IVORY BELONGS TO ELEPHANTS
AMBOSELI-TSAVO CONSERVATION AREA
GRASS-ROOT CAMPAIGN WALK (455km)
"Feb 6th – March 14th 2015"

"Conserving African elephants through walking and talking "

By Jim Justus Nyamu
Elephant Neighbors Center (ENC)

ELEPHANT NEIGHBORS CENTER 2015

www.elephantneighborscenter.org

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"Tsavo is Kenya's second oldest national park. It biodiversity is part of our history and one of the pillars of our economy. For this reason, we will protect this unique ecosystem and its wildlife fiercely, relentlessly and passionately. And for as long as we have friends like IFAW who share our vision, Tsavo will live well into the future.' Julius Kimani, KWS Former Assistant Director, Tsavo Conservation Area now Deputy Director Parks and Reserves"

ACKNOWLEDGEMENTS

Many institutions and people have contributed over the years to the success of this initiative and we have continued appreciating them in different walk editions. In this walk "**Amboseli – Tsavo Conservation Area grass-root campaign walk edition"** we wish to acknowledge the following institutions and persons for their outstanding support and contributions.

(a) Classic Safaris:

1. Michael Murimi - Director
2. Robert Ndegwa - Driver

Your stupendous support with your land-cruiser and your driver to this campaign was vastly acknowledged.

(b) **Amara Conservation**

1. Lori Bergeman- Founder and Director
2. Jacob Dadi
3. Peter Towett
4. Isaac Maina

We highly appreciate your technical advice while planning the walk. We are also most grateful for availing an extra support vehicle.

(c) Wildlife Works

1. Rob Dobson – Director
2. Lauran Lenjo - Community Relation Officer
3. Emily Mwawasi – Community Relation officers
4. Carol Wakesho - Community Relation officers
5. Eric Sagwe Head Security
6. Evans Mwachoki- Ranger
7. Bernard On'gare Ranger
8. And your members of staff

We appreciate your support in fueling the donated support vehicles, security and technical support in formulating the route among other assistance.

(d) **Kenya Wildlife Service**

- *Machakos office*

1. County Warden Mrs. Eunice Kiarie and her staff

- *Kajiado office*

1. County Warden: Mrs Elema Hapicha- for coordination while planning

- *Amboseli office*

1. Park Warden: Mrs Zaibabu Salim
2. Deputy Park Warden: Joseph Dadacha
3. Community Warden: Munene

We do appreciate your kind support in hosting our team in Amboseli KWS campsite and your technical advice during the planning and implementing the walk.

Taveta Station

1. Robert Obrein: Assistant Director Tsavo Conservation Area
2. Mr. Erupe: Senior Warden Tsavo West National Park
3. Joseph Kavi: Community Warden TCS southern sector
4. Joseph Kisio: Assistant Community Warden
5. Wickliffe Millimo: Ranger - Rombo
6. Peter Okongo: Ranger Taveta
7. Emily Muriuki: Ranger Taveta

Voi and Bura station

1. Dickson Too: Senior Community Warden TCA
2. Joseph Wambua: Senior Warden Tsavo East National Park
3. Samuel Rukaria: Community Warden Larger Taita
4. Grace Kariuki: Warden in charge of education
5. Samuel Wandera: Ranger

We undeniably acknowledge your tirelessly support you accorded to us in all the KWS offices that include the HQ divisions. Your work was every day visible.

(e) **County Commissioners office**

1. Mrs. Dollar: Makueni County Commissioner

2. Madam Sabina: Assistant county Commissioner Matiliku
3. Mr. Mohamed Harsma: Kajiado County Commissioner
4. Mr. Ole Kikua: Deputy county Commissioner Loitoktok
5. Mr. Ole Sossion: County commissioner Taita Taveta
6. Mr. Nkakuda: Deputy County Commissioner Taveta
7. Mrs. Shufaa Ormar Mwijuma: Deputy County Commissioner Mwatate
8. Mr. Mbui: Deputy County Commissioner Wundanyi
9. Mr. Shivogo: Deputy County Commissioner Voi

Words cannot express our sincere appreciation for your support you accorded in your designated areas Mobilizing community meetings through your local chiefs, security escorts from Kenya Police and Administration Police as well as your officers, was a sign of solidarity and togetherness.

