Activities conducted under this project will also complement the activities to be conducted to combat illegal rhinoceros trade.

In addition to the immediate activities highlighted above, ICCWC partners are in the process of designing a number of national and regional activities that would further complement the proposed work over the four year period of the project. Other in kind contributions in the form of staff time, operational costs, support for training and consultative workshops or other related efforts are also expected to contribute to the project.

Therefore key stakeholder partners in this GEF Rhino Project are DEA, SAPS, SANParks, VGL, WWF-SA and, at the international level, the IUCN AfrSG, CITES and ICCWC.

¹⁰⁰ The Toolkit is intended to serve as an initial entry point for national governments, international actors, practitioners and scholars to better understand the complexity of the wildlife and forest crime, and to serve as a framework around which a prevention and response strategy can be developed.

UNEP/GEF DEA Rhino Project – Draft Project Procurement Plan

(to be refined/updated at project inception)

Project title and number: Strengthening Law Enforcement Capabilities to Combat Wildlife Crime for Conservation and Sustainable Use of Species in South Africa (target: Rhinoceros)

Project number: UNEP ADDIS 856 - **GEF ID 4937**

Project executing partner: Department of Environmental Affairs, Ministry of Water and Environmental Affairs, South Africa

UNEP Budget Line		List of Goods and Services required (to be purchased with GEF funds)	Budget	Year {Note 1}	Brief description of anticipated procurement process {Note 2}
1200	Consultants				
1201	Legal Advisory Services	Legal advisory Services required for the development of international MOUs/MLAs and data exchange systems under Outputs 3.1 and 3.2	40,000	1-4	Procurement effected by the DEA according to existing procurement guidelines (in accordance with the Public Finance Management Act of South Africa)
2100	Sub-contracts (MOUs/LOAs for cooperating agencies)				
2101	VGL subcontract	<p>TOTAL Value of contract: 841,000USD</p> <p>1. Procurement of Laboratory Equipment for DNA sequencing and sample storage equipment (refrigerators) for the bio-banking facility Includes:</p> <ul style="list-style-type: none"> - DNA Sequencer (3500XL Genetic Analyzer – Life Technologies), Kingfisher Magnetic Beads Particles Processor - Total: 300,000 - 8 Freezers, 2 Cabinets, automated WIFI system – total 15,000\$ - Equipment operation and overall GEF grant management (1 VGL dedicated staff x 4 years) - 80,000 <p>2. Technical task force / consultants to upgrade VGL Rhino database -</p>	395,000	1	Procured according to VGL / University of Pretoria established procurement procedures
				1	
				1	
				1-4	
			240,000	1-4	

		(task force 1 Analyst and 2 Technicians x 4 years full time) Costs of Backlog running of 4000 routine samples (includes private rhino owners) 3. Production Rhodis DNA Sampling Kits 4. Design and Delivery of Training Programme to other labs in SA and in other countries in the region - (to train 12 staff x 6 weeks each, on Rhino DNA testing from other Labs in e.g. Kenya, Botswana, Vietnam, China, etc.) – ref. component 3	80,000 30,000 96,000 TOTAL 841,000	1-4 1-4 1-4	Trainees and programme defined in collaboration with the DEA Training costs include: travel accommodation, and training-related consumables/materials for trainees
2102	Establishment of the Wildlife/Environmental Forensics Section (DEA SAPS FSL)	- renovation/upgrading and use of temporary facilities (building to be identified by the DEA & partners, among existing facilities), and - procurement of essential communication/office/laboratory/field equipment (to fill gaps in existing stock as provided by DEA/SAPS)	85,000	1-4	Procurement effected by the DEA according to existing procurement guidelines (in accordance with the Public Finance Management Act of South Africa)
2103	Wildlife Crime Analysis and Forecasting Tool (WCAFT)	IT Services (design and initial operation of WCAFT meta-tool) – external consultancy services	150,000	1-4	Procurement effected by the DEA according to existing procurement guidelines (in accordance with the Public Finance Management Act of South Africa)
2104	Wildlife Forensics & SOP Kits and Mobile Units	Off-road trailers for Mobile Forensic Units (3 Units) [4x15,000 =60,000] SoP Kits and forensic equipment for kitting out the Mobile Units (IT, communication, photographic, DNA sampling, cold storage, lighting, tents, etc.) Total: 40,000	60,000 40,000 TOTAL 100,000	1 1	Procurement effected by the DEA according to existing procurement guidelines (in accordance with the Public Finance Management Act of South Africa)

