

INTERNATIONAL ELEPHANT FOUNDATION

FINAL REPORT - 2015



P. O. Box 204, Mtito Andei - 90128, Kenya

<u>Project Title:</u>	LARGE ELEPHANT MONITORING PROJECT Now called: <i>BIG TUSKER PROJECT</i> (Aerial reconnaissance supporting anti-poaching/elephant management)
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<u>Budget:</u>	Total Project Budget US\$ 309,596 Total Requested US\$ 20,000 & Received from IEF US\$ 15,000
<u>Project Start Date:</u>	6th January 2015
<u>Project End Date:</u>	31st December 2015
<u>Project Present Status:</u>	Completed 31st December 2015
<u>Project Category:</u>	Field Conservation and Field Research

Summary:

The “Large Elephant Monitoring Project”, now called the “**Big Tusker Project**” ran between January to December 2015, whereby the Tsavo Trust purchased twenty x 55.5-gallon drums of aviation fuel (Avgas) to support aerial reconnaissance, anti-poaching and elephant management as well as purchasing one high quality camera and lens to boost the Trusts capacity in media and pictorial recording of information, as per the funding proposal submitted on 13th August 2014. Note the original proposal requested for US\$ 10,000 for sixteen drums of Avgas but when purchased the price had reduced from \$ 625 to \$ 500 per drum and this enabled Tsavo Trust to purchase an additional four drums of Avgas which provided an extra 28 hours of flight.

The Tsavo Trust gratefully received US\$ 15,000 support funding from the International Elephant Foundation on 22nd June 2015. These funds were used for aerial reconnaissance in support to anti-poaching and elephant management within the Tsavo’s.

The Tsavo Trust’s Big Tusker Project (BTP) receives generous funding support from various other conservation organisations and individuals including Save The Elephants/Wildlife Conservation Network – Elephant Crisis Fund, who provide the main funding for this project along with many other organisations such as US Fish & Wildlife Service, Tusk Trust and local Kenyan corporate and individual supporters.

For the first 10 months of 2015 the Tsavo Trust’s aged Super Cub, registration 5Y ACE, flew a total of 458.5 hours over the Tsavo Conservation Area (TCA) that covered 34,208 miles. In October 2015 5Y ACE was grounded and put in for a major overhaul and re build and a new (second hand) Super Cub, registration 5Y TTZ, came into action to continue the “aerial blanket” in November 2015. Since then 5Y TTZ has flown a further 108.5 hours covering 7,658 miles. Between the two aircraft, a total of 567 hours of reconnaissance flight covering 41,866 miles has been achieved at an average speed of 74 miles per hour over the TCA. This has provided extremely valuable support to the Kenya Wildlife Service (KWS) within the Tsavo Parks but also support to other organisations who operate in dispersal areas outside of the Parks.

Aerial reconnaissance in 2015 totaled 567 hours of flight and 41,866 miles with support funding from IEF that provided 140 hours of flight covering 10,360 miles over the TCA.

This aerial coverage is in support of the Kenya Wildlife Service (KWS), the governing wildlife agency in Kenya and the elephants of Tsavo.

The year 2015 was an extremely good year in contrast to the previous year of 2014 in terms of the number of fresh or recent elephant carcasses found. For example, in May 2014 alone, Tsavo Trust found 23 elephant carcasses. These 23 carcasses were part of the total of 106 elephant carcasses found throughout the same year. 2015 in contrast saw a big change for the better with a total of 55 elephant carcasses found throughout the TCA over the entire year. This represents a 50% reduction in number of carcasses found. This clearly shows some positive outcomes as a result of combined efforts between KWS and its field based partners such as Tsavo Trust.

IEF’s support has undoubtedly contributed to this down turn in poaching within the Tsavo’s. Tsavo Trust aims to continue supporting KWS’s efforts to maintain this positive trend.

Without consistent aerial coverage over the vast and largely road-less expanse of Tsavo, an accurate picture of the situation on the ground could not have been achieved.

BIG TUSKER PROJECT - SUMMARY of ACHIEVEMENTS & IMPACTS - 2015

The table below summarizes number of hours flown, miles covered, individual big “Tuskers” observed, ivory recovered, numbers of fresh and recent elephant carcasses, numbers of poachers camps/blinds/hides & platforms, number of joint TT/KWS arrests and number of aerial responses to armed situations for 2015.