(f) County Government

1. Madam Nazi Kibwana: The First Lady of Makueni County
2. Dr. Wambua: Executive Secretary Natural Resource and Environment Makueni
3. Mr. Mulwa: Executive Secretary Tourism and Trade Makueni
4. Mr. Ali Letula: Executive Secretary Natural Resource and Environment Kajiado
5. Madam Jane Nkandienye: The First Lady of Kajiado County
6. Mr. Cassian Ngotho Mwachanya: Sub county Administrator Taveta
7. Mr. Evans Mchana: Sub county Administrator Taveta
8. Madam Hope Mruttu: The First Lady Taita Taveta County
9. Mr. Executive Secretary Natural Resources and Environment Taita Taveta.

Thank you very much for your guidance, support and words of encouragement before and during the campaign walk

(g**) Born free Foundation**

1. Timothy Oloo - Country Manager
2. Martin Nduru - Driver
3. Simon Ole Kasaine - field officer

Born Free Foundation started with us in our 1st campaign walk in 2013 and in USA 2013. We do recognize your continuous support in this campaign.

Members of Parliament and Members of County Assembly

1. Hon. Patrick Musimba: West Kibwezi Constituency
2. Hon. Katoo Ole Metito: Kajiado South Constituency
3. Hon. Andrew Mwandime: Mwatate Constituency
4. Hon. Joyce Lay: Women Representative Taita Taveta Constituency
5. Hon. Jones Mganga MCA Ngulia Ward
6. Hon. Mchila: MCA Mwaktau Ward
7. Hon. Musa Mackinon Ward in Kwale County Ward

This campaign received financial and in kind support from some of the above organizations, others included: Manu Chandaria Foundation & Save the Elephants and Tsavo Trust.

Thank you very much for believing in this cause. Your support and contribution towards this campaign walk remain alive and we acknowledge even your political good will support.

Special mention to Muzzafar Juma Khan, Annabella Franceson of Maniago Safaris, Doris Schaule of Friends of Tsavo, Christina La Monica, Anna Martinson, Janet Goss, Pts. Lucy of USA, Chris Edwards, Maria Mossman of UK, Sophie Gerald, Miss Tourism Taita Taveta among others who contributed towards this campaign; We would also like to acknowledge several hotels who accommodated our team that include: Challa Hotel, Lion's Bluff, Sarova Taita Hills, Kipalo Lodge, Tsavo Lodge and St Augustine George's.

African Environmental Films Foundation (AEFF) led by Mr. Simon Trevor, Lucy Ng'ang'a and Amboseli Elephant Trust, Dr. Cynthia Moss, thank you for meeting Jim Justus Nyamu and his team and for donating the educational DVDs "Elephants in Peril" and "Echo of Elephants".

I wish to salute my support team lead by Ken Mwenda Gichuru Honorary Warden of KWS Mt Kenya; your guidance and encouragements when planning this walk was highly recognized. Lillian Mugo and Winfred Kawira communication team, thank you for your tolerance and updating the world through all means of communication as the walk take place; Oscar Muriithi and George Muthui logistics team, I acknowledge your guidance and your

abilities to withstand the pressure during the walk. Finally Peter Hongo KWS cartographer who developed the route that we walked for this report a big thanks you.

My support team & Amara team after paying a courtesy call to Dr Cynthia Moss at her Research office in Amboseli

Classic Safari's escort and support vehicle.

