Department for Environment Food & Rural Affairs

Illegal Wildlife Trade (IWT) Challenge Fund Annual Report

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Important note: *To be completed with reference to the Reporting Guidance Notes for Project Leaders: it `is expected that this report will be about 10 pages in length, excluding annexes*

Submission Deadline: 30th April

IWT Challenge Fund Project Information

Project Reference	IWT010
Project Title	Securing rhino populations with effective law enforcement and Impact Bonds
Country/ies	Kenya
Contract Holder Institution	Zoological Society of London
Partner institutions	Kenya Wildlife Service (KWS); Equilibrium Research; Biglife Foundation; Seven Technologies Group.
IWT Grant Value	£480,471
Start/end dates of project	April 2015 – March 2017
Reporting period (e.g. April 2015-Mar 2016) and number (e.g. Annual Report 1,2,3)	April 2015 – March 2016. Annual Report Y1
Project leader name	Chris Gordon
Project website	n/a – see www.zsl.org; www.kws.go.ke
Report author(s) and date	Chris Gordon, Karen Ross, Richard Moller, Louise Hartley, Cedric Khayale, Linus Kariuki – 30th April 2016

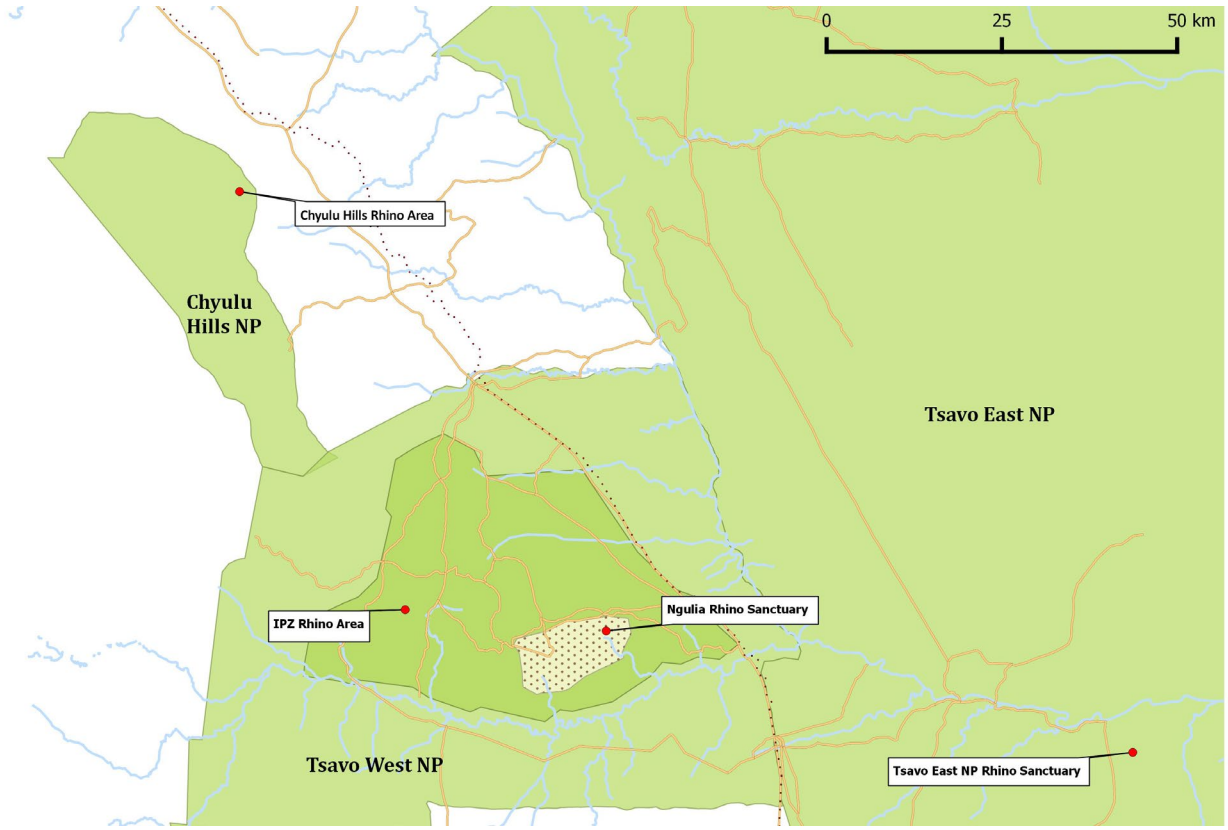
1. Project Rationale

Demand for rhino horn, resulting in poaching, continues to be the major threat to the Critically Endangered Eastern black rhino. During the 1970s and 80s, rhino and elephant numbers in Africa declined drastically. In Kenya alone, black rhino dropped from 20,000 to less than 300. Their numbers have been steadily rising over the past two decades but once again, Africa faces rampant elephant and rhino poaching. In 2013, Kenya lost 59 rhino to poaching, up from 30 in 2012. With approximately 650 black rhino remaining, these losses are unsustainable. This project addresses two key problems facing Kenya in its efforts to tackle wildlife crime:

1. Inadequate financial resources. The Government of Kenya, through KWS, is committed to securing their wildlife, with significant resources put in place, including a 400-strong ranger force dedicated to rhino protection, but more is required. KWS is currently not financially self-sustaining and at times some activities are not undertaken due to financial constraints. KWS's protected area (PA) management budget is c. US/year per Protected Area (PA) on rhino-related activities.
2. Lack of capacity. There is a need to improve law enforcement and rhino monitoring capacity. Kenya has in place a law enforcement training academy (Manyani) for government, private and communal rangers and officers. This institute lacks up-to-date knowledge on some law enforcement technologies and methodologies, e.g. adaptive patrol monitoring and evaluation tools.

Successfully tackling illegal wildlife trade requires a holistic approach. This project will address key elements including increasing financial resources, improving park operations and management, improved law enforcement and monitoring capacity, enhanced intelligence on poacher movements, better trained frontline rangers, and rapid response capabilities to react to poaching incursions.

This project is being implemented in the Tsavo Conservation Area (TCA), comprising three national parks: Tsavo West; Tsavo East; and Chyulu Hills. The TCA makes up 49% of Kenya's PAs and has massive growth potential for recovery of wildlife numbers. The TCA contains wide ranging elephant populations, and four key rhino sub-populations: Ngulia Rhino Sanctuary (NRS) and the Intensive Protection Zone (IPZ) of Tsavo West; Mukururo rhino area in the Chyulu Hills; and the new Tsavo East Rhino Sanctuary.



As of 2013, Kenya conserved 79% of the Critically Endangered Eastern black rhino, with room for expansion. Due to its size and suitable habitat, KWS considers the TCA to be the most critical area to secure a large viable population of black rhinos in future, since most of Kenya's enclosed rhino sanctuaries have attained their estimated carrying capacities. The TCA as a recipient site for surplus rhinos from overstocked populations, originally by stocking a second rhino sanctuary in Tsavo East National Park, would significantly contribute to Kenya's vision of at least 2,000 black rhinos in the wild. In addition to surplus rhino imports, the TCA is expected to see the growth of rhino numbers at a rate of over 4% growth per annum. This project will enhance protection of 18% of Kenya's black rhinos, and has additional benefits for elephants that utilise these protected areas. Growing rhino and elephant populations in the TCA depends on resolving all aspects of the Illegal Wildlife Trade (IWT) puzzle.

In addition to wildlife within the TCA, the major beneficiaries from this project will be the KWS and the local communities around the Chyulu Hills and the Tsavo PAs. KWS will benefit by having well trained and motivated rangers and officers. All employees of KWS are Kenyans, thus improving capacity in country for effective protected area management. Training the trainers will ensure capacity is ultimately delivered to hundreds of individuals. Such training and the use of law enforcement tools to strengthen intelligence gathering, will also help to improve ranger safety in the field. Training of Biglife rangers in the Chyulu Hills will provide increased capacity and knowledge to the indigenous Maasai people of this area. This project will monitor the number of local persons who receive capacity benefits from this training through social surveys.

2. Project Partnerships

The project partners communicate and collaborate on three levels: 1. Site-level collaborations within the TCA between KWS, ZSL and Biglife Foundation; 2. National-level collaborations with KWS at a head-quarter level and ZSL; 3. International-level collaborations between ZSL and other partners including Equilibrium Research.

Site level meetings happen on a monthly basis for Tsavo West NP between KWS and ZSL (see supporting document sd01-05), where our initial focus on delivery has been, with quarterly meetings occurring within the Chyulu Hills between KWS, Biglife and ZSL. Delivery of activities within Tsavo East NP has been setback by the delays in completion of the Tsavo East rhino sanctuary. Consequently, meetings within Tsavo East have been limited to two during year one of this grant. As delivery of intervention activities in Tsavo West have expanded, monthly planning meetings have evolved into planning, review and feedback meetings to the rhino ranger units on the ground. KWS and ZSL teams are working together very closely on the ground with at least 7 days per month of interactions in Tsavo West NP. All three National Parks received a 3 day visit from Equilibrium Research to work through completion of the Management Effectiveness Tracking Toolkit (METT) assessments (sd06-08).

ZSL held an inception meeting at the start of the project with the Rhino Programme Coordinator for KWS, the Senior Scientist for Tsavo West NP, and with a senior instructor at Manyani law enforcement academy at KWS head-quarters to plan for upcoming activities. Follow-up meetings have occurred at least once every two months. These meetings have been important to allow for the adaptation of activity delivery because of delays in completion of the Tsavo East rhino sanctuary, and the issues that have arisen with regards to the external delivery of trainings at Manyani Training academy.

KWS completed a mid-term review of the Kenya black rhino national strategy (sd09-10), to review progress against each activity, to which ZSL and all national-level project partners were invited. Three members of KWS attended the IUCN African Rhino Specialist Group meeting in South Africa in February 2016 to discuss population and poaching results with colleagues from wildlife authorities and conservation actors from across the continent (sd11).