2105	Upgrading of existing Rhino Databases	IT Services (analysis of existing systems and database management protocols, systems upgrading) – external consultancy services	200,000	1-2	Procurement effected by the DEA according to existing procurement guidelines (in accordance with the Public Finance Management Act of South Africa)
2106	Development of enhanced International Collaboration and info exchange protocols	IT Services (analysis of existing data exchange and sharing protocols, systems upgrading, including training) – implemented by DEA with SAPS and VGL and might entail procurement of external consultancy services	140,000	1-4	Procurement effected by the DEA according to existing procurement guidelines (in accordance with the Public Finance Management Act of South Africa)
2200 - Sub-contracts (MOUs/LOAs for supporting organizations)					
2201	Forensic Techniques Research Programme Costs (DEA/SAPS-FSL)	Funding will be provided through the DEA to internal or external researchers to conduct studies and publish results under Output 1.2	76,000	1-4	Research programmes defined jointly between DEA and SAPS FSL – funding provided to external researchers through the DEA, either through the existing bursary programme or through payment to external consultants
3200 - Group training					
3201	Wildlife Crime Scene SoP Training Programme	Training will be organized by the DEA in collaboration with SAPS FSL and VGL, for: EMI (Grade 5 field officers), police officers, Private Rhino farms, vets, stockpile managers, nature conservation officials, etc. This includes the production of a training manuals and DVDs	188,000	1-4	Organised through the existing structure of the DEA Training Unit
3202	Training for Legal / Judicial Professionals	Design and implementation of a training programme specifically targeted to legal / judicial professionals	120,455	1-4	Organised through the existing structure of the DEA Training Unit
3202	WCAFT Training	Design and implementation of a training programme specifically targeted to WCAFT users in each partner organisation	61,000	2-4	Organised through the existing structure of the DEA Training Unit
4200 - Non-expendable equipment					
4201	office equipment, computers & software	Essential office equipment, computers and software for the DEA Project Manager and support staff	7,000	1	Procurement effected by the DEA according to existing procurement – inventory maintained as project property and handed over to DEA upon project completion
5200 - Reporting costs					

5201	Publications	Final publications in conjunction with CITES (output 3)	32,000	4	Procurement for editing and printing effected by the DEA according to existing procurement guidelines guidelines (in accordance with the Public Finance Management Act of South Africa)
GRAND TOTAL			2,040,000 USD		

Note 1 - Year when goods/services will be procured;

Note 2 - Based on your organisation's procurement procedures, and in compliance with UNEP rules and procedures, briefly explain how the service provider/consultant/vendor will be elected

Position title: Project Manager

Reports to: Chief Director: Enforcement (DEA)

I. Major Functions

- The Project Manager (PM) will act as the head of the Project Management Unit and Executive Secretariat to the Project Steering Committee and will be responsible for all aspects of project management and coordination in collaboration with the national and international project stakeholders to ensure adequate project implementation. The Project Manager will also perform a range of technical tasks in support of project activities and will be directly responsible for the implementation of all components.
- The PM has the overall responsibility for the direction of the project, detailed work planning, financial management and the timely delivery of outputs including reports as well as coordination activities.

II. Major Duties and Responsibilities

The PM manages the project according to GEF and UNEP standards. He/she will be:

- Working closely with the Project Steering Committee to ensure proper management, including:
 - Reporting regularly to the Project Steering Committee.
 - Submission of all the required reports on time.
 - Operational management of the project according to the project document and UNEP and GEF guidelines.
- Working closely with and reporting to CD: Enforcement that is acting as the Secretariat and with primary responsibility to execute the project.
- Working in close collaboration with members of the Project Steering Committee and relevant UNEP staff to ensure that essential steps in the implementation of the project are undertaken in a technically sound, timely and transparent fashion. This includes:
 - Organizing and managing all project activities according to the work plan in order to produce the outputs in a timely manner; updating and regular reviewing of the project work plan.
 - Coordinating and participating in meetings of the Project Steering Committee.
 - Reviewing progress and financial reports.
 - Revising budgets and allocations to ensure project output delivery within budget.
 - Managing the M&E system for the project, including risk mitigation plan.
- Working in close cooperation with members of the project team and key partners and stakeholders, ensure the delivery of project activities. This includes:
 - Ensure organization of regional/international activities and partnerships.
 - Draft Terms of Reference and hire consultants and supervise their work.
 - Promote the project, liaise and engage with key stakeholders especially at the national, regional and international levels.
- Working in close cooperation with members of the Project Steering Committee, key partners and stakeholders, and UNEP staff to identify and actively cultivate additional national and international co-finance as the project develops.
- Prepare annual PIR (Program Implementation Reports), including updating of GEF tracking tools and any other reporting requirement for the GEF, as per instructions provided by the UNEP/DGEF
- Provide support to field missions by UNEP staff as well as to Mid-Term and Final External Evaluations.
- Prepare and implement a project's visibility plan to ensure adequate dissemination of project results and lessons learned.

III. Supervisory Responsibilities

- Supervise project staff and project consultants especially working at the national, regional or international level.

IV. Working Relationships

- The PM will report directly to CD: Enforcement and maintain a close relationship with UNEP.
- For the implementation of activities, he/she will establish and uphold close relationships with other related projects, both nationally and internationally;
- For project management and governance, the PM will work closely with the Project Steering Committee, including particularly representatives of the Department of Environmental Affairs, SAPS, other governmental bodies, as well as UNEP.
- The PM will also be in close contact with key stakeholders relevant for project implementation.

V. Minimum Qualifications

1. Knowledge/training

- Higher degree in Environmental Sciences / Conservation or related field.
- Broad background in environmental / conservation policies and regulations.