ABBREVIATIONS AND ACRONYMS

AE…… Amboseli Ecosystem

AEFF……....Africa Elephant Film Foundation

AfESG……. African Elephant Specialist Group

ANAW…… African Network for Animal Warfare

BLF……... Big Life Foundation

CC…….County Commissioner

CCC……..Chinese Construction City

CITIES…… Convention on International Trade in Endangered Species of Fauna and Flora

CoP…….. Conference of Parties to CITIES

DSWT…….. David Sheldrick Wildlife Trust

ENC……. Elephant Neighbors Center

GDP……. Growth Domestic Product

HEC……..Human-Elephant Conflict

HWC…….Human-Wildlife Conflict

IFAW…… International Funds for Animal Warfare

KFS……... Kenya Forest Service

KNBS…….Kenya National Bureau of Statistics

KWS. ……Kenya Wildlife Service

MCA……..Member of County Assembly

NGO…… Non- Governmental Organization

OCPD……Officer Commanding Police District

PA's…….. Protected Areas

TCA……....Tsavo Conservation Area

TW's……...Tsavo West

USA……United States of America

GLOSSARY

Biodiversity: Variety of life on Earth

CITIES: Acronym "Convention on International Trade in Endangered Species of Wild Fauna and Flora"; a treaty signed in 1975 by many countries to regulate the international trade in wild animals and plants that are included in its appendices, and in products and derivatives made thereof, including elephants and elephants products.

Ecosystem: A complete community of living organism and the non-living materials of their surroundings. It component includes plants, animals, microorganism and materials as well as surrounding water sources and the local atmosphere.

Growth Rate: The natural increase in the size of a population, here referred as "growth rate".
Human-Elephant Conflict (HEC): Any human-elephant interaction, which results in negative effects on human social, economic or cultural life, on elephant conservation or on the environment.

Ivory: Material of which elephant tusk is composed (mostly dentine). It is used in the manufacture of a great variety of an ornamental nature.

Keystone Species ; A species that has a major ecological effects on its habitats and, therefore, on other species living in the same area. Elephants are second only to humans in their habitats; e.g. by feeding they may change bush to grassland, by digging for water they provide drinking places for other species.

Loxodonta africana. African elephant; divided into 2 sub-species; Savannah elephant L.a Africana and Forest elephant *L.a.cyclotis*

Mortality: Signifying to loss in a population includes factors such as disease, accidents, starvation, predation and poaching.

Objective: Comprehensive summaries of the approaches to be taken in attempting to achieve a strategic vision.

Poaching: In the case of elephants, illegal usually for ivory but can also be for meat

PREAMBLE

In the 22nd century Kenya faces a myriad and complex wildlife, environmental conservation and development challenges that are interlinked with expansion of human population and poor policy guidelines. Education and advocacy has been recognized worldwide being extremely important in preparing either the upcoming generation or the existing community structures addressing the global and emerging challenges. Advocacy and education imparts relevant values, proficiencies and knowledge to help learners and community to appreciate the need to co-exist with nature as we strive to achieve our best.

United Nations General Assembly declared the period 2005- 2014 as the UN Decade of Education for sustainable development (DESD). This distinguished the role of education in practices that can be applied to inform the general public about the sustainable development and charting the way forward.

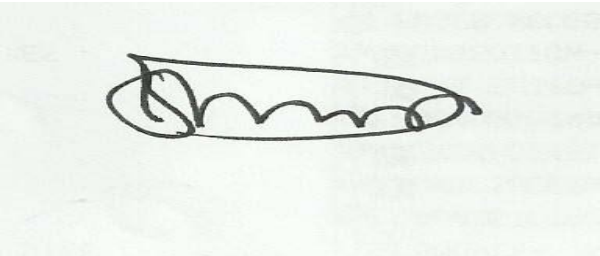
Education and Advocacy has been practiced globally and has received a stand in the sustainable, environmental and conservation arena. The late Laureate Prof. Wangari Mathai (Environmentalist), Mahtama Gandhi, among other key people, have used it in raising awareness that lead in policy formulation in development sectors.