ZSL has engaged with partner Seven Technologies Group (7TG) to arrange the manufacture of Instant Detect (ID) systems (formerly called Instant Wild). These systems will be used in Tsavo East Rhino Sanctuary to enhance law enforcement capacity through providing real-time alerts and intelligence on poacher movements. The ZSL Conservation Technology team in London held three meetings with 7TG during Y1 to agree and plan for equipment manufacture, deployment and ranger training. As part of separate projects, ZSL and 7TG have worked together on two other ID system deployments in Kenya and Tanzania in the past year. Deployment reports prepared by 7TG and ZSL and the feedback received from the two sites will inform best practice installation and use in Tsavo East. Seven ID systems have now been manufactured for deployment by 7TG as a Y2 activity (sd32).

3. Project Progress

3.1 Progress in carrying out project activities

Assessments and evaluations have been conducted at three levels to gather baseline understanding for this project, and to help design project activities further.

Output 1: Management Effectiveness Tracking Toolkit (METT) self-assessments were conducted for all three National Parks in the TCA: Chyulu Hills, Tsavo West and Tsavo East. Prior to METT assessments, two presentations were given by Nigel Dudley from Equilibrium Research to socialise the idea with the senior park staff, and to explain the process and what it would achieve. These are self-assessments by senior park staff and partner organisations to assess Management Effectiveness of 30 columns of Protected Area management (also facilitated by Nigel Dudley). These METT assessments highlight the gaps in management and encourage management to think about and plan activities to address these gaps.

Output 2: In April 2015, KWS and WWF conducted a mid-term review of the Kenya Black Rhino National Strategy to understand the monitoring status and capacity at all rhino sites nationally. A stakeholder workshop in April 2015 allowed all stakeholders, including all national-level project partners, to feed into this process which involved a site-by-site assessment of rhino monitoring standards and capacity. Rhino monitoring protocols were evaluated by KWS and ZSL and a Standard Operating Procedure was developed for the Tsavo sites. Cedric Khayale, the Senior Rhino trainer within KWS, assessed the standard and number of rhino monitoring trainers in each site. All four sites within the TCA have had rhino monitoring “trainers” deployed at site to lead monitoring efforts, train rangers, analyse the KPIs, and write reports.

Output 7: Social surveys were designed by Dr. Mwangi Githiru of Wildlife Works (a Tsavo-based livelihood development company), with input from Sarah Thomas, Head of Discovery and Learning, and Nisha Owen, EDGE Programme Manager, both from ZSL. These social surveys test perceptions of the National Park, Conservation efforts, Security, Corruption, Trust and Conflict. Baseline social surveys have been conducted in 3 local communities surrounding the TCA. The surveys are currently being written up and should be finalised by May 2016. The project end surveys will be delivered in the same communities and households during Y2.

Law enforcement and rhino monitoring systems have been designed, trained, assessed and delivered to rhino areas in the TCA.

Output 3: KWS underwent senior management changes throughout the year, as the board reviewed KWS management structures. During this time, KWS were reluctant to allow any project activities associated to such a sensitive component of operations as at Manyani Law Enforcement Academy. Following the review, a new Director General and a new Head of Security were appointed to the organisation in late 2015. Discussions on this output were held with relevant personnel, and KWS informed the project that they would not be comfortable with any external influence of training curricula at a para-military training academy. Due to the lateness of this decision by KWS, a change request form will be submitted to DEFRA. Law enforcement and rhino monitoring systems have been designed for implementation in the TCA, building on best practice knowledge from similar areas, and on lessons learned from the mid-term review and METT assessments. KWS and ZSL refined the Standard Operating Procedures for rhino monitoring to ensure that they were relevant and specific to each rhino site.

The project has had to adapt its delivery on this output to be predominantly site-focused. Tackling IWT effectively requires a broad range of actions including improving park operations, management effectiveness, improving law enforcement monitoring, target species monitoring, intelligence gathering, community support, and rapid response capabilities. ZSL and KWS held the majority of trainings at site. However, during March 2016, KWS conducted a 45-day training course at Manyani Law Enforcement Training Academy in advanced operations and rapid response skills (sd34), to allow the deployment of two rapid response ranger units for poaching incursions or intelligence operations. ZSL ran a 5-day training for key project personnel from the TCA and KWS HQ in use of SMART software for monitoring law enforcement effectiveness. Four rhino trainers were selected for the four rhino sites in the TCA, and these individuals received on-site training from both KWS and ZSL in rhino monitoring, GPS tracking, data collection, SMART, 'Kifaru', Critical Sightings Intervals, and reporting on project progress. Rhino trainers have been familiarised with the new Standard Operating Procedures that were developed (sd12). Further training was provided to 100 rangers on rhino monitoring, rhino ID skills, GPS tracking and data collection by the four rhino trainers, the KWS Senior rhino scientist, and by ZSL (sd01, sd28-29). These activities were delivered to improve rhino monitoring.

Output 4: The Manyani Training Academy assessed all participants during the KWS Rapid Response Unit training, and only those passing the course criteria graduated from the course (sd34). Participants in the ZSL SMART training course were evaluated and assessed by ZSL's SMART trainer, and those passing the course were issued with certificates. A ranger effectiveness scoring system (sd24) was designed by all project partners to be used on a monthly/quarterly basis to score performance of every ranger in the target platoons. This scoring will be a reflection of understanding of GPS tracking and data collection, and of ranger performance. With the recent completion of the rhino ID booklets, coupled with the training of rangers on rhino monitoring, rangers will now be tested monthly on knowledge of the individual rhinos in their area – this will be conducted via spot testing of a random number of rhinos per month.

Output 5: Due to Ngulia being the largest and most important rhino population within the TCA, activities during Y1 have focused on setting up, training and testing the law enforcement and monitoring systems for Ngulia before expanding these concepts to the three other rhino areas of the TCA.

Ngulia required infrastructure upgrades at the request of KWS to ensure that reporting and monitoring systems could be effectively delivered. A new office, equipment store and solar system (sd33) was built with funding from the IWT Challenge Fund, the Google Impact Award, AWF, ZSL and the Rhino Impact Investment project. This infrastructure makes the rhino areas totally self-sufficient and able to report on rhino monitoring and law enforcement effectiveness, to communicate 24/7 with its ranger platoons using the newly installed digital radio networks, and to monitor and manage Instant Detect systems 24/7 due to an improved power system.

Rhino "trainers" have been identified for all four rhino areas of the TCA, and trained on the Standard Operating Procedures, and the new systems for rhino monitoring and reporting. These individuals have then trained the rangers at site, with support from ZSL (sd28-29). Extensive ranger training has been conducted with the platoons in the Ngulia and Mukururo rhino areas, with efforts now scaling up into the

IPZ. All ranger outposts in each of the four rhino areas have been furnished with two GPS devices, binoculars, solar charging units and rechargeable batteries to allow for quality data collection. Having multiple GPS devices per ranger block allows for easy management of data collection – the rangers hand in the GPS they have been using for the past 10 days, and receive a clean GPS to use for the next 10 days. The rangers have all received pocket-sized rhino ID booklets complete with rhino monitoring guidance notes (e.g. sexing/ageing/identifying rhinos) as well as individual ID sheets for each rhino within their rhino area. The monitoring team is using a combination of foot patrols and camera trapping to effectively monitor these rhino populations, with camera trap images clearly able to demonstrate individual rhinos (sd17, sd19, sd21). An incentive scheme linked to monthly reports and the ranger scoring system (sd24) will see rangers rewarded with additional equipment (e.g. camping bed / canvas bed roll / multi-tool) for being the best performing ranger in that section over the month / quarter.

Two monitoring vehicles have been purchased – one has been deployed in Ngulia, with the second destined for the Tsavo East rhino sanctuary, but initially supporting the IPZ area. Having a dedicated vehicle for rhino monitoring allows the rhino rangers to operate and maintain camera traps, monitor the rhino population, and collect and feedback to ranger units regularly. ZSL will continue to support these new monitoring procedures throughout the life of this project and beyond with the upcoming Conservation Impact Investment (CII) project (formerly the Rhino Impact Bond) and further pipeline projects. The IWT Challenge Fund project has acted as co-financing to leverage additional funding under the CII project. This project will support the development of the IPZ rhino base, as well as provide a third monitoring vehicle for the IPZ, as well as upgrade the ranger outposts in Tsavo West.

Collecting real-time intelligence on poacher movements will improve the ranger's ability to rapidly respond to poaching incursions, building on their increased law enforcement capabilities.

Output 6: The delivery of this activity has been moved to Y2 due to the delays in the completion of the Tsavo East Rhino Sanctuary. Originally due for completion in early 2015, it will now only be complete in mid-2016 due to KWS procurement issues delaying the the fencing and water infrastructure for the sanctuary. DEFRA were informed of these delays during the Half-year report (sd30) and through a project alteration request. The ID systems have been manufactured in the UK by project partners, 7TG. These systems will be shipped to Kenya so that rangers can be trained on their use during September 2016. To ensure progress towards outputs for this activity in Y1, despite the Tsavo East rhino sanctuary delays, this project has supported the ongoing running of ID systems already setup in Ngulia Rhino Sanctuary, Tsavo West through covering data transmission costs. Learnings from Ngulia will help ensure that systems in Tsavo East are effectively deployed and managed.

3.2 Progress towards project Outputs

Assessments and evaluations were conducted at three levels to gather baseline understanding for this project, and to help design project activities further.

Output 1: METT reports were published and disseminated to all partners (sd06-08). The documents highlight the gaps in management effectiveness, and most importantly encouraged park management to complete a next steps strategy process. Output will be completed in project timeline.