2. Experience

- Extensive experience (5-7 years) in biodiversity conservation, natural resources management and project management and implementation preferably with UN-implemented projects.
- Experience with GEF and UNEP policies and programs, especially on biodiversity/environmental.
- Experience in law enforcement and forensic procedures would be highly desirable.
- Understanding of international relations, governance and law will be an added advantage.

3. Skills and Abilities

- Proven ability to manage interdisciplinary professional staff
- Diplomatic and cultural skills to work with a broad array of individuals from a variety of cultural backgrounds
- Ability to work with government officials, corporations, NGOs and local communities
- Excellent oral and written communications skills in English
- Excellent organizational and time management skills
- Self-motivated personality
- Willingness to travel when necessary

Position title: Project Administrator

Reports to: Project Manager

I. Major Functions

- The Project Administrator will be part of the Project Management Unit and support the Project Manager, particularly in relation to the administration responsibilities.

II. Major Duties and Responsibilities

The project administrator will be:

- Meeting with the PM on a regular basis to provide project updates and share relevant information.
- Providing administrative and logistic support to the PM.
- Assisting with reports as needed.
- Establishing and maintaining the management system of the project's information.
- Following up on all correspondences, actions and deadlines.
- Preparing documents and materials for meetings and updating the tracking tools regularly.
- Providing logistical support for project workshops and meetings.
- Assisting in arranging programs for official missions and making appointments with stakeholders.
- Following up for progress reports, submission of reports and data and other material.

III. Minimum Qualifications

1. Knowledge/training:

- Four years administration experience
- Courses / qualification related to office administration

2. Skills and Abilities:

- Good oral and written communications skills in English
- Good organizational and time management skills
- Self-motivated personality

It is well known that many successful arrests and investigations are intelligence led. Collecting and analysing intelligence data can assist by providing new insights and revealing patterns not previously known such as the structure of a syndicate, links between members and possible relations to other syndicates. However, to get the most from intelligence and investigations information it is essential it is captured into a 'queriable' electronic format. A range of tools are available which allow for and facilitate data capture (such as incident recording) and analysis (such as the generation of multi-level graphical link charts showing relationships between people, vehicles etc.). Most of these tools allow for different levels of access with controllers governing who can enter, edit and analyse what data. Ideally original data that has been deleted or edited should always be able to be recovered to prevent any corrupt user causing problems for investigations and cases.

The table below provides a summary of the different intelligence/investigations databases and applications that can be used to capture, manage and analyse intelligence and case information. It primarily summarises much of the discussions and presentations on alternative tools at a recent (Sept 2012) Rhino and Elephant Interpol (sub-regional) Environmental Crime Working Group (RESG/Interpol ECWG). The table below also provides some brief information on some other databases or potential future tools relating to permitting, horn stockpile control, rhino DNA and transponders.

Historically, such database systems have often suffered from insufficient attention being paid to the analytical component. To get the most value from such systems requires having some staff with analytical skills; simply capturing information electronically is not much use if the data cannot be queried and analysed to provide new insights, determine patterns and linkages (eg members of a syndicate) or be used to provide guidance on which investigations or suspects to prioritise for attention. For such systems to work, they also need to be easy to use and cost-effective. It is also important that those providing and entering data get useful practical feedback, helping them do their job and incentivising them to supply more data. Such systems ideally also need to be tailor made to provide solutions to specific problems. This may require a full strategic analysis of the problem prior to customising the software tools.

The interim NWCRU has been using Memex in KNP to capture data and do some analyses. However, link charts are currently being produced using Analyst Notebook rather than Memex due to its ease of use. The Memex Lite licences made available to some provincial investigators with the interim NWCRU have not proved to be successful due to difficulty of logging in remotely, inadequate training provided by the company, difficulty of use, and the fact the Lite version doesn't have analytical capabilities and users have to submit requests for information to the data capturer/analyst based in KNP. This in effect creates two classes of user which is not an ideal situation for encouraging collaboration and sharing. It also limits how much analysis is done and how much new insight can be obtained. Just entering and submitting data (if they could log on) does not provide sufficient incentives to encourage provincial investigators to use this system to its full potential. Memex is also very expensive and has been tried and rejected by the Police's DPCI. In addition it appears that Memex has been bought out by another company and thus its future is uncertain.

The i2 Suite of products (includes iBase and Analyst Notebook) are probably the best known and these are in use by many police forces around the world. The i2 tools are currently used by TRAFFIC to assist with management of tiger data in Asia and are by SAPS DPCI staff in South Africa. Analyst Notebook is also being used to produce graphical link charts from data stored in Memex or the iBase database. In addition, a web-based application IntelliShare is available that has been designed to dovetail and link with iBase and Analyst Notebook. This application allows other users to securely input, find and analyse data. A forensic data recovery tool and software is also available (Cellebrite) which allows data to be captured and exported from recovered cell phones, so these can also be analysed using Analyst

Notebook. The i2 products have an advantage over Memex in that they are cheaper. Kenya Wildlife Service has obtained i2 products and is in the process of setting up a system in Kenya.