Activity	Hours Flown	Miles Covered
<i>Aerial Reconnaissance January to December 2015</i>	567 Average 74 mph low level flight	41,866 Flights carried out jointly with KWS Officers/Rangers, thus current/live info. relayed to ground units for action
<i>Monthly Average January to December 2015</i>	Average of 47.25 hrs per month	Average of 3,489 miles per month
Big “Tuskers”	No. Observed	
<i>January to December 2015</i>	<ul style="list-style-type: none"> • Iconic Tuskers: 10 different bulls (2 lost in 2015 – IR1 c of d - natural, DA1 c of d unconfirmed) • Emerging Tuskers: 18 different bulls • Iconic Cow Tuskers: 7 different cows • Total: 28 bulls & 7 cows 	
Ivory recovered	No. Recovered	
<i>January to December 2015</i>	18 tusks recovered from poached, natural and unconfirmed causes of death. All jointly recovered by TT/KWS ground teams	
Elephant carcasses	No. Observed	
	Fresh	Recent
<i>January to December 2015</i>	45	10
Poachers camps & hides/blinds/platforms	No. Observed	
	Fresh	Recent
<i>January to December 2015</i>	5	11
Arrests following illegal activity inside the Parks	No. Arrests	
<i>January to December 2015</i>	276 (Arrests made by KWS resulting from aerial observations and back up to KWS operations by TT aircraft & ground teams)	
Aerial responses to armed gangs & backup to KWS	No. Responses	
<i>January to December 2015</i>	11 (Both inside and outside the National Parks as back up to KWS)	
Notable Occurrences	<ul style="list-style-type: none"> • 14Feb15 - Loss of Tusker DA1, ivory 51kg & 48kg recovered by KWS/TT • April15 - Pilot Josh Outram started work for TT/BTP • May15 – record number of individual Tusker sightings in a single month - 74 • June15 – support to combined KWS/Kenya Police operation in the Taita Ranches, with TT aerial back up. Over 100 arrests made • 27July15 – Locating 6 poached elephants and aerial support to KWS ground teams • 16Aug15 – Locating 20,000 cattle & bomas for KWS in TWNP – 22 arrests made • 14Nov15 – deployed new Super Cub aircraft 5Y TTZ to Tsavo Ops • 16Nov15 – donated new Toyota Land Cruiser vehicle to KWS, TWNP • Several occasions – avgas & diesel donations to KWS specific field Ops • All months – Elephant poaching well down compared to 2014 • All months – support to KWS in all TCA rhino areas – TENP, TWNP, CHNP • All months – support to KWS Research & Monitoring Depts. through predator & endangered species observations – ground & air 	

Big Tusker Project – (formally the Large Elephant Monitoring Project):

The Large Elephant Monitoring Project started in early 2013 and is an ongoing project with no plans for a completion date. It is supported by other organisations including Save The Elephants (through the Wildlife Conservation Network/Elephant Crisis Fund), US Fish & Wildlife Service, Tusk Trust, The Woodtiger Fund and many other corporates and individual supporters such as Tsavo Trust Board Member and entrepreneur - Stuart Herd.

The Tsavo Trust continues to play a very meaningful role in the day-to-day security of elephant within TCA via its aerial and ground patrols through the Big Tusker Project. It does this in total partnership with the KWS where by Tsavo Trust acts as a field based support body. Aerial reconnaissance flights continue to be carried out on a regular basis with the Tsavo Trust's Chief Executive Officer (Richard Moller) and the Tsavo Trust's additional pilot (employed full time in April 2015 – Josh Outram). Flights are carried out with a KWS Officer or Ranger as a rear seat observer.