Output 2: A mid-term review of the Kenya Black Rhino National Strategy was completed and published by KWS and WWF (sd09-10). This review included a site-by-site assessment of the state of each rhino area, and the standard and number of rhino monitoring trainers in each site as part of the mid-term strategy review. Rhino monitoring protocols were evaluated by KWS and ZSL and a Standard Operating Procedure was developed for the Tsavo sites (sd12). Standard Operating Procedures will be finalised for Tsavo East and Chyulu Hills during Y2. The Output will be completed in project timeline.

Output 7: A short report on the social surveys is available (sd31), while the surveys are being analysed and reported on. The team collected data from 224 households in about 100 villages across the three general study sites (Kibwezi, Maktau and Rombo) bordering the TCA. Overall, the majority (96%) of the 224 respondents were Kamba (35%), Maasai (31%) and Taita (30%). There was a difference across the study sites with the majority of those interviewed in Maktau, Kibwezi and Rombo being Taita (92%), Kamba (97%) and Maasai (95%), respectively. Further data analyses are underway and the final draft report is due out before the end of May 2016. The project end surveys will be completed in Y2, and so the analysed report should be available before the project finishes.

Law enforcement and rhino monitoring systems have been designed, trained, assessed and delivered to rhino areas in the TCA.

Output 3: KWS conducted a 45-day training of 44 rangers at Manyani Law Enforcement Training Academy in advanced operations and rapid response skills, to allow the deployment of rapid response ranger units (sd34). 31 of the 44 rangers successfully graduated from the course. Two rapid response units have been deployed by KWS in Tsavo and Central Kenya; these units will be able to provide rapid support to 70% of Kenya's rhino population.

ZSL ran a 5-day SMART training course for 14 personnel from the TCA, including two female operators (sd26). All 14 persons passed the course and were presented with certificates (sd27). 50 rangers were trained by Cedric Khayale, KWS' head rhino trainer, over three days in rhino monitoring and ID skills. This number included all three women from the Ngulia rhino platoon (sd28). Four rhino trainers were selected for the four rhino sites in the TCA. These four trainers and 100 rhino rangers received on-site training, as outlined in section 3.1. Further trainings will be conducted in Y2 for all the rangers in the rhino areas, with repeat rhino monitoring trainings, and on-the-job trainings for the rhino "trainers". This output will need to be altered slightly to reflect the fact that trainings will be focused on site-level training. The output will be completed in the project timeline.

Output 4: All 14 KWS participants in the ZSL SMART training course were evaluated and assessed by ZSL's SMART trainer, and were issued with certificates for completion of the course (sd26). The ranger effectiveness scoring system (sd24) has been used to rank rangers performance each month, with top performing ranger receiving an equipment-based incentive. Average ranger scores per month have increased from under 10% during the baseline month of January, to 17% in February, and 21% in March (sd22-23). Scoring of rangers for law enforcement performance and rhino ID knowledge will be conducted monthly throughout Y2, and expanded to all areas of the TCA. This output will be altered slightly to reflect the fact that trainings will be focused on site-level training. The output will be completed in the project timeline.

Output 5: Rhino "trainers" have been identified for all four rhino areas of the TCA, and received training on the Standard Operating Procedures, as outlined in section 3.1. Cumulative distances covered per month by ranger sectors has increased 500% from baseline in January to February, and a further 200% from February to March (sd22-23) – a total of 1000% increase in cumulative patrol distances. The number of individual rhinos that are being IDed per month in Ngulia has risen from a baseline of 15 per month in December 2015, up to 63 per month in March 2016. A total of 78 rhinos have been confirmed, and can be independently verified, in Ngulia since interventions began at the start of 2016. Average sightings intervals for the Ngulia rhino population has dropped from a baseline of 157 days in December 2015, to 81 days in March 2016. The output should be completed in the project timeline, but the outcomes might take longer to demonstrate. The work of the IWT Challenge Fund will be continued by the CII project, and so these outcomes will still be able to be demonstrated past project completion.

Collecting real-time intelligence on poacher movements will improve the ranger's ability to rapidly respond to poaching incursions, building on their increased law enforcement capabilities.

Output 6: The ID systems have been manufactured in the UK by project partners, 7TG (sd32). These systems will be shipped to Kenya so that rangers can be trained on their use during September 2016. This output is behind schedule but all activities will be completed during the project timeline. It might be difficult to demonstrate much towards the intended outcomes as there will be relatively little time with the systems in the field during the project period. In addition to the Tsavo East rhino sanctuary deployment, systems in Ngulia rhino sanctuary will continue to be used and evaluated by KWS and ZSL.

3.3 Progress towards the project Outcome

Outcome *Enhanced, effective training of Kenya Wildlife Service law enforcement, and rhino monitoring personnel, combined with deployment of real-time surveillance and monitoring systems, will advance intelligence gathering, law enforcement effectiveness, and monitoring of rhino populations, leading to increased number of prosecutions, reduced poaching, and ultimately increased rhino numbers. Focused implementation of this training in key black rhino strongholds within the Tsavo Conservation Area (TCA) will provide necessary enabling conditions for long-term investment through Rhino Impact Bonds.*

There are three major outcomes desired by this project: improving law enforcement and rhino monitoring effectiveness across the TCA, deployment of real time surveillance and monitoring systems, and raising sustained financing for the TCA.

The IWT Challenge Funds for this project have contributed as co-financing towards approval of UNDP/GEF funding, allowing for the launch and implementation of the pilot phase of the Conservation Impact Investment (CII) project (formerly the Rhino Impact Bond). The CII project will develop innovative

financing mechanisms to raise significant long-term funding to tackle conservation issues. This pilot phase is focused on raising funds for rhino conservation, but the principles of the concept can be applicable to a range of potential conservation issues. The pilot phase allows ZSL and its partner, UBS, to develop the financing mechanism for raising novel financing sources for conservation, which will then be utilised to support conservation interventions in 5-10 conservation areas for specific outcomes, with regular reporting on performance metrics tracking progress towards this impact, while simultaneously providing confidence to investors that they will receive their financial returns. Tsavo West NP will be the testing site for these performance metrics during the pilot phase, and will receive approximately $ towards conservation interventions to achieve this. The third part of the CII project will assess 34 priority global rhino sites to assess current conservation performance, and potential impact with future investments. This will advise which conservation areas are to be supported by the full CII project, giving Tsavo the potential to receive a further 10 years of financing. There were no indicators written in the project proposal for this outcome, but the outcome has been achieved with the approval of funds by UNDP/GEF.

Progress towards the deployment of real-time surveillance and monitoring (Instant Detect – ID) systems in Tsavo has been delayed to Y2 of the project. See section 3.1 for more details on the delivery of these activities. This activity builds upon the deployment of ID systems in Ngulia rhino sanctuary by ZSL and KWS in October 2014. Since that initial deployment, there have been zero rhinos poached over the 18 months that the ID systems have been operational. As a result of moving this activity to Y2, it has been difficult to effectively deliver towards the associated indicators of this outcome during Y1 – the section on developing effective law enforcement systems will provide some information towards these indicators, as outlined below.

The progress on training and developing effective law enforcement and rhino monitoring systems has focused at a site level due to complications at Manyani. See section 3.1 for more details. Assessments have been conducted of both the management effectiveness of all National Parks within the TCA, and of the current rhino monitoring systems nationally. As a result law enforcement and monitoring systems have improved the effectiveness of both these critical elements in tackling IWT, while rhino monitoring Standard Operating Procedures have been finalised. Equipment and training for implementation of these systems have focused on Ngulia, with regular reports now being generated, with significant success. The project is now replicating and rolling out these systems to all the other rhino areas. Since interventions began, the number of individually recognisable rhinos that are being sighted per month increased by over 400% from the December 2015 to March 2016. Furthermore, almost 80% of Ngulia's rhinos have been independently verified through camera trapping images over this period. During the first quarter of reporting in Ngulia, cumulative distance patrolled by rangers increased by over 1000% from January 2016 to March 2016. One outcome of this improved law enforcement presence is that one unsuccessful poaching incursion was detected in Ngulia during the project period (no rhinos were poached, but the poacher escaped). Improved law enforcement effectiveness will raise chance of intercepting poachers and there have been zero arrests to date.

The indicators associated to these project outcomes require sufficient time to demonstrate. The delays in the completion of the Tsavo East rhino sanctuary, coupled with the length of time it has taken in Y1 to test and roll out the new law enforcement and monitoring systems, has shortened the ability to report on these outcome indicators. The work of the IWT Challenge Fund will be continued by the CII project, and so these outcomes will be demonstrated past project completion. At this stage, I think it would be difficult to demonstrate several of the outcome indicators (indicators 3-5) during the course of Y2 (but this is entirely dependent on the level of poaching seen in the TCA over this period).

3.4 Monitoring of assumptions

1. Manyani Academy does not experience a complete overhaul of Instructors post-training on new curriculums.
2. The rhino monitoring trainers do not all leave KWS.
3. Ranger platoons in the TCA are not transferred out of the area post-training on new law enforcement tools.
4. IW systems are correctly deployed at key threat points within the TENP rhino sanctuary. Rangers maintain and manage the IW systems including changing batteries.
5. Rhino population in the TCA does not experience any disease outbreaks.

All five original project assumptions still hold true. There are two assumptions that were not considered that have caused changes to project delivery.

1. KWS change their mind on allowing a review and update of the law enforcement curricula at Manyani Academy. The way the project has adapted to this assumption occurring, was to adapt the delivery of law enforcement systems to focus on site-level training and implementation only.
2. Delays in completion of the Tsavo East Rhino Sanctuary, affecting delivery of the ID systems, and expansion of the law enforcement and monitoring systems to this area.

4. Impact: achievement of positive impact on illegal wildlife trade and poverty alleviation

Impact: Rhino numbers increase, and illegal wildlife trade in rhino products in Kenya is restricted through effective enforcement, sustained financing and opportunities for local involvement in wildlife-related employment.