Onlineintelligence is a locally based but international company which provides a suite of integrated products allowing for the capture, management and analysis of intelligence and investigations data. Much of what its products do is similar to the i2 suite of products, but onlineintelligence have designed their products with the operational investigator in the field in mind rather than the computer savvy trained analyst at head office. One of its designers comes from a South African police and intelligence background and has indicated products were ostensibly designed in part because of frustrations and limitations with using Analyst Notebook. Onlineintelligence focuses on providing solutions with applications simply serving as tools to provide what is needed to achieve identified strategic and practical objectives. The company undertakes a full strategic business analysis before customising its applications for users. In addition to being able to provide training for users it can provide an analytical service until such time as in-house analysts are trained and up and running. Onlineintelligence products (like i2 products) are tried and tested and in use by many major corporations and businesses worldwide. In South Africa, they are being used in the national tourism safety initiative (which Nat Joints is involved with) as well as in the fuel retail industry and banking. An advantage of online intelligence products is their lower cost. At a recent RESG/Interpol ECWG meeting a company representative indicated that for dealing with wildlife crime it could provide 50 licenses for a cost R25,000 a month (or R35.000 a month if analysis was also being provided by the company).

Both i2 and online intelligence have relatively easy to use tried and tested products and further in depth comparisons between the two would be a useful precursor to identifying the strengths and weaknesses of the two sets of products.

Before opting for Memex, the KNP-based NWCRU staff tested an earlier version of the Access-based Wildlife Investigator (LawForce) that had been developed by Ezemvelo KZN Wildlife (EZKNW) and SADC Regional Programme for Rhino Conservation. However, due to limited funding and work pressures on the programmer, earlier versions were unfortunately very buggy, but the final version of Wildlife Investigator (WI1) produced by the programmer is largely bug free. The application's development was supported by the RESG/Interpol ECWG as a means to provide a free tool to investigators who otherwise would have nothing. It was designed to be very easy to use and captures much of the same data as more sophisticated products (such as i2 and online intelligence). It allows users to simply find information, look at links to specific objects such as a person or vehicle, as well as summarising data to produce a range of customised reports and graphs. It also has a case management section which has been used successfully by Zimbabwe's Lowveld Rhino trust. However, the application is slow and is not written on a secure platform and the transfer of data from satellite versions to a central version of the software has limitations. Cases are also not treated as discrete objects on their own in the underlying database, which would make the tool easier to use and more useful. While WI1 can list all the links to a specific object it cannot produce graphical link charts that the more powerful and sophisticated Memex, i2 or online intelligence products can deliver. A modified version of WI1 is in use by EKZNW and its marine coastal management section but elsewhere in South Africa WI1 is not being used.

At a recent RESG/Interpol ECWG meeting delegates from other range States decided they supported and favoured the development and roll out of an updated and improved version of Wildlife Investigator (WI2) that is more secure and web-enabled and has better functionality, which might be a more viable option for other range States that cannot afford more sophisticated options (such as Memex, i2 or online intelligence products. An RESG/Interpol ECWG working group has been set up and tasked with developing detailed specifications for a Wildlife Investigator 2 which can then be taken to possible programmers to produce. However this will require funding and to date only WWF's African Rhino Programme have shown an interest in supporting such an initiative. While the aim is to eventually provide the software free to users, it is possible that participating range States will have to commit to providing a dedicated data-capturer/trainer and analyst for a minimum specified period to ensure any roll out is a success and the product is used. It is likely that the South Africa will opt for a higher level suite of tools such as using i2 (already being used by DPCI and interim NWCRU) or online intelligence products if not continuing with the use of Memex. However, to try to

maximise and facilitate possible sharing of information between countries South Africa has a representative on the WI2 development working group.

Database/Software /App	Suite of products	Currently used by	Used for	Type of information held	Strengths	Weaknesses	Interacts with	Current information co-ordination and sharing
Memex	Was Memex but believe the company has or is being taken over	Interim NWCRU members in SANParks but with apparently only one dedicated data capturer/analyst based in KNP - Attempts to provide scaled down remote version to some wildlife investigators from other provinces haven't worked out, as very difficult to get through and access Memex without ADSL link the inadequate training given by company to users, limited functionality of scaled down version and its difficulty of use	<p>Storing and analysing interim NWCRU data.</p> <p>Can access whole suite of databases including SANParks' Room Seeker database and park entry and staff info.</p> <p>Can draw link charts but in practice Analyst Notebook is being used for this instead (as it is easier to use and can access data in Memex)</p> <p>Able to flag persons of interest in the system, send taskings to investigators regarding outstanding actions.</p> <p>System downloads information nightly.</p> <p>It can search for a name phonetically if the spelling is uncertain (fuzzy matches) and it can capture a typed or written documents, video recordings, GPS and cellphone data.</p>	Very powerful and can access a whole suite of databases including SANParks' Room Seeker database and park entry and staff info. Cell phone info	<p>Potentially very powerful analysis</p> <p>Can access data across a wide range of databases and applications including other software such as i2 products and Wildlife Investigator</p> <p>Has the capacity to trawl the web looking for links</p>	<p>Not easy or as intuitive to use as other products.</p> <p>Very (and for mass roll out prohibitively) expensive. Users can get stung with very high up front costs and then be locked into smaller but still significant annual license fees. This encourages people to stick with software as so much has already been invested in it.</p> <p>One off purchases of all the full licences currently in use by the National Wildlife Crime Reaction Unit including SANParks was R2 million and the annual maintenance fee is R150 000.</p> <p>One has to buy another full licence to be able to trawl the web.</p> <p>DPCI have tried Memex and rejected it as it failed. Thus not likely to be an option that everyone could link together on.</p>	A wide variety of databases and applications and can also trawl the web looking for possible links	<p>Managed by interim NWCRU staff at KNP .</p> <p>Successfully being used to determine who is connected to whom and building up pictures of structure of syndicates. However the relevant staff member in KNP has indicated Analyst Notebook currently being used (rather than Memex) to produce link charts as it is easier to use.</p> <p>Not really working in terms of getting information coming in from other agencies as system does not provide feedback and incentives to others to put data in. An investigator from another provincial authority cannot themselves query the data or even their own data they feed in.</p> <p>Having only one person who can access all data entered and do analyses limits what can be done. Also likely to bias focus on her own agency/park poaching.</p>