1. *Loss of 2 iconic Tuskers called Dakota (coded DA1) and Irima (IR1):*

On 14th February 2015, the TT's ground monitoring team called *Tembo 2* found a fresh elephant carcass along the Galana River in Tsavo East National Park (TENP) whilst out on patrol and believed it to be that of the iconic Tusker called Dakota, coded as DA1. A joint ground follow-up with KWS/TT later the same day confirmed that it was indeed Dakota and the ivory was recovered. These weighed a whopping 51kg and 48kg (112lbs and 106lbs respectively). On closer investigation, it was found that Dakota had most probably died as a result of 2 gun shot wounds, one on his left flank and one in his rear end that he probably sustained in the area where he was last seen – north side of Galana River in the Garasamuke/Emusaya area. It is important to note that Orma cattle illegally grazing and watering on the Galana inside the TENP have invaded this area. Historically this is a “hot spot” elephant poaching area, thus suggesting there was an attempt to poach him for his big ivory, but he had escaped, only to die an agonizing death days or even weeks after the attempt.

INSERT: Separately sent photo that shows fresh carcass of iconic Tusker Dakota (DA1) in TENP on February 14th 2015. Tusks weighed 51kg and 48kg.

2. Irima, one of the well-known iconic Tuskers, coded as IR1 was found to have died of natural causes in late June 2015, his carcass was fully inspected and positively identified as that of IR1. IR1 was a mono tusked bull elephant and looking at his teeth wear on his lower jaw, it would indicate he was at least 60 years old. Photographs were sent to experts to confirm his age and all agreed on between 60 and 65 years old. Part of his huge single tusk was still intact and recovered but the brunt of the tusk must have broken off between mid April, when IR1 was last seen, and late June. Although a sad loss, there is a big positive here – in this day and age for an elephant to live all his life and die naturally of old age is extremely rare. It does occur here in Tsavo and here is proof.

INSERT: Separately attached photo was taken in April 2015 and is the last know photo taken of Tusker IR1 before his natural death aged 63 years +_ in TENP in late June 2015.

For an elephant to have died naturally of old age in these modern times is very rare, but in Tsavo it happens.

Short-term goals of this project are:

- Ensuring regular aerial surveillance of Tsavo's "Tuskers" is maintained – through number of hours flown/miles covered and recording of flight paths taken that cover specific areas. ***ACHIEVED with 567 hours flown that covered 41,866 miles over the TCA and in so doing, 28 bull and 7 cow "Tuskers" regularly monitored over 2015 along with elephant seasonal movements whereby ground security units can be better deployed. Average individual Tusker sightings per month were 48 equating to 1.6 sightings every day of the year for 2015 through joint aerial and ground Tsavo Trust teams.***
- Assisting KWS in their conservation efforts within TCA – through real time aerial observations to direct rapid ground follow-up operations. ***ACHIEVED with 11 call outs in response to armed security situations and follow-ups. 276 arrests as a result of aerial coverage.***
- Providing elephant related data for KWS, Save The Elephants and Monitoring the Illegal Killing of Elephants (MIKE) program under the Convention on International Trade in Endangered Species (CITES) – through numbers of elephant carcasses observed and verification of cause of death. ***ACHIEVED with recording specific data on 55 elephant carcasses seen from the air and many visited on the ground to confirm cause of death.***
- Through the number of elephant tusks recovered as a result of aerial observations, so these cannot fall into the "wrong hands" – i.e. poachers. ***ACHIEVED with 18 tusks recovered.***
- Being a regular observatory presence in areas that are desperate for on-going reconnaissance in the largely road-less expanse of Tsavo, in particular poaching "Hot Spot" areas. ***ACHIEVED by regular and consistent recce flights in collaboration with KWS Field Officers and Rangers as Rear Seat Observers during recce flights.***
- Establishing further ground units such as "Tembo 2" team to provide regular "eyes and ears" on the ground in the big "Tuskers" known home ranges. ***ACHIEVED with deployment of newly established joint KWS/TT "TEMBO 2" team in October 2014.***
- To upgrade the Tsavo Trust's capability in media and pictorial recording of information. ***ACHIEVED with the purchase of 1 high quality camera (Canon 7D2 body plus Canon 70mm to 200mm lens, camera bag and cleaning equipment) for professionally recording observations and reporting of relevant information.***

Long-term goals of this project:

- Striving to maintain the stability of Tsavo’s large “Tusker” gene pool by providing a regular “eye in the sky” in those known areas that the large bull elephant frequent so that the super Tuskers live on to old age and the emerging Tuskers of today become the super Tuskers of tomorrow. ***ACHIEVED with 567 hours flown that covered 41,866 miles over the TCA and observations of 28 iconic bull “Tuskers” (10 super Tuskers and 18 emerging Tuskers) and 7 cow “Tuskers”.***
- Data recording of large “Tuskers” for future reference – through a basic database, date of individual elephant sighting, GPS location and any other pertinent information recorded. ***ACHIEVED by observations of 28 different individual bulls and 7 iconic cows plus positive identification of at least 8 new “Tuskers” to the Tsavo Trust “Tusker” data base during 2015.***
- Data recording for MIKE purposes – through number of elephant carcasses observed and verification of cause of death. ***ACHIEVED with recording details of 55 carcasses observed from the air and many of them visited to confirm details on the ground including recovery of ivory (18 tusks in 2015).***
- Private/Governmental conservation partnerships – an area as large as Tsavo can and does benefit hugely from such collaboration, it is too big and has too many challenges to be achieved under the Governing Agency alone. ***ACHIEVED with on-going partnerships with Kenya Wildlife Service, Save The Elephants, USFWS, Zoological Society of London (ZSL), Tsavo Elephant Research Project, Tusk Trust and many individuals.***
- Recording and relay of relevant elephant information to KWS database – through real time observations made from the air. ***ACHIEVED by regular and consistent recce flights in collaboration with KWS Field Officers and Rangers as Rear Seat Observers during recce flights, and real time observations governing where ground teams can be better deployed against illegal activities.***
- Establishing further ground units such as “Tembo 2” team to provide regular “eyes and ears” on the ground in the big “Tuskers” known home ranges. ***NOT ACHIEVED AS YET due to funding constraints.***
- Upgrade the Tsavo Trust’s old and ailing Super Cub aircraft with a more reliable aerial platform to work from. ***PARTIALLY ACHIEVED. Funding support for this plan is in progress, and a second Super Cub was purchased and deployed into the field in November 2015 so as not to break the “aerial blanket” of coverage.***
- To establish a “Big Tusker Museum” within the Tsavo Conservation Area in partnership with KWS to show case the Tsavo “Tuskers”. ***NOT ACHIEVED AS YET due to funding constraints.***

Conservation Needs:

- Continued support for aerial reconnaissance over the vast TCA for all the reasons stated above and in the original proposal in support to KWS. **ON GOING PROJECT.**
- Support to the governing wildlife agency in Kenya – the Kenya Wildlife Service. Joint conservation efforts (Government/NGO) have stronger conservation outcomes and in the process a more transparent approach is achieved where such partnerships have evolved. **ON GOING PROJECT.**
- Purchase of a new 4 x 4 Toyota Land Cruiser vehicle purchase for the deployment of a **mobile anti-poaching unit called “Tembo 1”** who will work jointly with existing KWS anti-poaching teams along the 50-kilometre southern boundary section of Tsavo East National Park (TENP) between Bachuma to the west and Sala Hill to the east. Operations will take place both inside the TENP to the north and on community owned land to the south. **FUNDRAISING FOR THIS HAS STARTED: It is hoped by end of 2016 this joint KWS/TT anti-poaching unit will be deployed.**
- Establishing further ground units such as “Tembo 2” team to provide regular “eyes and ears” on the ground in the big “Tuskers” known home ranges. This will raise the “Tuskers” profile, bring conservation partners together and in so doing provide specific focus on maintaining the existence of the “Tuskers” and their vibrant gene pool. **FUNDRAISING FOR THIS HAS STARTED: By end 2016 at least 1 further ground team to be deployed.**
- Upgrade the Tsavo Trust’s old and ailing Super Cub aircraft with a more reliable aerial platform to work from. **ACHIEVED: With 5Y TTZ now deployed and 5Y ACE in Nairobi for extensive re-build as an ON GOING project.**
- To establish a “Big Tusker Museum” within the Tsavo Conservation Area in partnership with KWS to show case the Tsavo “Tuskers”. **LONG TERM FUTURE PLANS.**

Summary of Progress, Goals, Objectives, Findings & Accomplishments to date:

The table below shows 2015 breakdown per month of hours flown, miles covered, numbers of large “Tuskers” observed, numbers of fresh (less than 3 weeks) and recent elephant carcasses (less than 3 months old) observed, numbers of poacher hides, blinds, camps observed and ivory recovered jointly by KWS & Tsavo Trust:

Month - 2015	No. Hrs flown	No. Miles covered	No. Tuskers observed	No. Fresh elephant carcasses	No. Recent elephant carcasses	No. Poachers camps, hides, blinds	No. Ivory recvd.
January	44	3,298	19 (14 bulls, 5 cow)	2	2	3	4
February	35	2,615	14 (10 bulls, 4 cow)	4	2	6	2
March	36	2,788	15 (12 bulls, 3 cow)	8	-	1	4
April	35	2,536	12 (9 bulls, 3 cow)	1	2	1	2
May	43	3,099	16 (11 bulls, 5 cow)	6	1	-	2
June	61	4,538	12 (9 bulls, 3 cow)	5	-	1	2
July	55	3,950	13 (10 bulls, 3 cows)	9	-	1	-
August	51	3,928	13 (10 bulls, 3 cows)	6	1	1	-
September	50	3,806	17 (14 bulls, 3 cow)	-	-	-	-
October	46	3,478	18 (16 bulls, 2 cow)	3	1	-	-
November	57	4,075	22 (17 bulls, 5 cow)	1	1	2	2
December	54	3,755	18 (14 bulls, 4 cows)	-	-	-	-
TOTAL	567	41,866	28 different Bulls & 7 Cows	45 s/total	10	16	18

At an average speed of just under 74 miles per hour, it is this slow speed at low level (200 feet above ground) that is so important during aerial reconnaissance flights as it means the observers are able to visually recognize current observations for immediate ground follow up as necessary. The Super Cub is a perfectly suited platform for wildlife and anti-poaching related work, rather than faster aircraft that might carry more people, but many observations are missed due to a higher air speed and lack of low-level maneuverability.

The goals and objectives remain the same through this project and going forward there is no change.

Conservation Outcomes:

With a total of 41,866 miles over 567 hours of flight over the TCA, many areas, particularly poaching “Hot Spot” zones and areas where the known large “Tuskers” frequent, have been regularly covered and a presence there has potential poachers.

It is important to note here that due to the sheer size of Tsavo and the fact that so few roads exist in many places, it is impossible to cover and secure the entire area. The poaching of the famous super Tusker called Satao in May 2014 and the poaching of super Tusker called Dakota in February 2015 clearly shows this. But what we can say is that without this aerial component the situation would be much worse with no “eyes in the sky” to assist KWS in ground deployments. It is difficult to quantify but the fact remains that without aerial presence an understanding of the threats and challenges to management would not be achievable. Regular aerial reconnaissance provides an absolutely vital conservation tool in the fight for wildlife protection.

Elephant poaching well down by over 50%:

Some very good and encouraging news to report for 2015 is that elephant poaching within the Tsavo’s has significantly dropped by at least 50% judging by the aerial and ground findings over the last 3 years. During 2013 a total of 112 fresh or recent elephant carcasses were located and in 2014 there were 106 located. 2015 saw a total of 55 carcasses found. This major success can be attributed to many different reasons and a combination of the following:

- Kenya is lucky to have in place a very active and energetic Cabinet Secretary for Environment, Water and Natural Resources and with this Government support to addressing the illegal wildlife trade has been met with vigorous and positive actions including a total modernization of the Wildlife Conservation and Management Act, 2013;
- KWS has played a huge and commendable role in security efforts in curbing elephant poaching where many key poachers have been apprehended; arrests of some main “king pin” ivory dealers have been effected and the conservation community is eagerly awaiting their trials and convictions;
- Kenya is blessed with having an extremely vibrant private sector conservation community and with this not only very significant amounts of donor funding is realized but also their strong participation over the long term has made the conservation Non Governmental Organisations (NGO) a vital stakeholders in Kenya;
- PR pressure from various conservation organisations has been immense; high-level Governmental talks and International “buy in” across the globe regarding the ivory trade has without doubt made a positive impact.

These are just a few reasons for this positive trend and down turn in elephant poaching.