Monitoring systems are being put in place to track rhino numbers, and encouragingly there has been zero poaching of rhinos in Tsavo West and Tsavo East during the project period. The Chyulu Hills lost one rhino which occurred before the project interventions had started in that area. Sustained financing to support Tsavo West will be delivered through the Rhino Impact Investment project, which will initially deliver a further 18 months of funding to Tsavo West, with the potential to provide up to 10 years of financing thereafter. This project has kick-started the process of addressing poverty alleviation in communities surrounding the TCA by collecting baseline socio-economic and conflict data from these communities. There were no community-related activities within the IWT Challenge Fund project, but these elements will be addressed by funding from the RII project, and further funds sought by project partners.

5. Project support to the IWT Challenge Fund Objectives

This project has focused on strengthening law enforcement (1) through improving law enforcement effectiveness and patrol coverage, improved monitoring and knowledge of high-value target species, improved tracking of real-time intelligence on poacher movements, and development of rapid response capabilities. The project has laid the foundations for future work in developing sustainable livelihoods (2) by conducting baseline surveys of community socio-economic and conflict levels. The project has also laid the foundations for further addressing of both (1) and (2) by providing co-financing to raise further funds for the TCA through the RII project, and other fund-raising efforts by project partners.

6. Impact on species in focus

In Ngulia, IPZ and Tsavo East, there has been zero poaching of rhino during Y1 – the last poached rhino was in April 2014. There was one rhino poached (snared) in the Chyulu Hills in late 2015, but this occurred before intervention activities started for this area. There was an additional old rhino carcass discovered in the Chyulu Hills during 2015 (but this rhino had been poached at least 3 years previously).

Elephant poaching figures are sensitive and cannot be realised in detail, but poaching has halved between 2014/15 and 2015/16. This is corroborated by ZSL's partners in Tsavo, the Tsavo Trust, who report that they discovered 106 carcasses (c. 80 poached) in 2014, and 55 carcasses (40 poached) in 2015.

7. Project support to poverty alleviation

Tackling wildlife crime effectively requires a holistic approach including gaining the support of target communities surrounding PAs. METT self-assessments of the TCA conducted in 2015 have highlighted community engagement and capacity building as two key gaps in PA effectiveness. The TCA Management Plan 2008-2018 has a chapter dedicated to Community Partnership and Conservation Education, consisting of management objectives, which mimic the pathways needed to change community behaviours, as defined by Biggs et al. (2015). KWS, ZSL and their partners will work to fill these gaps by raising funds to work with surrounding communities with the aim of providing real benefits from conservation, to diversify incomes, to promote good relationships and to encourage communities to provide timely information on wildlife crime. During 2016, ZSL commissioned resident community experts, Wildlife Works to undertake a detailed baseline socioeconomic survey of key communities surrounding the Tsavo PAs, and the results are currently being analysed. The next phase of this project, with additional donor funds from other sources will ensure that community livelihoods improve from better access to water and power, to improved protection from Wildlife Conflict, and from several sources of

alternative income generation. Further activities will work to encourage community participation in tackling IWT issues, through close collaboration with park staff.

8. Consideration of Gender equity issues

All women (n=3, 4% of total ranger force trained) within the ranger platoons in the TCA have been trained to date on rhino monitoring, rhino ID skills, GPS use and data collection. Zero women were trained on the rapid response unit training at Manyani for two reasons: 1. due to the elite personnel required for these roles, KWS chose their top 44 rangers from across the Service for training, none of which included women; 2. KWS has a policy of not deploying women in high-conflict zones.

The socio-economic surveys within the communities surrounding Tsavo collected information on demographic and ethnicity of respondents. This data is being analysed and written-up currently, and will be released in May 2016. The community poverty alleviation projects planned in the TCA will focus on women as the key implementers.

9. Monitoring and evaluation

Rhino monitoring has been evaluated through a critical sightings interval system that can be validated by independent assessment of each month's verification data. The ranger scoring effectiveness system allows for a structured method of reviewing ranger performance based on a suite of scoring criteria, which includes a monthly review of the rangers' uptake of rhino monitoring and ID knowledge.

The CII project is going to be using nine Key Performance Indicators (KPIs) to test performance over time, which can be measured through SMART, 'Kifaru', Critical Sightings Intervals, and by gathering data from the intelligence and investigations departments of KWS. These systems can deliver the KPIs required for the IWT Challenge Fund indicators. The nine KPIs under the CII project will be as follows:

1. Rhino population growth rate
    a. Net growth rate (corrected for translocations)
    b. Underlying biological growth rate (corrected for translocations and man-induced mortalities)
    c. Survivor Recruitment rates to Y1 and Y3 (independence).
2. Poaching Mortality Rate - % of total year-end population (including poached animals)
3. Poachers intercepted
    a. Per reported incursion
    b. Per poached rhino
    c. Per poached elephant
    d. % of poachers intercepted as a result of intelligence-driven response
    e. % arrests of poachers resulting in deterrent sentences
4. Average sightings intervals of rhino population
5. Percentage of rhino population independently identifiable
6. Percentage of known rhino population seen
    a. Percentage of rhino population that can be independently verified per month
    b. Percentage of rhino population physically identified per month
7. Effective manpower and patrolling
    a. Effective patrol coverage/unit area (100 km2)
    b. Ranger performance scores per month
8. Detection of rhino mortalities
    a. Average time to detection of rhino carcasses per 100 km2
    b. Percentage of rhino carcasses detected (from missing rhino rate)
    c. Percentage of fresh (less than one week) carcasses of large mammals (>500kg) vs older carcasses (less than two months) that are detected.
9. Percentage of total poacher incursions reported by or reacted to by community members
    a. Percentage of information gathered from informer sources
    b. Percentage of information gathered from volunteered information

10. Lessons learnt

Improving law enforcement effectiveness requires adaptive management. KWS has taken monthly reports and used these to start advising patrol planning and law enforcement effort for future months. Monthly reports have shown continuous improvement as a result of this, and due to a motivated ranger force. The ranger effectiveness scoring system and the incentive scheme has been a great success for this project, which we would highly recommend to other similar projects.

Our original proposal to equip all rangers with PDA units for data collection was scrapped when time was spent on the ground understanding the true logistics of successful delivery. The project team realised that using GPS and paper forms would be the most appropriate methodology for KWS rangers. Furthermore, this is a cheaper methodology for KWS to replicate and expand to other areas in the future once these systems in Ngulia are successful before expanding to other rhino areas within the TCA. The development of the CII project simultaneously to the implementation of Y1 of the IWT Challenge Fund project has allowed the project team to think more clearly about which KPIs will be critical to delivering confidence to potential impact investors. See section 9 for further details.

If we started the project again, we would have put in a contingency window for delivery of the Tsavo East rhino sanctuary components, anticipating potential delays. Further, we would have a more site-level focus from the start instead of trying to institutionalise these systems into the Manyani Law Enforcement Training Academy.

11. Actions taken in response to previous reviews (if applicable)

N/A – this is our first annual report on this project.

12. Other comments on progress not covered elsewhere

No further comments. See sections 9 and 10 for more details.

13. Sustainability and legacy

One of the major outcomes expected of this project was that funds act as co-financing for the CII project and as a result, UNDP / GEF have now approved the grant for testing the CII project as a novel conservation financing model. Tsavo West NP will be a test site for trialling KPIs for this concept, demonstrating to investors that KPIs can be regularly tracked over time, and that investment returns can be linked to project success. This project will release approximately of funds for Tsavo West NP over the next 18 months. The main purpose of this CII project is to develop and test financial mechanisms that can provide long-term funding to protected areas. Once proven in the pilot, Tsavo West would be a likely recipient of a further 10 years of additional funding to support park operations and management, law enforcement and monitoring.

ZSL has been a partner of KWS for over 25 years. Both KWS and ZSL understand that conservation is a long game. KWS, as the government wildlife authority, have taken the responsibility to protect and finance its Protected Areas in perpetuity. ZSL views its support to the TCA as being long-term and as such, ZSL continues to seek further funding in addition to the CII project to tackle all aspects of PA support, and all pieces of the IWT puzzle.

The law enforcement and monitoring systems that are being developed during this project are being ingrained into KWS through training of trainers, and through establishing rigid reporting structures that will be institutionalised within the TCA initially. Equipment has been provided to all ranger units in the rhino areas; with solar chargers ensuring power requirements are sustainable. Furthermore, the IWT Challenge Fund has contributed funds with other donors including ZSL, AWF and Google to construct and power a new rhino field office (sd33) for collation and analysis of data, and production of reports.

14. IWF Challenge Fund Identity

The IWT Challenge Fund and UK Aid / DEFRA have been listed as sponsors / funders on all reports produced by this project to date (see annex 4). This project has not published any formal publications or media articles to date, and as such has been unable to publicise the IWT Challenge Fund. There have been formally produced reports on the METT assessments that were undertaken at Tsavo West, Tsavo East and Chyulu Hills. These reports were disseminated to all stakeholders, and include recognition of the funding role by the IWT Challenge Fund (sd06-08). Further, pocket rhino ID books have been produced for all the rangers in each of the rhino areas with UK Aid and Defra acknowledged as being the funding body for these materials (sd13-15). These ID books are hugely important for raising standards of rhino monitoring.

15. Project Expenditure

Table 1 Project expenditure during the reporting period (April 2015-March 2016)

Project spend (indicative) since last annual report	2015/16 Grant (£)	2015/16 Total actual IWT Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)				
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items (see below)				
Others (see below)				
TOTAL				

16. OPTIONAL: Outstanding achievements of your project during the reporting period (300-400 words maximum). This section may be used for publicity purposes

I agree for the IWT Secretariat to publish the content of this section (please leave this line in to indicate your agreement to use any material you provide here)

The outstanding achievements of the project to date have involved the law enforcement and monitoring systems that have been put in place to improve ranger patrol effectiveness. This has been tested extensively in Ngulia Rhino Sanctuary and is now being rolled out to all the other rhino areas within the Tsavo Conservation Area (TCA). During the first quarter of reporting in Ngulia, cumulative distance patrolled by rangers increased by over 1000% from January 2016 to March 2016, while the number of individually recognisable rhinos that are being sighted per month increased by over 400% from the December 2015 baseline to March 2016. Furthermore, almost 80% of Ngulia's rhinos have been independently verified through camera trapping images over this period.

Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2015-2016

Project summary	Measurable Indicators	Progress and Achievements April 2015 - March 2016	Actions required/planned for next period
Impact Rhino numbers increase, and illegal wildlife trade in rhino products in Kenya is restricted through effective enforcement, sustained financing and opportunities for local involvement in wildlife-related employment.		The systems are being put in place to track rhino numbers. There has been zero poaching of rhinos in Tsavo West and Tsavo East during this period. The Chyulu Hills lost one rhino which occurred before the project interventions had started in that area. Sustained financing to support Tsavo West will be delivered through the CII project, which will initially deliver a further 18 months of funding to Tsavo West, with the potential to provide up to 10 years of financing thereafter.	[redacted]
Outcome Enhanced, effective training of Kenya Wildlife Service law enforcement, and rhino monitoring personnel, combined with deployment of real-time surveillance and monitoring systems, will advance intelligence gathering, law enforcement effectiveness, and monitoring of rhino populations, leading to increased number of prosecutions, reduced poaching, and ultimately increased rhino numbers. Focused implementation of this training in key black rhino strongholds within the Tsavo Conservation Area (TCA) will provide necessary enabling conditions for long-term investment through Rhino Impact Bonds.	1. All Manyani Instructors have full working knowledge of new law enforcement tools, and are training with these tools by March 2016. 2. All rhino monitoring trainers have full working knowledge of rhino monitoring tools, and are training with these tools by March 2016. 3. Increased detection of poachers in the TCA by 10% from April 2015 to March 2016, and by a further 30% to March 2017. 4. Increased arrest of poachers in the TCA by 10% from April 2015 to March 2016, and by a further 30% to March 2017. 5. Increase in successful convictions from TCA arrests by 10% from April 2015 to March 2016, and by a further 30% to March 2017. 6. Increase of 5% in rhino population in	1. Owing to complications in delivery of Manyani components, this outcome is now focused at the project site level. Systems have been and are being put in place at this level, with trained trainers disseminating those systems to all the rangers. Systems focus on improved law enforcement and rhino monitoring effectiveness. Four rhino trainers are now disseminating this knowledge to the rangers in the platoons they are supporting. 2. Rhino monitoring training has happened in 3 of the 4 rhino areas, with Tsavo East to be completed once the sanctuary is completed. Rhino monitoring effectiveness is improving rapidly for Ngulia, while the baseline levels for Chyulu and Tsavo East have been assessed. IPZ will be launched imminently. The site-level rhino assistants are training rangers on monitoring systems to be able to	1. Law enforcement effectiveness tracking needs to be polished for the IPZ and Chyulu Hills. The systems are operating effectively for Ngulia, with phase two starting currently, involving increased monthly planning as adaptive management to previous reports. This process needs to be adopted for Tsavo East once the Sanctuary is completed. 2. The three rhino monitoring trainers for Ngulia, IPZ and Chyulu have knowledge of the systems, and are training the rangers accordingly. The monitoring systems need to be adopted more thoroughly in the IPZ. This process needs to be adopted for Tsavo East once the Sanctuary is completed. 3. This outcome needs to be tracked in all rhino areas in Y2. 4. This outcome needs to be tracked in all rhino areas in Y2. 5. This outcome needs to be tracked in

	Tsavo Conservation Area from March 2016 to March 2017. 7. Increased sense of security amongst local communities, with an increased level of trust towards local law enforcement agencies and perceptions that corruption has decreased.	deliver the required outputs. Regular reports are being produced for Ngulia and are imminent for IPZ and Chyulu Hills. 3. Law enforcement effectiveness is now being tracked in one rhino area, with two more soon to follow. One unsuccessful poaching incursion was detected in Ngulia during the project period (no rhinos were poached, but the poacher escaped). Improved law enforcement effectiveness will raise chance of intercepting poachers. 4. Zero poachers were arrested during the project period (with one incursion occurring). 5. Zero poachers arrested so no chance of convictions. 6. This KPI can only be tracked now the monitoring systems are in place. The time period for this outcome is Y2. 7. The baseline social surveys have been conducted. These will be compared to the project end social surveys in Y2.	all rhino areas in Y2. 6. This outcome needs to be tracked in all rhino areas in Y2. 7. Project end social surveys will be conducted during Y2, with results from both surveys analysed to compare changes in attitudes.
Output 1. Management effectiveness gaps assessed to define the training needs for enforcement personnel in the TCA.	1.1 MEC assessments demonstrate management effectiveness gaps after initial assessment by May 2015. 1.2 MEC assessments at project interim (March 2016) and project end (March 2017) demonstrate diminishing effectiveness gaps from baseline assessment.	1.1 METT reports have been published and disseminated to all partners (sd06-08). The documents highlight the gaps in management effectiveness, and most importantly encouraged park management to complete a next steps strategy process. 1.2 will be conducted at project end. It will be too much to conduct interim METT assessments as well. These METT assessments will be repeated every two years at these sites by KWS and ZSL to be able to track management effectiveness changes over time, especially due to implementation of the CII project.	
Activity 1.1 Management effectiveness criteria socialised with site managers		Before the METT assessments were conducted, two presentations were given by Nigel Dudley from Equilibrium Research to socialise the idea with all the senior park staff, and to explain the process and what it would achieve.	
Activity 1.2 Site managers carry out self-assessment workshop facilitated by project team and with external expert support. Workshops will be conducted at		Management Effectiveness Tracking Toolkit (METT) self-assessments were conducted for all three National Parks in the TCA (Chyulu Hills, Tsavo West and Tsavo East) by Senior Park Staff and partner organisations to assess	

project start, project interim and project end.		Management Effectiveness of 30 columns of Protected Area management. METT assessments highlight the gaps in management and encourage managers to think about and plan activities to address gaps.
Output 2. Evaluations of rhino monitoring programmes and "trainer" knowledge to establish a revised rhino monitoring programme.	2.1 Collaborative evaluation of current rhino monitoring tools, and rhino monitoring capacity at all KWS rhino sites have been conducted by ZSL and KWS before June 2015, to identify training needs. 2.2 Assessments of knowledge of identified rhino monitoring "trainers" have been completed before June 2015, to identify training needs.	2.1 A mid-term review of the Kenya Black Rhino National Strategy was completed and published by KWS and WWF (sd09-10). Rhino monitoring protocols were evaluated by KWS and ZSL and a Standard Operating Procedure was developed for the Tsavo sites (sd12). Standard Operating Procedures will be finalised for Tsavo East during Y2. 2.2 Cedric Khayale, the Senior Rhino trainer within KWS assessed the quality of rhino monitoring trainers in each site as part of the mid-term strategy review (sd09-10). This review included a site-by-site assessment of the state of each rhino area, and the standard and number of rhino monitoring trainers in each site.. All four sites within the Tsavos have had rhino monitoring "trainers" deployed to lead monitoring efforts, train rangers, analyse the KPIs, and write reports.
Activity 2.1 Site by site evaluation of standards of rhino monitoring capacity conducted by KWS and ZSL.		KWS and WWF conducted a mid-term review of the Kenya Black Rhino National Strategy to understand monitoring status and capacity at all rhino sites nationally (sd09-10) – a stakeholder workshop in April 2015 allowed all stakeholders including all national-level project partners to feed into this process. The review involved a site-by-site assessment of rhino monitoring standards and capacity.
Activity 2.2 Current rhino monitoring protocols are assessed by KWS and ZSL to identify gaps and new tools to introduce.		Rhino monitoring protocols were evaluated by KWS and ZSL and a Standard Operating Procedure was developed for the Tsavo sites (sd12).
Activity 2.3 Assessments of the identified rhino monitoring "trainers" against knowledge of current rhino monitoring protocols.		Cedric Khayale, the Senior Rhino trainer within KWS assessed the standard and number of rhino monitoring trainers in each site as part of the mid-term strategy review (sd09-10). All four sites within the Tsavos have had rhino monitoring "trainers" deployed at site to lead monitoring efforts, train rangers, analyse the KPIs, and write reports.
Output 3. All Manyani Instructors and rhino monitoring "trainers" have received "train the trainer" courses on new law enforcement technologies and tools, and on rhino monitoring tools, respectively.	3.1 KWS and ZSL have conducted a training needs assessment to identify the new law enforcement technologies that will be provided to Manyani Instructors by June 2015. 3.2 Four-six weeks training provided to all Manyani instructors, to include all female instructors where applicable, on the new technologies by October 2015 3.3 Four weeks training provided to all rhino monitoring trainers, to include all female trainers where applicable, on	3.1 Law enforcement and rhino monitoring systems have been designed for implementation in the TCA, building on best practice knowledge from similar areas, and on lessons learned from the mid-term review and METT assessments. 3.2 KWS conducted a 45-day training of 44 rangers at Manyani Law Enforcement Training Academy in advanced operations and rapid response skills, to allow the deployment of rapid response ranger units. 31 of the 44 rangers successfully graduated from the course. Two rapid response units have been deployed by KWS in Tsavo and Central Kenya; these units will be able to provide rapid support to 70% of Kenya's rhino population. ZSL ran a 5-day SMART training course for 14 personnel from the TCA, including two female operators (sd26). All 14 persons passed the course and were presented with certificates (sd27). Further training was provided to 100 rangers