		<p>Data entered can be modified but the original document will always remain in the system</p> <p>Certain users can be blocked from accessing information and users can send messages requesting information from the database controller.</p>			<p>With apparent takeover of company Memex may be phased out and incorporated into another product suite</p> <p>Cut down remote access "Lite license" version available but not very useful as very difficult to log in remotely unless you have access to fast ADSL line. Also cut down version functionality very limited as users can't query data themselves or draw link charts. Instead they have to ask the data person in KNP to run a query or prepare a chart for them.</p> <p>Training provided by company to provincial investigators on using the Lite version was not satisfactory</p> <p>System of only having one person sitting in Kruger able to analyse and query data means investigators from other provincial agencies are effectively second class citizens expected to provide data but be unable</p>		
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					<p>to use and interrogate the data directly themselves (even only if they want to access only the data they themselves have put in). This does not incentivise and encourage users to input data.</p> <p>Ideally need dedicated analysts with experience of data analysis rather than primarily data capture. Lack of analysts a possible current limitation.</p> <p>What happens if license fee not paid? Does one lose access to all the data that have been captured into Memex?</p>		
iBase	<p>i2 (a company now owned by IBM)</p> <p>TRAFFIC (used in Asia to manage tiger intelligence and information) / SAPS DPCI</p>	<p>Crime information management database that allows you to enter, store, and if skilled undertake sophisticated queries of information.</p> <p>iBase has been designed to dovetail with other i2 products such as Analyst Notebook which is used to analyse and display results of queries and analyses of data stored in iBase.</p>	<p>Wide range of fields relating to incidents, species, suspects, vehicles, firearms etc</p>	<p>A tried and tested product worldwide and seems more user friendly than some other tools such as Memex.</p> <p>An SQL database allowing trained database users to undertake complex queries</p> <p>Easier to use to generate graphical link charts than Memex</p> <p>Security classification based on clearance level, job function and operational group</p> <p>Auditing, security and alerting functions empower</p>	<p>Need to understand and be trained in iBase to be able to ask complex database queries but easier to use tools provided for less technical users to enable more people to access data and get useful output</p> <p>What happens if license fee not paid? Does one lose access to all the data that have been captured into iBase?</p>	<p>All i2 products and can also sit on top of an query data from elsewhere (such as in Memex)</p>	<p>Links to web-based intelliShare allows many people to link in and put in data.</p>

		<p>Also can act as Action Management tool (eg as by National Wildlife Crime Unit in UK) letting users know what is being done by whom to prevent duplication.</p> <p>Can be used to assess underlying crime levels comparing baselines with other years and searching for where there have been spikes in crime in particular areas and looking for why this has happened.</p>		<p>collaboration</p> <p>Search 360 finds exact and fuzzy match variants across records, charts and documents</p> <p>Bulk import and export of disparate file types increases productivity</p> <p>i2 now owned by IBM – one of the world’s most successful and biggest IT companies</p> <p>Can give a name for people in a network and look for links between different networks</p> <p>Allows user to see how active different suspects are right now.</p>	<p>As with other systems crucial to have trained analysts to ensure the quality of the data is fit for purpose; the security of the data is continually monitored and that analysis adds value by providing new insights and helping prioritise investigations and providing actionable intelligence. A good analyst will look at the bigger picture and how things are happening and make recommendations on where to focus effort as well as identifying intelligence gaps. However this needs people with an analytical mind.</p> <p>As with all intelligence when dealing with transnational or inter agency issues there is a need for collaboration but concern with sharing data often precludes this.</p> <p>Not enough dedicated investigators mean they are overworked and do not have much time for data</p>		
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					capture or analysis			
Analyst notebook	2	<p>SAPS DPCI and indeed many police bodies around the world</p> <p>SANParks Interim NWCRU staff using it to draw link charts</p>	<p>Analyzing data that were obtained during investigations - For example can be used to draw link charts .</p> <p><i>Analyst's Notebook provides</i> assisted analysis and visualisation capabilities allowing analysts to quickly turn large sets of disparate information into actionable intelligence</p>	All information relating to crime trends and threats	<p>Very powerful as it has been tested in the court of law</p> <p>Comprehensive range of visualization and analytical tools including graphical link charts that deliver intelligence by quickly identifying connections, patterns and trends in complex data sets</p> <p>Can distinguish between confirmed and unconfirmed or inferred links and strength of links and reliability of information</p> <p>Use of different colours patterns and line thicknesses can be used to increase value of graphical outputs.</p> <p>i2 now owned by IBM – one of the world's most successful and biggest IT companies</p>	Inexperienced analysts Cost ?	Most electronic formats	Priority Crime Management centre
intelliShare	2	?	<p>Web-based platform for less technical users allowing them to securely enter, query and share information. Designed to dovetail with Analyst Notebook and store data in iBase Mapping capabilities</p>	Wide range of information on incidents, suspects, phone records, firearms, vehicles etc.	<p>Designed to be easy to use – Link charts can be produced</p> <p>Web base application provides instant access to the iBase database from any location</p> <p>i2 now owned by IBM – one of the world's most successful and biggest IT companies</p>		Designed to link seamlessly to iBase and Analyst Notebook	Not sure if in use in SA
Cellebrite	2	?	Can perform both logical and physical forensic data	Can access and recover information from over	Maintains data integrity by extracting information		Once extracted, this data can be	