Elephant Neighbors Center, under the leadership of Jim Justus Nyamu, has been in the forefront in promoting this philosophy of advocacy in the country and beyond through education and campaign walks dubbed " Ivory belongs to Elephants" advocating for elephant conservation, using elephants as a key stone and a flag species.

Between 2013- 2015, ENC, through Jim Justus Nyamu, started the grass-root education campaign walk raising awareness on the plight of the African Elephant (*Loxodonta Africana).* This campaign focuses on reminding communities about elephant conservation, the elephant values, the role of communities in conservation and highlighting the new Wildlife Conservation and Management Act 2013. I have now walked 5001km in different counties involving various high powered dignitaries in different sectors such as H.E the First Lady Mrs. Margaret Kenyatta, Cabinet Secretary to the Ministry of Environment Water and Natural Resources Prof Judy Wakhungu, Agt Director General KWS and KFS, Internationally the following persons have participated in this walk: i.e. Senator Michael J.Barret (Massachusetts in USA), President of International Funds for Animal Welfare (IFAW) Mr. Azzedine Downes, Will Trevers of Born Free Foundation UK amongst others. Additionally this campaign walk offers an opportunity among the conservation agencies to recognize and

implement solutions that may aid them to overcome the underlying environmental, conservation, social and development challenges in order to achieve their blueprint mission.

It is my sincere hope that information contained herein will be of great importance in all sectors. It is my expectation that, it will significantly recuperate the understanding on how to interconnect wildlife conservation, economic, social and environmental mainstays of ecological development among the stakeholders.



Jim Justus Nyamu
Executive Director: Research Scientist &Elephant Specialist
Elephant Neighbors Center K.

EXECUTIVE SUMMARY

The elephant population in 1973 was at 167, 000. The numbers stand at 26,400 elephants in Kenya today as at 2014 (African Elephant Database by AfESG). Kenya loses one (1) elephant daily to poaching and over 365 elephants for its tusks (ivory) annually. The future of elephants is of critical significance to the Government of Kenya. Elephants are charismatic animals that serve as a reassembling point for conservation, winning global attention and generating momentous returns from wildlife-based tourism. Elephants are also known as keystone species with a meaningful role in ecological dynamics and demonstrating how important they are to the conservation of other biodiversity. Elephants living outside the protected areas bring conflicts between people, which result in competition for resources. These conflicts are intense and, if not controlled, cause implications for public support for conservation and management. Poaching is an emerging challenge and if it is not managed now, it will lead to decline of elephant numbers and negatively impact the economy (GDP). If this trend continues the national elephant population may decline, given that mortality rate stands at 4% compared to a growth rate of 2% in 2011. Over 80% of Kenya's elephants are found outside protected areas and the rest in National Parks and Reserves.

Elephant Neighbors' Center (ENC) is a Non- profit Organization whose mission is to protect the African elephant and secure landscapes for elephants outside the protected areas. ENC places emphasis on a three-tier approach: integrating community knowledge, environment and livelihoods in resolving principal problems and bias facing conservation in Kenya.

The Ivory belongs to Elephant walk campaign has received enormous support from Kenya's First Lady H.E Mrs. Margaret Kenyatta, Cabinet Secretary to the Ministry of Environment, Water and Natural Resources and KWS' various conservation areas.

Jim, the founder of ENC and Research Scientist with over 15 years of studying elephants has walked over 5000 km that include 970 km in the USA (Boston to DC).
The "Ivory belongs to Elephants" campaign being his brainchild, he has visited 409 learning institutions and held over 701 community meetings. These walk editions include: Mombasa-Nairobi, Maasai–Mara-Samburu-Mt Kenya, South Coast-North Coast, and Amboseli-Tsavo Conservation Area. The campaign has also interacted with County Commissioners, Administration and Kenya Police in different counties.