	the existing and new rhino monitoring tools by October 2015.	on GPS tracking and data collection by the four rhino trainers, the KWS Senior rhino scientist, and by ZSL (sd01, sd28-29). Further trainings will be conducted in Y2 for all the rangers in the rhino areas, with repeat rhino monitoring trainings, and on-the-job trainings for the rhino "trainers". 3.3 Cedric Khayale, KWS' head rhino trainer, trained 50 rangers over three days in rhino monitoring and ID skills. This number included all three women from the Ngulia rhino platoon (sd28). Four rhino trainers were selected for the four rhino sites in the TCA, and these individuals received on-site training from both KWS and ZSL in rhino monitoring, GPS tracking, data collection, SMART, Kifaru, Critical Sightings Intervals, and reporting on project progress. Rhino trainers have been familiarised with the new Standard Operating Procedures that were developed (sd12). Four rhino trainers were selected for the four rhino sites in the TCA, and these individuals received on-site training from both KWS and ZSL in rhino monitoring, GPS tracking, data collection, SMART, Kifaru, Critical Sightings Intervals, and reporting on project progress. Further training was provided to all rangers on rhino monitoring, GPS tracking and data collection by the four rhino trainers, the KWS Senior rhino scientist, and by ZSL.
Activity 3.1 Training needs assessment of new law enforcement technologies on offer. Training will complement course curriculums.		Law enforcement and rhino monitoring systems have been designed for implementation in the TCA, building on best practice knowledge from similar areas, and on lessons learned from the mid-term review and METT assessments. KWS and ZSL refined the Standard Operating Procedures for rhino monitoring to ensure that they were relevant and specific to each rhino site.
Activity 3.2 All Manyani Instructors attend a "Training of Trainers" on the new law enforcement technologies and tools.		Due to unforeseen circumstances at Manyani, the project had to adapt its thinking on this output to be predominantly site-focused. Tackling IWT effectively requires a broad range of actions including improving park operations, management effectiveness, improving law enforcement monitoring, target species monitoring, intelligence gathering, community support, and rapid response capabilities. ZSL and KWS held the majority of trainings at site. KWS conducted a 45-day training at Manyani Law Enforcement Training Academy in advanced operations and rapid response skills, to allow the deployment of two rapid response ranger units to be available in case of poaching incursions or intelligence operations.
Activity 3.3 All identified rhino monitoring "trainers" attend a "Training of Trainers" on existing rhino protocols and on new rhino monitoring tools.		Four rhino trainers were selected for the four rhino sites in the TCA, and these individuals received on-site training from both KWS and ZSL in rhino monitoring, GPS tracking, data collection, SMART, Kifaru, Critical Sightings Intervals, and reporting on project progress. Rhino trainers have been familiarised with the new Standard Operating Procedures that were developed (sd12). ZSL ran a 5-day training for key project personnel from the TCA and from KWS HQ in use of SMART software for monitoring law enforcement effectiveness.

Activity 3.4 Rhino monitoring "trainers" run training courses to ensure this knowledge is passed to rhino monitors at all KWS rhino sites.		Training was provided to all rangers on rhino monitoring, rhino ID skills, GPS tracking and data collection by the four rhino trainers, the KWS Senior rhino scientist, and by ZSL. These activities were delivered to improve target species monitoring.
Output 4. An assessment plan is in place which ensures Manyani graduates and rhino monitors have the knowledge and skills to deliver new tools at site.	4.1 100% of graduates (including a 75:25 male:female ratio) meet the required level of knowledge, skills and values to deliver these tools.	31 of 44 rangers on the Manyani Training Academy *Rapid Response Unit* training graduated from the course. All 14 participants in the ZSL SMART training course were evaluated and assessed by ZSL's SMART trainer, and were issued with certificates for completion of the course (sd26). The ranger effectiveness scoring system (sd24) has been used to rank rangers performance each month, with top performing ranger receiving an equipment-based incentive. Average ranger scores per month have increased from just under 10% during the baseline month of January, to 17% in February, and 21% in March. Spot tests of rangers on their knowledge of individual rhinos have not yet begun. Scoring of rangers for law enforcement performance and rhino ID knowledge will be conducted monthly throughout Y2, and expanded to all areas of the TCA.
Activity 4.1 Assessment questionnaires have been designed.		The Manyani Training Academy assessed all participants during the Rapid Response Unit training, and only those passing the course criteria graduated from the course. Participants in the ZSL SMART training course were evaluated and assessed by ZSL's SMART trainer, and those passing the course were issued with certificates. A ranger effectiveness scoring system was designed by all project partners to be used on a monthly/quarterly basis to score performance of every ranger in the target platoons. This scoring will be a reflection of understanding of GPS tracking and data collection, and of ranger performance. With the recent completion of the rhino ID booklets, coupled with the training of rangers on rhino monitoring, rangers will now be tested monthly on knowledge of the individual rhinos in their area – ranger assessments are conducted as flash cards of rhino ear notch patterns to see how many randomly-chosen rhinos that ranger identifies correctly each month.
Activity 4.2 Questionnaires are completed by all course graduates. Course graduates include all female rangers that are attending the basic ranger training at the law enforcement academy.		Due to the Manyani components of this project not being delivered, assessment of graduates was not able to be completed.
Activity 4.3 Questionnaires are analysed quarterly to analyse effectiveness of teaching.		Due to the Manyani components of this project not being delivered, assessment of graduates was not able to be completed.
Output 5. All new training tools have been taught and implemented in all platoons of the Tsavo Conservation Area, prioritising those four platoons with a rhino specific focus.	5.1 Four weeks training provided to all TCA platoons on the new law enforcement tools by March 2016 (baseline= zero), including female rangers if available. 5.2 New law enforcement tools are being implemented by platoons in the	5.1 Rhino "trainers" have been identified for all four rhino areas of the TCA, and have been trained on the Standard Operating Procedures, and the new systems for rhino monitoring and reporting. These individuals have then trained the rangers at site, with support from ZSL (sd28-29). Extensive ranger training has been conducted with the platoons in the Ngulia and Mukururo rhino areas, with efforts now starting in the IPZ. A total of 100 rangers have been trained to date including all three female rangers within the Ngulia platoon.

	field by March 2016. 5.3 Monthly reports are being produced on law enforcement effort and results by June 2016.	5.2 The rhino "trainers" will also be collating the data collected by the law enforcement efforts, producing reports for park management using SMART. Rangers have been equipped and trained to collect data on their law enforcement patrols. 5.3 Regular reports are now being produced in the more advanced rhino areas of the TCA, on both rhino monitoring and law enforcement effectiveness (sd16-23). As a result of the training, and ranger scoring systems, average ranger scores per month have increased from just under 10% during the baseline month of January, to 17% in February, and 21% in March (sd22-23). Cumulative distances covered per month by ranger sectors has increased 500% from baseline in January to February, and a further 200% from February to March (sd22-23). The number of individual rhinos that are being IDed per month in Ngulia has risen from a baseline of 15 per month in December 2015, up to 63 per month in March 2016. A total of 78 rhinos have been confirmed, and can be independently verified, in Ngulia since interventions began at the start of 2016. Average sightings intervals for the Ngulia rhino population has dropped from a baseline of 157 days in December 2015, to 81 days in March 2016.
Activity 5.1 Equipment for implementation in each platoon has been delivered.		Due to Ngulia being the largest and most important rhino population within the TCA, activities during Y1 have focused on setting up, training and testing the systems for Ngulia before expanding these concepts to the three other rhino areas of the TCA. Ngulia required some infrastructure upgrades at the request of KWS to ensure that the reporting and monitoring systems could be effectively delivered. A new office, equipment store and solar system (sd33) was built with funding from the IWT Challenge Fund, the Google Impact Award, AWF, ZSL and the Rhino Impact Investment project. This infrastructure will make the rhino areas totally self-sufficient in its ability to report on rhino monitoring and law enforcement effectiveness, to communicate 24/7 with its ranger platoons using the newly installed digital radio networks, and to be able to monitor and manage Instant Detect systems 24/7 due to a suitable power system. All ranger outposts in each of the four rhino areas have been furnished with two GPSs, binoculars, solar charging units and rechargeable batteries to allow for quality data collection. Having multiple GPSs allows for ready management of data collection in remote ranger outposts – the rangers hand in the GPS they have been using for the past 10 days, and receive a clean GPS to use for the next 10 days. The rangers have all received pocket-sized rhino ID booklets complete with rhino monitoring guidance notes (e.g. sexing/ageing/identifying rhinos) as well as individual ID sheets for each rhino within their rhino area. The monitoring team is using a combination of foot patrols and camera trapping to most effectively monitor these rhino populations, with camera trap images clearly able to demonstrate individual rhinos (sd17, sd19, sd21). An incentive scheme