			<p>extraction of data from recovered cell phones including the recovery of deleted messages and content.</p> <p>Designed to work with Analyst Notebook with latter being used to visualise data captured from cellphones, as well as finding interconnections between different phones, identifying duplicate contacts across multiple phones, and uncovering common associations.</p> <p>Used to drill down on large quantities of data to quickly identify phones that are key players in networks and transactions as well as identifying temporal patterns and trends in phone (eg using Analyst Notebook's Histogram and HeatMatrix capabilities to analyse data obtained by and imported using Cellebrite)</p>	2,000 handset models supporting CDMA, GSM, IDEN and TDMA technologies and a wide array of other mobile devices	in a "read only" format i2 now owned by IBM – one of the world's most successful and biggest IT companies		easily and directly imported into <i>Analyst's Notebook</i> for further analysis to uncover connections and relationships by layering the UFED telephonic data with other intelligence in <i>iBase</i> or <i>Analyst's Notebook</i> , users will be able to create a more detailed picture for deeper analysis.	
Wildlife Investigator 1	A EKZNW, SADC Regional Rhino Programme, RESG/Interpol ECWG project	A modified version is being used by EKZNW for Marine issues. Wildlife Investigator	Storing information on incidents, suspects/people, weapons, species, vehicles, front businesses,	Information on incidents, people, weapons, vehicles, aircraft, vessels,	Very easy and intuitive to use It was free Could easily produce basic reports and get	Original programmer overcommitted and for the most part unfunded meant lack of support and	Standalone but data captured in WI1 could be accessed by	Satellite and Central versions of the software. Satellite stations can only query their own data but can export their data to a central

		<p>1 not really being used in SA but is being used by Lowveld Trust in Zimbabwe and they in turn have been able to assist Zimbabwe Parks by providing answers to their case management queries.</p> <p>At a recent RESG/Interpol meeting delegates from Botswana, Malawi, Swaziland, Mozambique Tanzania, Uganda, and Zimbabwe Wildlife supported the development of a revised Wildlife Investigator2 .</p>	<p>aircraft, boats etc and then storing information on links between these different objects.</p> <p>Also can store information on cases and assist with case management.</p> <p>Can also link to electronic documents and associated photos.</p> <p>Software has very easy to use menus and radio buttons that can be used to query data to produce a range of graphs and reports. Can also ask for a table that gives all the links to a specific object such as to a person or to an incident etc.</p>	<p>businesses and species as well as information on cases , Can also link to photographs and online documents</p>	<p>tabular report on all links to a specific object like an incident or person or firearm.</p> <p>Customisable for different organisations</p> <p>Context sensitive online avi videos assist users use the software</p> <p>Drop down menus also customisable</p>	<p>product not properly serviced. Versions that were released were often so buggy putting users off and tool largely not used because of this. Current and final version largely bug free but missing some functionality.</p> <p>Cases not seen as separate objects in database which is a structural problem as could have many different incidents related to a single case. Would be better to have cases as separate objects.</p> <p>W11 programmed in Access which is not secure and very slow.</p> <p>W11 cannot draw graphical link charts</p> <p>W11 cannot flag and warn users when they input data on a "hot" suspect or vehicle which has been flagged by another user.</p>	<p>Memex if required</p> <p>Information captured by satellite versions can be sent to a central version allowing data from many areas to be analysed centrally by someone with high level authority.</p> <p>Other satellite users can be restricted to seeing and analysing only their data.</p>	<p>version that can analyse and query all data received from all the satellite stations.</p> <p>Data in W11 could be accessed by Memex if required</p>
Wildlife Investigator 2 (to be developed)	An RESG/Interpol project	Still to be developed but the go ahead for its development and use given by RESG/Interp	Storing information on incidents, suspects/people, weapons, species, vehicles, front businesses,	Information on incidents, people, weapons, vehicles, aircraft, vessels,	Plan is to provide this free to users (although there may be a proviso that each country using it commits to providing at least one full-time	Sufficient funding needs to be secured to complete detailed specifications and to then fund	Standalone but potential to enable other tools to access data.	Data to be stored in a single database but with different users having access rights to different amounts of information.