ENC has brought National and International organizations together, such as International Funds for Animal Warfare (IFAW), World Wildlife Fund, Wildlife Clubs of Kenya, Lewa Conservancy. The "Ivory belongs to Elephants campaign", among others, lobbied the

Kenyan Government to enact the 2013 Wildlife Conservation and Management Act that improved the wildlife penalties. The "Ivory belongs to Elephants" walk gave birth to other campaigns such as Elephants for Kenya and Hands Off Our Elephants and represented Kenyans in the 1st Global Elephant March held in Washington DC on October 4th 2013.

The Amboseli- Tsavo "Ivory belongs to Elephants" campaign edition covered 455km in 37 days from Emali to Voi. Out of 85 schools, only 26 had registered with Wildlife Clubs of Kenya, Most schools in Kajiado county had interacted with Giraffe Center education officer with only 5 schools in Taita Taveta had heard about Giraffe center.

Mr. Mwangi OCPD Mwatate and KWS community warden: Hon Mwadime of Mwatate constituency addressing people at Mwatate shopping center

1. CHAPTER ONE

1.1 GENERAL BACKGROUND

The decline in the African elephant (*Loxodonta africana Africana*) population dropped from 1.3 millions to 600,000 between 1973 and 1989 and this was attributed primarily because of poaching for ivory (*Douglas 1990*). In Kenya, the population decreased from 167,000 to 16,000 (KWS and AfESG status report 2007).

This desperate decline in the elephant population impelled CITES to delete the African Elephant population from Appendix II to Appendix I. Appendix I lists all species that are threatened with either extinction by outlaws of commercial trade or ecologically, whilst Appendix II list species which are not threatened with extinction however trade must be controlled and monitored (CITIES 2012).

In November 2002 CITIES partially lifted a 13-year ban on trade in elephant ivory and permitted South Africa, Namibia and Botswana to sell sixty tons of stockpiled tusks from their stores that had come from dead elephants. During this (CoP 12) Namibia, Botswana and South Africa were allowed to trade 60 metric tonnes of ivory on condition that their stockpile will be verified. In 2007 during the (CoP 14) a one-off sale of 108 tonnes of ivory from Botswana, Namibia, South Africa and Zimbabwe was approved by CITIES. There was optimism in 2014 during the CoP 16 when Tanzania accepted to withdraw their proposal of trading with 120 tonnes in CoP 15; this was a remarkable ecstasy for Kenya whose elephant population enjoys the transponders and migratory pattern.

Presently Kenya and Burkina Faso on behalf of the African Elephant Coalition have submitted a proposal to amend Appendix Annotation 5 that currently reads there should be no further proposals submitted "allow trade in elephant ivory from population already in Appendix II for nine years" from 2008, the date of the one-off sale approved at CoP 14. The current phrasing opens the possibility that some elephant populations might be down listed after 2008 and then not subject to the moratorium. The proposed wording remains "no further proposals to be submitted to allow trade in elephant ivory from any population in Appendix II".

The elephant population in 1970 was at 167, 000. The numbers stand at 26,400 elephants in Kenya today (AfESG 2013). Kenya loses one (1) elephant daily to poaching and over 365 elephants for its tusks (ivory) annually. If this trend continues the national elephant population may decline given that mortality rate was 4% compared to a growth rate of 2% in 2011. Over 80% of Kenya's elephants are found outside protected areas and the rest in

National Parks and Reserves. It has been noted that about 78 % of poaching incidences are reported outside protected areas while 12 % in the protected areas.

The number of elephants killed by poachers in Kenya increased from 50 in 2000 to 278 by the end of 2011, representing an increase of about 456% (n = 228) in 12 years (Ngene *et al.* 2012). This increase started in 2008 and with the total elephant mortality standing at about 500 animals in 2011, (KWS elephant mortality database, 2011). In 2012, an alarming rise in poaching was recorded with 384 elephants and 29 rhinos as compared to 289 elephants and 25 rhinos in 2011 (KWS elephant mortality database, 2012).