		tied to the monthly reports and the ranger scoring system (sd24) will see rangers rewarded with additional equipment (e.g. camping bed / canvas bed roll / multi-tool) for being the best performing ranger in that section over the month / quarter. Two monitoring vehicles have been purchased – one has been deployed in Ngulia, with the second supporting the Tsavo East rhino sanctuary, but initially the IPZ area. Having a dedicated vehicle for rhino monitoring allows the rhino monitors to operate and maintain camera traps, monitor the rhino population, and collect and feedback to ranger units regularly.
Activity 5.2 Identified officers / rangers within the TCA have attended a training course run by Manyani Instructors on the use of all the new course materials. Gender equality policies will be strictly adhered to, to ensure that a minimum number of women in these platoons have received this training.		Rhino "trainers" have been identified for all four rhino areas of the TCA, and have been trained on the Standard Operating Procedures, and the new systems for rhino monitoring and reporting. These individuals have then trained the rangers at site, with support from ZSL. Extensive ranger training has been conducted with the platoons in the Ngulia and Mukururo rhino areas, with efforts now starting in the IPZ.
Activity 5.3 ZSL provides continued support in all areas of the TCA.		ZSL will continue to support the success of these new systems throughout the life of this project, and beyond with the upcoming Rhino Impact Investment Project and further pipeline projects. The IWT Challenge Fund project has acted as co-financing to leverage the release of further funds under the Rhino Impact Investment project. This project will support the development of the IPZ rhino base, as well as providing a third monitoring vehicle for the IPZ. This project will also support upgrading the ranger outposts in Tsavo West.
Output 6. Seven IW systems functioning effectively in Tsavo East Rhino Sanctuary with high priority data being sent in real time to rangers so they can react accordingly. Rangers properly trained to use and maintain the equipment with access to operational support when required.	6.1 Two weeks of training provided to Tsavo East Rhino Sanctuary rangers, to include all female rangers responsible for protection of the rhino sanctuary, in the setup and use of IW by August 2015 (baseline = zero). 6.2 100% of images taken of humans are sent as high priority to the responsible party (baseline = zero). 6.3 All IW systems are operational and deployed at Project End.	N/A – this activity will be delivered in Y2. The delivery of this activity has been moved back to Y2 due to the delays in the completion of the Tsavo East Rhino Sanctuary. The Sanctuary was due for completion in early 2015, but will now likely be complete in mid-2016 due to KWS procurement issues for completing the fencing and water infrastructure for the sanctuary to be able to receive rhinos. DEFRA were informed of these delays during the Half-year report (sd30) and through a project alteration request. The ID systems have been manufactured in the UK by project partners, 7TG (sd32). These systems will be shipped to Kenya so that rangers can be trained on their use during September 2016. To ensure progress towards outputs for this activity in Y1, despite the Tsavo East rhino sanctuary delays, this project has supported the ongoing running of ID systems already setup in Ngulia Rhino Sanctuary, Tsavo West through covering data transmission costs. Learnings from Ngulia will help ensure that systems in Tsavo East are effectively deployed and managed.
Activity 6.1 Deployment of seven IW systems and five unmanned ground sensor systems (UGS) in Tsavo East National Park Rhino Sanctuary.		
Activity 6.2 An in-depth analysis of threat hotspots and key sites for IW deployments are identified.		
Activity 6.3 Identified staff at the rhino sanctuary attend a 'Training of Trainers' on the use and deployment of IW systems. Training is given jointly by ZSL and 7TG.		

The project team will ensure that a minimum number of female staff are selected for training on the IW systems.		
Activity 6.4 Maintenance checks of the systems takes place on a bi-monthly basis, carried out by KWS and ZSL when necessary, to ensure the long-term functionality of the system.		
Activity 6.5 Quarterly review on effectiveness of IW systems to provide real-time alerts to rangers.		
Output 7. Benefits to local communities around the TCA rhino areas are monitored to ensure that the impacts of activities are reaching the community, specifically through enhanced security, reduced corruption and a level of trust towards the local law enforcement agencies.	7.1 Social surveys at project close demonstrate a positive change in attitude to security, corruption and trust (baseline = first 6 months of project).	A short report on the social surveys is available (sd31), while the surveys are being analysed and reported on. The team collected data from 224 households in about 100 villages across the three general study sites (Kibwezi, Maktau and Rombo) bordering the TCA. Overall, the majority (96%) of the 224 respondents were Kamba (35%), Maasai (31%) and Taita (30%). There was a difference across the study sites with the majority of those interviewed in Maktau, Kibwezi and Rombo being Taita (92%), Kamba (97%) and Maasai (95%), respectively. Further data analyses are underway and the final draft report is due out before the end of May 2016. The project end surveys will be completed in Y2, and so the analysed report should be available before the project finishes.
Activity 7.1 Questionnaire survey has been designed to test community perception of security, corruption and trust of local law enforcement agencies.		Social surveys were designed by Dr. Mwangi Githiru of Wildlife Works, with input from Sarah Thomas and Nisha Owen of ZSL. These social surveys will test perceptions of the National Park, Conservation, Security, Corruption, Trust and Conflict.
Activity 7.2 Questionnaires are delivered to the three major communities surrounding rhino areas at the start and close of project. Questionnaires are delivered to an average subset of the community demography, ensuring that gender equality is acknowledged.		Baseline social surveys have been conducted in 3 local communities surrounding the TCA. These surveys were conducted by Wildlife Works, a Tsavo-based livelihood development company. The surveys are currently being written up and should be finalised by May 2016. The project end surveys will be delivered in the same communities and households during Y2.
Activity 7.3 Questionnaire surveys are compared to analyse the effectiveness of the intervention in supporting local people.		Not applicable – only relevant in Y2.

Annex 2 Logframe

There need to be slight tweaks to the project logframe as per the above text. A Change Request form will be submitted shortly.

Impact

The Impact is not intended to be achieved solely by the project. This is a higher-level situation that the project will contribute towards achieving. All IWT Challenge Fund projects are expected to contribute to tackling the illegal wildlife trade and supporting poverty alleviation in developing countries.

Rhino numbers increase, and illegal wildlife trade in rhino products in Kenya is restricted through effective enforcement, sustained financing and opportunities for local involvement in wildlife-related employment.

Outcome

There can only be one Outcome for the project. The outcome statement is the overarching objective of the project you have outlined. That is, what do you expect to achieve as a result of this project? The Outcome should identify what will change, and who will benefit.
There should be a clear link between the outcome and the impact.

Enhanced, effective training of Kenya Wildlife Service law enforcement, and rhino monitoring personnel, combined with deployment of real-time surveillance and monitoring systems, will advance intelligence gathering, law enforcement effectiveness, and monitoring of rhino populations, leading to increased number of prosecutions, reduced poaching, and ultimately increased rhino numbers. Focused implementation of this training in key black rhino strongholds within the Tsavo Conservation Area (TCA) will provide necessary enabling conditions for long-term investment through Rhino Impact Bonds.

Measuring outcomes - indicators

Provide detail of what you will measure to assess your progress towards achieving this outcome. For each indicator, you should be able to state:

- What is the starting point
- What is the expected change
- What the end point will be
- When the change will be achieved

Indicator 1	All Manyani Instructors have full working knowledge of new law enforcement tools, and are training with these tools by March 2016.
Indicator 2	All rhino monitoring trainers have full working knowledge of rhino monitoring tools, and are training with these tools by March 2016.
Indicator 3	Increased detection of poachers in the TCA by 10% from April 2015 to March 2016, and by a further 30% to March 2017.
Indicator 4	Increased arrest of poachers in the TCA by 10% from April 2015 to March 2016, and by a further 30% to March 2017.
Indicator 5	Increase in successful convictions from TCA arrests by 10% from April 2015 to March 2016, and by a further 30% to March 2017.
Indicator 6	Increase of 5% in rhino population in Tsavo Conservation Area from March 2016 to March 2017.
Indicator 7	Increased sense of security amongst local communities, with an increased level of trust towards local law enforcement agencies and perceptions that corruption has decreased

Verifying outcomes

Identify the source material the IWT Challenge Fund (and you) will use to verify the indicators provided, and the progress made towards achieving them. These are generally recorded details such as publications, surveys, project notes, reports, tapes, videos etc. You should submit evidence of these with your annual reports.

Indicator 1	Report on “training of trainers” courses held at Manyani, including names of all the

	Instructors who attended each course.
Indicator 2	Report on “training of trainers” courses for rhino monitoring, including names of all the trainers who attended the course.
Indicator 3	Patrol monitoring reports produced by management via law enforcement monitoring and evaluation tool, data collected by ranger patrols. All image and sensor data from IW will be analysed through the IW system database. All patrols sent out based on intelligence from the IW system will be reported on an incident basis. Monthly, quarterly and annual reports will be submitted. Management will use reports to inform future adaptive enforcement on a monthly basis.
Indicator 4	Patrol monitoring reports produced by management, data collected by ranger patrols. Monthly, quarterly and annual reports will be submitted. Management will use reports to inform future adaptive enforcement on a monthly basis.
Indicator 5	Patrol monitoring reports produced by management, data collected by ranger patrols. Monthly, quarterly and annual reports will be submitted.
Indicator 6	KWS rhino status reports will detail population growth within the TCA for the project period.
Indicator 7	Analysis of community questionnaire surveys at project start and close will detail changes in community perceptions.

Outcome risks and important assumptions

You will need to define the important assumptions, which are critical to the realisation of the *outcome and impact* of the project. It is important at this stage to ensure that these assumptions can be monitored since if these assumptions change, it may prevent you from achieving your expected outcome.

Assumption 1	Manyani Academy does not experience a complete overhaul of Instructors post-training on new curriculums.
Assumption 2	The rhino monitoring trainers do not all leave KWS.
Assumption 3	Ranger platoons in the TCA are not transferred out of the area post-training on new law enforcement tools.
Assumption 4	IW systems are correctly deployed at key threat points within the TENP rhino sanctuary. Rangers maintain and manage the IW systems including changing batteries.
Assumption 5	Rhino population in the TCA does not experience any disease outbreaks.

Outputs

Outputs are the specific, direct deliverables of the project. These will provide the conditions necessary to achieve the Outcome. The logic of the chain from Output to Outcome therefore needs to be clear.
If you have more than 3 outputs, insert a row(s). It is advised to have less than 6 outputs since this level of detail can be provided at the activity level.

Output 1	Management effectiveness gaps assessed to define the training needs for enforcement personnel in the TCA.
Output 2	Evaluations of rhino monitoring programmes and “trainer” knowledge to establish a revised rhino monitoring programme.
Output 3	All Manyani Instructors and rhino monitoring “trainers” have received “train the trainer” courses on new law enforcement technologies and tools, and on rhino monitoring tools, respectively.
Output 4	An assessment plan is in place which ensures Manyani graduates and rhino monitors have the knowledge and skills to deliver new tools at site.
Output 5	All new training tools have been taught and implemented in all platoons of the Tsavo Conservation Area, prioritising those four platoons with a rhino specific focus.
Output 6	Seven IW systems functioning effectively in Tsavo East Rhino Sanctuary with high priority data being sent in real time to rangers so they can react accordingly. Rangers properly trained to use and maintain the equipment with access to operational support when required.
Output 7	Benefits to local communities around the TCA rhino areas are monitored to ensure that the impacts of activities are reaching the community, specifically through enhanced security, reduced corruption and a level of trust towards the local law enforcement agencies.