		<p>of ECWG representatives from Botswana, Malawi, Mozambique Swaziland, Tanzania, Uganda, and Zimbabwe at the recent RESG/Interpol ECWG meeting. Namibia has also agreed to join working group to develop specifications for WI2. Although it will use other tools, South Africa also has a representative on the specifications working group.</p>	<p>aircraft, boats and possibly phones etc and then storing information on links between these different objects. Also planned enhancements to storage and information on cases. Will allow links to electronic documents and associated photos.</p> <p>Improvements proposed to menu driven queries to produce a wider range of graphs and reports of the data.</p> <p>Ways to improve reporting and display of links will also be investigated.</p>	<p>businesses and species as well as information on cases. Can also link to photographs and online documents</p>	<p>controller/data capturer/analyst/trainer for a specified period of time)</p> <p>Compared to WI2 will be much faster and more secure with data accessible in a cloud.</p> <p>Will have better case information management system that have a more appropriate database structure</p> <p>Will have improved reporting and graphing and investigate ways in which link information can be displayed.</p> <p>Users in one country could be automatically alerted if they input data on any "hot" suspects, vehicles etc. that have been flagged by users in other countries.</p>	<p>production and testing of tool and its subsequent deployment in range States (with associated training). Cannot produce a proper professional and debugged tool without sufficient funding. Minimal funding was the Achilles heel of WI1. However WWF African Rhino Programme has expressed interest.</p> <p>Improved audit record on data entry and editing compared to WI1.</p> <p>Improved security and variable access levels for different users</p>	<p>Countries will only have access to their data but plan is for system to automatically alert users if they enter data on a "hot" suspect or vehicle that someone from another country has flagged.</p> <p>An RESG/Interpol ECWG working group with nominated representatives from all participating countries has been set up (SA is also represented on this given the desire for systems regionally to dovetail and be as compatible as much as possible).</p>	
<p>Occurrence Book</p>	<p>Online intelligence</p>	<p>Not currently used for wildlife crime investigations in SA but many significant clients and businesses globally use the products. Locally being used by SA Tourism Safety Initiative which Nat Joints is involved with), Barclays Bank (starting with ABSA and will now be rolled out</p>	<p>Similar uses to i2 suite of products – used to capture and store crime intelligence and incident information and allows for analysis and display and sharing of results.</p> <p>However online intelligence products designed very much with the operational person in mind (and not just technically</p>	<p>Wide range of fields relating to incidents, species, suspects, vehicles, firearms etc</p> <p>Suite of products is in many respects similar to i2 products in terms of having a database, an analysis component and a web based application.</p>	<p>Cheaper than alternatives</p> <p>Although company is international, company is locally based and software developed in SA with a senior manager who previously worked for SA intelligence and police.</p> <p>Designed to provide warnings on the fly and not only rely on user queries.</p> <p>Can encourage sharing of information</p> <p>Has online and offline capability where there is not</p>	<p>Not currently used by police and investigators working on wildlife crimes in SA.</p> <p>As with other products needs dedicated and skilled analysts.</p> <p>Not enough dedicated investigators mean they are overworked and do not have much time for data capture</p>	<p>Like i2 products all online intelligence products designed to dovetail seamlessly together.</p> <p>Designed to allow import of historical data captured using other databases.</p>	<p>User groups can determine the extent to which data or warnings are shared. Sharing can be widespread if needed such as in tourism or fuel station industries</p>

	<p>international ly), and Petrol Stations throughout the country.</p> <p>While a locally developed product and company there is an international client base.</p> <p>Also concerned with trying to use intelligence tactically.</p>	<p>skilled analysts).</p> <p>Online intelligence focus is very much on providing solutions with applications as tools to achieve this rather than the applications being seen as an answer in their own right.</p>		<p>cell phone coverage. Data can be sent later once the investigator has cell phone comms.</p> <p>Has mobile capacity as well as offline capability.</p> <p>Users are automatically alerted if they input data on any "hot" suspects, vehicles etc. that have been flagged by other users.</p> <p>Graphical Link charts produced quickly and easily up to 10 levels.</p> <p>Designed and developed to be easy to use with field user and investigator in mind rather than highly educated analysts. Developed by people familiar with Analyst Notebook but who were frustrated with some aspects of it.</p> <p>A strategic assessment of objectives a key precursor to tailor-making data input and analyses – Not just a software package but designed to be an integrated solution</p> <p>Cheaper to get multiple licences than other products.</p> <p>Can include online SAPS Affidavit screen with e-statements filed online (used in SA Tourism safety application).</p> <p>Successful track record with other</p>			
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				<p>industries such as SA Tourism, banking, petrol stations etc. Clients include 220 large corporate companies around the world</p> <p>Can link to other databases such as Memex</p> <p>Can have fuzzy matches like i2 and Memex</p> <p>Database independent – can use SQL, Oracle, Linux etc.</p> <p>Training available</p> <p>Company can also for a fee also provide an analytical service while you wait to get your own in house analysts trained and up to speed.</p> <p>Audit trail of who has entered, edited or deleted what.</p>			
<p>Risk Manager</p>	<p>onlineintelligence</p>	<p>Used for analysis of data stored by Occurrence Book. Searching for trends, patterns and hotspots to facilitate being proactive in future.</p> <p>Allows easy preparation of graphical link charts and a number of different levels and profiling of suspects.</p> <p>Mapping capabilities</p>		<p>Seeks to give back and encourage operational people who provide most of the data (on the basis that people need to see value from providing data and need to see what is being achieved to continue to want to participate fully.</p>			