The TCA has the highest population of elephants, and the highest reported incidences of elephant poaching in Kenya.

Anti-poaching patrols in the TCA are particularly challenging because of limited resources, and the expansive area of the park that limits the effectiveness of patrols by park rangers (*Maingi 2013*). According to KWS over 190 elephants were poached in 2014 and TCA, Laikipia/Samburu and Maasai Mara reported the highest incidences compared to other parks. Over 40 elephants have been killed in 2015 in Kenya and TCA records the highest according to (KWS *per communication).*

During the campaign walk in TCA 6 elephants were reported poached while a truck in Manyani knocked one with some intermittent poaching reports in the TCA area.

This bull was sighted roaming at Lake Jipe KWS out-post

CHAPTER TWO

2.0 STUDY AREA

2.1 AMBOSELI –TSAVO CONSERVATION AREA

The Amboseli ecosystem covers an area of approximately 5,700 Km squared .The areas is largely arid and semi-arid. Amboseli Conservation Area is mainly supported by a number of private conservancies and they have now established a working Amboseli Ecosystem Trust with a management plan 2008- 2018. These group ranches include Rombo, Kuku, Kimana, Olgulului, Mbirikani and Serenkei 506,329 hectares in Kajiado County.

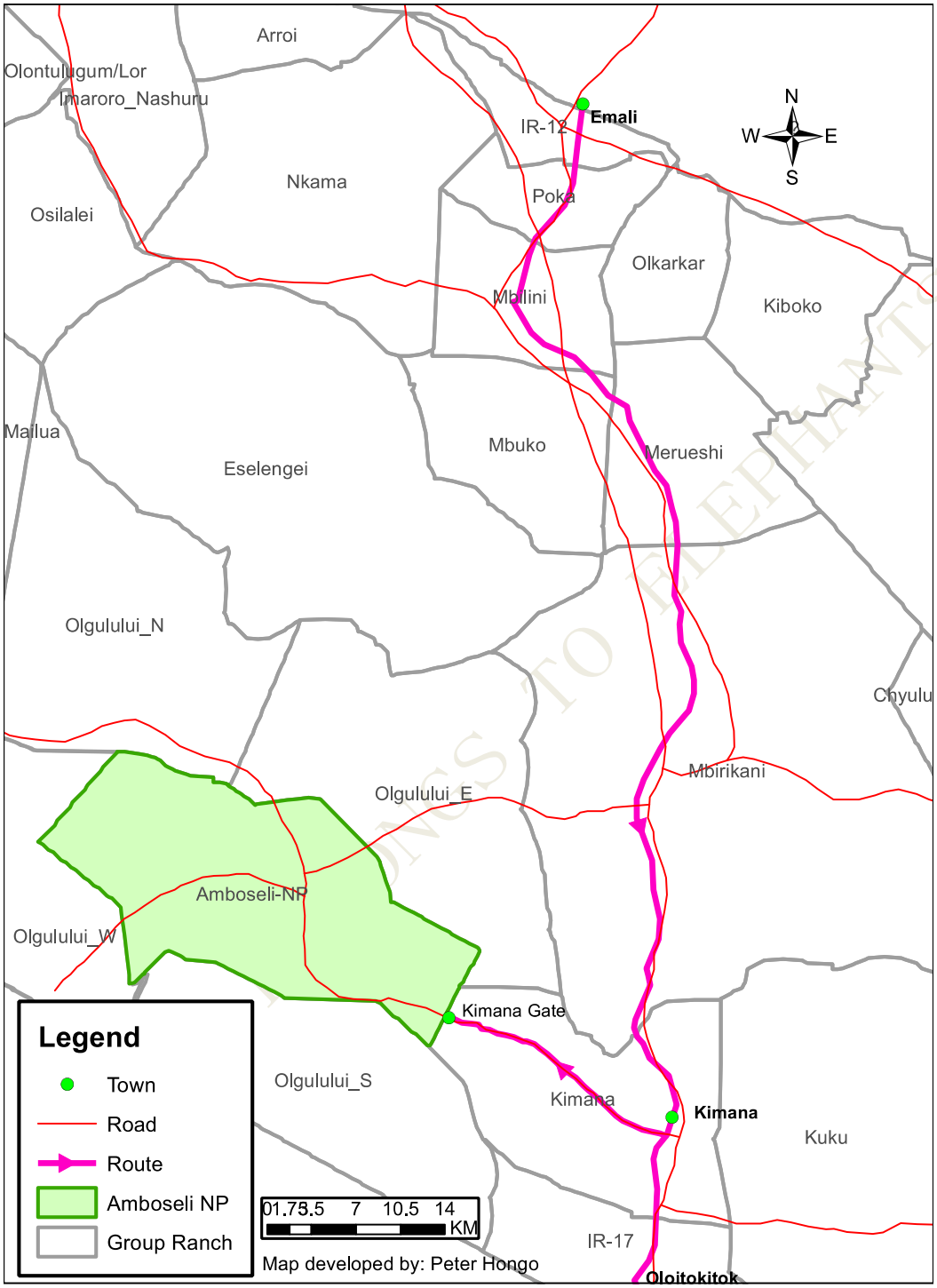
This Amboseli Ecosystem is defined by the extent of animal movements of wildlife in the private group ranches. Human-wildlife conflict and mostly elephants has been on the rise from the last decades due to extreme climate change with variations of seasons in the entire ecosystem.