But we are not “out of the woods” yet. The examples of 4 elephants found in one pile, shot in Tsavo East National Park (TENP), Triangle in late February 2015 and a further 6 shot dead in Tsavo West National Park (TWNP) on 27th July 2015 shows the demand for ivory is very much in existence and even with the updated wildlife Laws, poachers are still willing to take great risks.

Areas within the Tsavo Conservation Area covered by aerial reconnaissance flights:

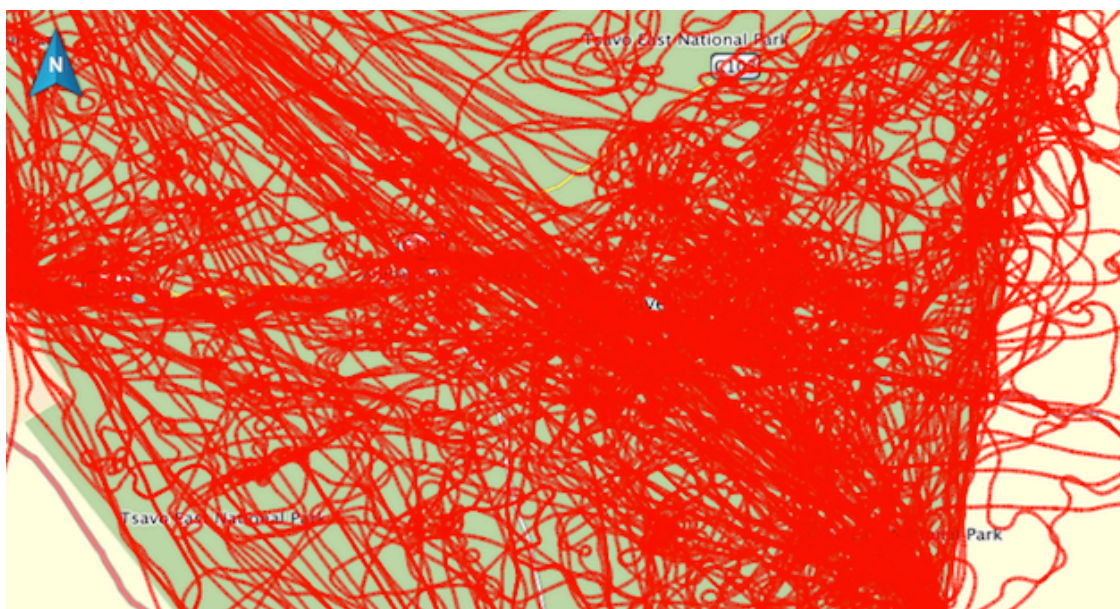
Table below shows the main areas covered within the TCA during 2015:

TSAVO EAST NP	TSAVO WEST NP	RANCHES & DISPERSAL AREAS
<p>Northern Area – Galana River, Athi River, Tiva River, Bisadi, Roka, Tundani, Tumbili, Masobo, Jimetunda, Ndiandaza, Ya Kalicha, Kone, Macho Kombo, Kiasa, Gothoa, Yatta Plateau, Hand Grenade Valley, Tambanguji, Durusikale, Garasamuke, Emusaya, Huri, Golf Charlie, Koitu, Sangayaya, Dabaduke, Mufupa ya Ndovu,</p> <p>Southern Area – Voi River, Voi, Irima, Maka, Ndololo, Kanderi, Wagalla, Waduruma, Ndara Plains, Buchuma, Maungu, Murondo, Dakota, Dika Plains, Satao, power lines, Aruba, Mukuaju, Dika, Konu Moja, Dida Harea, Balguda, Sala, Sobo, TENP boundary</p> <p>Central Area – Intensive Protection Zone (IPZ), Manyani east, Punda Milia, Hatulo Bisani, Lugards, Mbololo lugga, Balguda, Irima, Mudanda, Maka Hill, Ndi, Man-eaters, Ashaka, Triangle, Kamungi Conservancy, Mtito Lugga, Zero Delta, Voi north & east, Galana River, Tsavo River and Yatta Central, SGR line</p>	<p>Northern Sector – IPZ, Ngulia Rhino Sanctuary (NRS), Ngulia Valley, Mangalete, Kamboyo, Kisimeka, Chyulu south, Mtito lugga, Triangle, Mungai Hill, Finch Hattons, Mzima Springs, Shetani volcano, Severin, Kilaguni, Ndawe, Tsavo River to Athi River, Ngulia east</p> <p>Central Sector – IPZ, Rhino Valley, NRS, Tsavo River, Kinyek, Maji ya Chumvi (north & south), Ziwani, Lesoito, Kyulu, Mombasa Highway, Man Easters, Kenani, Kanga, Manyani north and west, SGR line</p> <p>Southern Sector – Lake Jipe, Toloa, Kanjaro, Maore, Murka, Maktau, Kangechwa</p>	<p>TENP border – Kamungi Conservancy, Kilalinda, Kulalu & Galana Ranch, Shaka Hola, Bombi, Danisa, Kisiki, Dakadima, Dakadakotha, Kilifi Ranch, Kulalu Ranch, Dere, Murondo, Magram/Dakota Ranch, Lali Hills, Kone</p> <p>TWNP border – Kishushe, Lualenyi, Oza, Kuku, Il Talal, Mbulia, Rombo, Taveta & Salaita</p> <p>Chyulu Hills NP – Il Talal, Rombo, Kuku, Ol Donyo Waas, Mukururo</p> <p>Taita Ranches – Teita, Amaka, Taru, Kalonzo, Jogoo, Bura, Mbale, Rukinga, Sagala, Kasigau</p>
<ul style="list-style-type: none"> • <i>The locations mentioned above is only an indicator of flight paths taken, many other areas in between are also covered and in so doing providing “eyes in the skies” over Tsavo and directional guidance to ground units.</i> • <i>All flight paths are logged and recorded with all relevant real time observations relayed to KWS on a daily basis for their records as well as necessary rapid reaction.</i> 		

Map below shows flight paths flown by Tsavo Trust aircraft over the TCA for the year 2015 where 41,866 miles were flown over 567 hours of flight.



Map below shows a section of the above map where intense flight paths occurred that covered a 5,000 square kilometer section of southern TENP. This clearly reflects the level of coverage and teamwork between Tsavo Trust and KWS in their efforts to curb illegal activities within the Parks.



- A total of 55 elephant carcasses have been observed during 2015 (45 fresh – less than 3 weeks old and 10 recent – less than 3 months old).
- Joint recovery by KWS/Tsavo Trust of 18 elephant tusks, all of these tusks having been observed from aerial flights between January and December 2015. By collecting this ivory for safekeeping, it denies the poachers more ivory to fuel the illegal trade. The weight of ivory recovered since the BTP started is in excess of 1,000 kilograms, with 97 tusks having been recovered in 3 years.
- Over 2015, a total of 10 known different individual iconic bull super “Tuskers” were regularly monitored, 18 emerging bull “Tuskers” (the icons of tomorrow) and 7 exceptional cow “Tuskers” have been observed and relevant information recorded in the Tsavo Trust BTP database. The total number of sightings of these known and named/coded elephant has been 572 sightings (475 bulls and 97 cows). This equates to 48 confirmed sightings per month and an average of 1.6 sightings per day. Before the BTP started there was no such regular reconnaissance and activity geared towards these iconic elephants protection.

The close working relationship between KWS and Tsavo Trust (aerial and ground units combined) is without doubt adding to elephant security and safety of the big Tuskers.

Additional conservation outcomes in 2015:

1. *Employment of Additional Pilot – Josh Outram:*

Josh Outram joined TT in April 2015 having completed tail wheel training on Super Cubs in the USA. He also is qualified as a commercial pilot and gained some flying experience in Serengeti, Tanzania. Josh now carries out much of the aerial reconnaissance work for the Trust and has come to know all the Tuskers and is extremely enthusiastic in every respect. He has made many friends with KWS Officers and field Rangers whom he flies with regularly whilst staying in field outposts and providing aerial coverage. With Josh on board, this means that the “aerial blanket” already being provided to support KWS in various capacities as well as aerial coverage to regularly monitor the Big Tuskers can now be improved, not only by more hours being flown but by the fact that there will always be a pilot and aircraft on call should the situation arise, as is often the case.