<p>Pimp</p>	<p>Onlineintelligence (company has total of eight applications)</p>	<p>Employee reference system designed to dovetail with other onlineintelligence products.</p>		<p>Helps ensure someone fired elsewhere in industry is not re-employed somewhere else.</p>			
<p>Blackberry Incident Reporting App</p>	<p>Stoprhinopoaching.com with DPCI Endangered Species and programmed by AfriGIS</p>	<p>Data and photo collection at crime scenes; generation of incident reports in the field and remote transmission of these reports. Also some mapping capabilities</p>	<p>Crime scene data capture and reporting, investigation data, visual data, management and prediction data</p>	<p>Allows investigators in the field to record crime scene information and remotely send incident reports from a smartphone in the field.</p> <p>The use of templates for filling in incident reports can help ensure all necessary information is captured.</p> <p>Photographs and GPS positions of crime scenes can also be easily captured and sent.</p> <p>Electronic docket and incident reporting obviates the need for later report preparation back at the office reducing bureaucracy.</p> <p>Has mapping capacity and allows for some geographic analysis.</p> <p>Has offline capability where there is not cell phone coverage. Data can be sent later once the investigator has cell phone comms.</p> <p>Data submitted to Memex and can be analysed. (However could easily be submitted to other platforms such as i2 or onlineintelligence products too if desired)</p> <p>Not everyone is a</p>	<p>Is for collecting and sending data, photos and especially incident reports from the field, not analysis.</p> <p>Most analysis to be done using other tools such as Memex, Analyst Notebook etc.</p> <p>Management, prediction and communication tool</p> <p>Concerns about the long term future of the company that produces BlackBerry's</p>	<p>BlackBerry groups</p>	<p>Via stoprhinopoaching.com and DPCI Endangered Species</p>

				<p>boffin with a phone so attention has been paid to user interface to allow users to enter large amounts of information quickly.</p> <p>Data encrypted on phone so information is secure even if the phone is lost.</p> <p>Some Blackberry phones with the app have been and are being provided to select police and wildlife investigators.</p>			
SMART?					Appears designed more for collecting general patrol and biological data rather than confidential intelligence and crime scene information (i.e the people primarily using SMART are not police and investigators).		

OTHER DATABASES WITH RELEVANT INFO?							
RhoDIS DNA database?	VGL	Maintaining information on genetic samples which facilitates calculating % chance of match to samples in the database	DNA profiles and metadata associated with sample	A very important tool for police. Investigators and prosecutors. Allows samples of recovered horn, blood, etc. to be matched to an individual rhino. Many uses of this information.	Need more secure funding and more equipment to allow more samples to be processed per day.	Standalone	
TRAFFIC rhino horn stockpile database	DEA	Holds data on national rhino horn stockpiles	Horn ID, weight, origin			Standalone?	
Electronic permit system	TO BE DEVELOPED (for National and provincial	Storing information on permit applications				Needs to link to all above and intelligen	

<p>Integrated National Rhino Database system</p>	<p>use) Not in existence</p>	<p>Possible future project ?</p>	<p>Storing a range of information that can be analysed to detect possible areas for investigation. For example if someone's rhino population has declined by 30 animals there should be either mortality or translocation data that explains the decline. If there is not this could be flagged for investigation.</p>	<p>Information on hunts, permits, numbers, translocations, mortalities, VGL sample numbers, transponders and rhino numbers</p>	<p>Cost</p>	<p>ce systems need to be able to dovetail with permit data</p>
<p>MicroTrack (Controller and Field versions)</p>	<p>EKZMW but been made available to RESG/Interpol ECWG members free of charge</p> <p>EKZMW but recently made available free of charge to all agencies attending recent RESG/Interpol ECWG meeting</p>	<p>Controlling Microchips within an organisation and keeping record of orders and which chips were distributed to where.</p> <p>Also field version of the software where use and recovery of microchips can be recorded and specific chips can be searched for.</p>	<p>Chip number Station chip sent to Date of use Species Location of chip</p>	<p>Helps ensure transponder distribution is coordinated and controlled within an organisation.</p> <p>Chip numbers can be scanned in by controller using receiver with chips given shorter ID numbers to allow for easier capture of use data in the field with less chance of transcription error.</p> <p>Allows user to quickly see if a recovered chip number is on the database</p>	<p>Cost</p>	<p>Helps coordinate issuing and record keeping and searching for transponders. Could be expanded to provide a higher level national or international version which would indicate who to contact should a transponder be detected.</p>