This Management plan is await gazettement. It aims at conserving the Amboseli ecosystem's threatened species and habitats, and especially the charismatic elephants and expansive swamps. The plan promotes sustainable development of the ecosystem for the benefit of the present and future generation (AE management plan *2008-2018*). Additionally the rationale of the management plan is pegged on defining the principles and strategies for creating, implementing and managing a sustainable future for the Amboseli Ecosystem by addressing wildlife conservation and management issues in the entire ecosystem

The Amboseli ecosystem has an elephant population of about 1400 individuals (KWS aerial census 2013). These elephants have been a major driving force in the ecology of Amboseli ecosystem and are closely associated with habitat changes in the Amboseli National Park according to the AE management plan.

It is quoted that Amboseli Park was created (*Prescott 2006*), not principally to conserve wildlife for its own sake, but to establish a mass tourist industry for the Kenyan national government. This move could have halted the fundamental decisions in regard to land-use management plans that would have zoned the very key areas for sustainable conservation and pastoralism respectively

Map of Jim 's walk between Emali- Oloitokitok



2.2 TSAVO CONSERVATION AREA

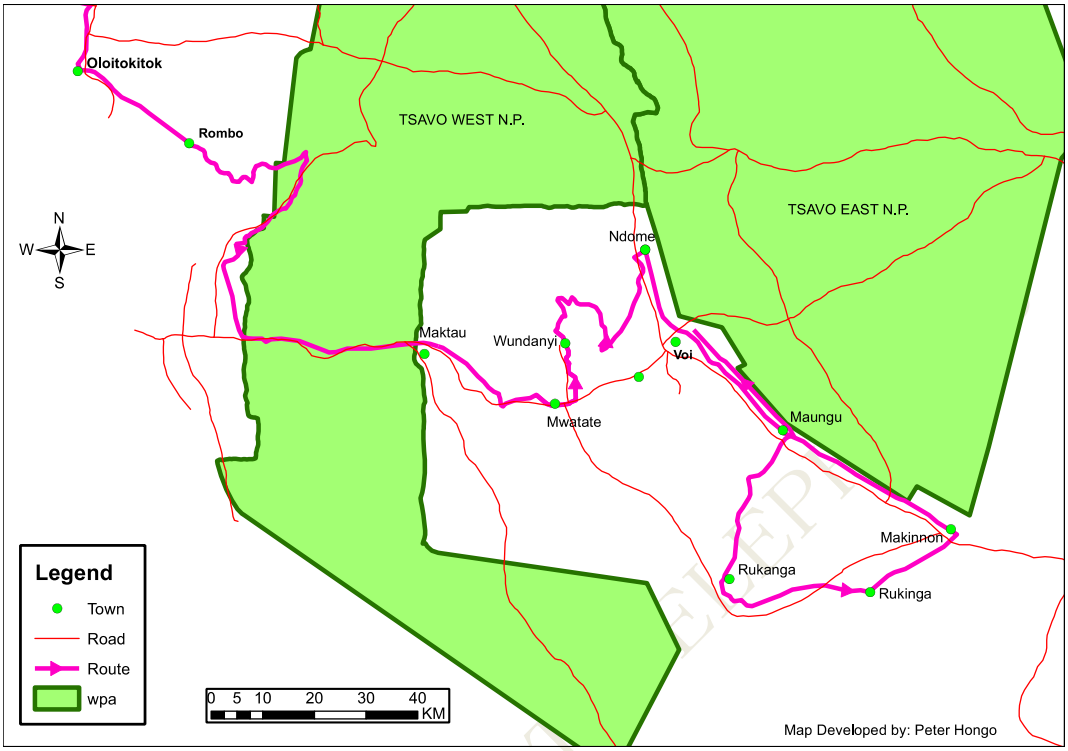
The Tsavo Conservation Area is home to Kenya's largest elephant population (*Blanc et al., 2007*). It is believed that the ecosystem had over 35,000 elephants by the end of 1974 (*Cobb, 1976*) and 11,076 in 2014 (*2014 KWS*). During the 2011 aerial survey of elephants, the ecosystem supported 12,573, which represented a modest increase of 2% in the previous years (*Ngene et* al., 2011). The Tsavo conservation area serves as wildlife refuge sheltering the country's single largest elephant population and a greater biodiversity of species. The ecosystem covers 43,000km squared bordering densely populated parts of Ukambani in the west, by Mounts Kilimanjaro, Pare and Usambara (*Robert J.Smith 2000; Wijngaarden 1985*). Tsavo experienced infrequent dry conditions in 1970, 1971 and in 2009,