Measuring outputs

Provide detail of what you will measure to assess your progress towards achieving these outputs. You should be able to state:

- What is the starting point
- What is the expected change
- What the end point will be
- When the change will be achieved

Output 1: Management effectiveness gaps assessed to define the training needs for enforcement personnel in the TCA.	
Indicator 1.1	MEC assessments demonstrate management effectiveness gaps after initial assessment by May 2015.
Indicator 1.2	MEC assessments at project interim (March 2016) and project end (March 2017) demonstrate diminishing effectiveness gaps from baseline assessment.

Output 2: Evaluations of rhino monitoring programmes and "trainer" knowledge to establish a revised rhino monitoring programme.	
Indicator 2.1	Collaborative evaluation of current rhino monitoring tools, and rhino monitoring capacity at all KWS rhino sites have been conducted by ZSL and KWS before June 2015, to identify training needs.
Indicator 2.2	Assessments of knowledge of identified rhino monitoring "trainers" have been completed before June 2015, to identify training needs.

Output 3: All Manyani Instructors and rhino monitoring "trainers" have received "train the trainer" courses on new law enforcement technologies and tools, and on rhino monitoring tools, respectively.	
Indicator 3.1	KWS and ZSL have conducted a training needs assessment to identify the new law enforcement technologies that will be provided to Manyani Instructors by June 2015.
Indicator 3.2	4-6 weeks training provided to all Manyani instructors, to include all female instructors where applicable, on the new technologies by October 2015
Indicator 3.3	4 weeks training provided to all rhino monitoring trainers, to include all female trainers where applicable, on the existing and new rhino monitoring tools by October 2015.

Output 4: An assessment plan is in place which ensures Manyani graduates and rhino monitors have the knowledge and skills to deliver new tools at site.	
Indicator 4.1	100% of graduates (including a 75:25 male:female ratio) meet the required level of knowledge, skills and values to deliver these tools.
Indicator 4.2	

Output 5: All new training tools have been taught and implemented in all platoons of the Tsavo Conservation Area, prioritising those four platoons with a rhino specific focus.	
Indicator 5.1	4 weeks training provided to all TCA platoons on the new law enforcement tools by March 2016 (baseline= zero), including female rangers if available.
Indicator 5.2	New law enforcement tools are being implemented by platoons in the field by March 2016.
Indicator 5.3	Monthly reports are being produced on law enforcement effort and results by June 2016.

Output 6: Seven IW systems functioning effectively in Tsavo East Rhino Sanctuary with high priority data being sent in real time to rangers so they can react accordingly. Rangers properly trained to use and maintain the equipment with access to operational support when required.	
Indicator 6.1	Two weeks of training provided to Tsavo East Rhino Sanctuary rangers, to include all female rangers responsible for protection of the rhino sanctuary, in the setup and use of IW by August 2015 (baseline = zero).
Indicator 6.2	100% of images taken of humans are sent as high priority to the responsible party (baseline = zero).
Indicator 6.3	All IW systems are operational and deployed at Project End.

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Output 7: Benefits to local communities around the TCA rhino areas are monitored to ensure that the impacts of activities are reaching the community, specifically through enhanced security, reduced corruption and a level of trust towards the local law enforcement agencies.	
Indicator 7.1	Social surveys at project close demonstrate a positive change in attitude to security, corruption and trust (baseline = first 6 months of project).

Verifying outputs

Identify the source material the IWT fund (and you) can use to verify the indicators provided. These are generally recorded details such as publications, surveys, project notes, reports, tapes, videos etc.

Indicator 1	MEC analysis reports
Indicator 2	Rhino monitoring analysis reports
Indicator 3	KWS and ZSL deployment and training reports
Indicator 4	Analysis report of graduate evaluation forms.
Indicator 5	KWS and ZSL deployment and training reports, Monitoring and Evaluation quarterly reports
Indicator 6	ZSL and 7TG deployment and training reports
Indicator 7	Questionnaire survey reports

Output risks and important assumptions

You will need to define the important assumptions, which are critical to the realisation of the achievement of your outputs. It is important at this stage to ensure that these assumptions can be monitored since if these assumptions change, it may prevent you from achieving your expected outcome.

Assumption 1	Manyani Academy does not experience a complete overhaul of Instructors post-training on new curriculums.
Assumption 2	Ranger platoons in Tsavo Conservation Area are not transferred out of the TCA post-training on new law enforcement tools.
Assumption 3	IW systems are correctly deployed at key threat points within the Tsavo East Sanctuary. Rangers maintain and manage the IW systems including changing batteries.

Activities

Define the tasks to be undertaken by the project to produce the outputs. Activities should be designed in a way that their completion should be sufficient and indicators should not be necessary. Risks and assumptions should also be taken into account during project design.

Output 1: Management effectiveness gaps assessed to define the training needs for enforcement personnel in the TCA.	
Activity 1.1	Management effectiveness criteria socialised with site managers
Activity 1.2	Site managers carry out self-assessment workshop facilitated by project team and with external expert support. Workshops will be conducted at project start, project interim and project end.

Output 2: Evaluations of rhino monitoring programmes and “trainer” knowledge to establish a revised rhino monitoring programme.	
Activity 2.1	Site by site evaluation of standards of rhino monitoring capacity conducted by KWS and ZSL.
Activity 2.2	Current rhino monitoring protocols are assessed by KWS and ZSL to identify gaps and new tools to introduce.
Activity 2.3	Assessments of the identified rhino monitoring “trainers” against knowledge of current rhino monitoring protocols.

Output 3: All Manyani Instructors and rhino monitoring “trainers” have received “train the trainer” courses on new law enforcement technologies and tools, and on rhino monitoring tools, respectively.	
Activity 3.1	Training needs assessment of new law enforcement technologies on offer. Training will complement course curriculums.
Activity 3.2	All Manyani Instructors attend a “Training of Trainers” on the new law enforcement technologies and tools.

Activity 3.3	All identified rhino monitoring “trainers” attend a “Training of Trainers” on existing rhino protocols, and on new rhino monitoring tools.
Activity 3.4	Rhino monitoring “trainers” run training courses to ensure this knowledge is passed to rhino monitors at all KWS rhino sites.

Output 4: An assessment plan is in place which ensures Manyani graduates have the knowledge, skills and values as described in the intended outcomes of the curriculum.	
Activity 4.1	Assessment questionnaires have been designed.
Activity 4.2	Questionnaires are completed by all course graduates. Course graduates include all female rangers that are attending the basic ranger training at the law enforcement academy.
Activity 4.3	Questionnaires are analysed quarterly to analyse effectiveness of teaching.

Output 5: All new training tools have been taught and implemented in all platoons of the Tsavo Conservation Area, prioritising those four platoons with a rhino specific focus.	
Activity 5.1	Equipment for implementation in each platoon has been delivered.
Activity 5.2	Identified officers / rangers within the TCA have attended a training course run by Manyani Instructors on the use of all the new course materials. Gender equality policies will be strictly adhered to, to ensure that a minimum number of women in these platoons have received this training.
Activity 5.3	ZSL provides continued support in all areas of the TCA.

Output 6: Seven IW systems functioning effectively in Tsavo East Rhino Sanctuary with high priority data being sent in real time to rangers so they can react accordingly. Rangers properly trained to use and maintain the equipment with access to operational support when required.	
Activity 6.1	Deployment of seven IW systems and five unmanned ground sensor systems (UGS) in Tsavo East National Park Rhino Sanctuary.
Activity 6.2	An in-depth analysis of threat hotspots and key sites for IW deployments are identified.
Activity 6.3	Identified staff at the rhino sanctuary attend a ‘Training of Trainers’ on the use and deployment of IW systems. Training is given jointly by ZSL and 7TG. The project team will ensure that a minimum number of female staff are selected for training on the IW systems.
Activity 6.4	Maintenance checks of the systems takes place on a bi-monthly basis, carried out by KWS and ZSL when necessary, to ensure the long-term functionality of the system.
Activity 6.5	Quarterly review on effectiveness of IW systems to provide real-time alerts to rangers.

Output 7: Benefits to local communities around the TCA rhino areas are monitored to ensure that the impacts of activities are reaching the community, specifically through enhanced security, reduced corruption and a level of trust towards the local law enforcement agencies.	
Activity 7.1	Questionnaire survey has been designed to test community perception of security, corruption and trust of local law enforcement agencies.
Activity 7.2	Questionnaires are delivered to the three major communities surrounding rhino areas at the start and close of project. Questionnaires are delivered to an average subset of the community demography, ensuring that gender equality is acknowledged.
Activity 7.3	Questionnaire surveys are compared to analyse the effectiveness of the intervention in supporting local people.

Annex 3 Standard Measures

N/A – no details are currently available from DEFRA on these standard measures

Annex 4 Onwards – supplementary material (optional but encouraged as evidence of project achievement)

Checklist for submission

	Check
Is the report less than 10MB? If so, please email to IWT-Fund@ltsi.co.uk putting the project number in the subject line.	YES
Is your report more than 10MB? If so, please discuss with IWT-Fund@ltsi.co.uk about the best way to deliver the report, putting the project number in the subject line.	N/A
Have you included means of verification? You need not submit every project document, but the main outputs and a selection of the others would strengthen the report.	YES
Do you have hard copies of material you want to submit with the report? If so, please make this clear in the covering email and ensure all material is marked with the project number.	NO
Have you involved your partners in preparation of the report and named the main contributors	YES
Have you completed the Project Expenditure table fully?	YES
Do not include claim forms or other communications with this report.	