2. *Record number of Tuskers observed in a single month:*

During May 2015, and in collaboration with KWS Research & Monitoring Department within the Tsavo’s, the TT’s BTP identified and recorded details of a total of 11 big bull Tuskers and 5 iconic cow Tuskers. A record number of 74 individual sightings was achieved, up from the previous highest sighting in one month of 45. There was a new Tusker coded as DH1 positively identified and added to the database (although this bull has been seen before, photographs taken by Tembo 2 team have confirmed he is indeed a new Tusker). This level of coverage and regular observations of Tsavo’s iconic Tuskers is without doubt adding to their security and well-being and a clear indication that a joint aerial and ground team approach to Tusker monitoring is successful. The close working relations between KWS and *Tembo 2* team also covers so much more than monitoring of the big Tuskers. It also fills an important niche to help KWS Research and Monitoring Department in TENP to cover predator monitoring as well as other endangered species including the critically endangered Hirola and Grevy’s zebra that occur in TENP.

3. *New Super Cub aircraft:*

Following very generous support from the Woodtiger Fund and Nick Southgate through Tusk Trust, UK, the Tsavo Trust has been able to purchase a very good second hand Super Cub in Alaska. This has been a lengthy yearlong process and finally 5Y TTZ was deployed straight into action in the field on 14th November 2015.

Tsavo Trust's 53 year old and much loved 5Y ACE, donated in 2013 by close friend Stuart Herd, has now been grounded at KWS Air Wing in Nairobi (who carry out TT aircraft maintenance) where she will undergo extensive airframe, fabric and new engine before being re deployed back to aerial reconnaissance in Tsavo. Thankfully the aerial blanket that has been so valuable to KWS and the Big Tuskers Project will be maintained and no down time has occurred.

INSERT: Separately attached a photo of 5Y TTZ flying over the TCA with elephants in background.

Time Line:

The time line for this project is now complete as it commenced in January 2015 and ended in December 2015.

However the Big Tusker Project will continue into the long term under the Tsavo Trust and collaboration with the KWS as well as other conservation partners such as IEF.

Video Clip and Photos:

Attached separately are the following:

- **Short video clip**
- Photo of fresh carcass of big Tusker known as Dakota and coded as DA1
- Photo of big Tusker called Irima coded as IR1
- Photo of new Super Cub 5Y TTZ during recce over Tsavo
- Photo of iconic Cow Tusker called Dida Harea and coded as F_DH1
- Photo of ivory recovered this year
- Photo of the big iconic "Tusker" called Kamboyo and coded as KA1
- Photo of ground team called "Tembo 2" with Tusker SA2 in foreground

Budget:

This project requested funding from International Elephant Foundation that covers part of one aspect of the project; the purchase of 16 drums of Avgas (3,360 litres) and the purchase of 1 high quality camera and lens. The funding amount received was US\$ 15,000. The total combined project value is US\$ 309,596.

Budget Justification:

At the time of the original proposal, 1 x 210 litre drum of Avgas costs US\$ 625 at the aviation fuel supply depot at Wilson Airport in Nairobi. Fortunately at the time of Avgas purchase, the cost had reduced to US\$ 500 per drum. We were therefore able to purchase 20 drums of Avgas as opposed to 16 and this gave an extra 28 hours of flight to total 140 hours for 2015. The purchase of 20 drums therefore equated to US\$ 10,000. This provided a total of 140 hours of flight for 2015 and given the fact the aircraft consumes 30 litres of fuel per hour (US\$ 71.5 per hour) the total cost to cover the 140 hours under this application is a fraction over US\$ 10,000.

Budget table showing total project costs (All costs in US\$)

Budget Item	Amount received from IEF	Date Purchased	Actual Costs (US\$)	TOTAL IEF Contribution to Project Costs (US\$)
Purchase of 20 drums Avgas from Nairobi @ \$500 per drum	10,000	15 drums 7 th July 2015 5 drums 27 th October 2015	7,500 & 2,500	10,000
Purchase of new camera (Canon 7D2 body) and Canon 70 – 200mm lens plus bag & equipment	5,000	15 th October 2015	5,280	5,000
TOTAL COST US\$	15,000		15,280	15,000

Note: Over expenditure of \$ 280 was covered by Tsavo Trust

On behalf of Tsavo Trust and the elephants of Tsavo – a huge thank you for your support to this project.