The core conservation area Tsavo East and West covers about 21,000km squared and the Mkomazi Game Reserve, which occupies 5,000km square in Tanzania. The area is characterized as agro-climatic classification of Kenya that identifies much of the ecosystem as marginal low or with no agricultural potential. The erratic and mostly low rainfall in the TCA means that the availability of surface water plays a major role in regulating the distribution of many species. Tsavo has two main categories of water sources:

(a) *Natural water supply:* The natural permanent water sources are very inadequate in the ecosystem. Galana, Tsavo and Athi rivers flows all year round with smaller seasonal rivers such as the Tiva and Voi that holds stagnant pools and ground water long into the dry seasons. Lake Jipe in the West offers permanent water and small springs are also found along the Yatta plateau and in some places on the separated plains. By the end of dry seasons the discharge is small and the water is often saline and not good for consumption.

(b) *Artificial water supply*: These water points were built within the NP in the early 1950's to prevent wildlife from moving outside the NPs in search of water, to distribute wildlife evenly throughout the NPs and to improve the tourist potential of the areas. More water-points were created in the 1960's and some of these were supplied by pumping water from Galana River and by sinking boreholes. Nevertheless, many of the water-points that were formed by inhibiting rivers silted up (*Sheldrick 1965*). Many ranches today have developed their own water supply, either by pumping from Galana River or by using a supply from the pipeline that runs from Mzima Springs to Mombasa.

Map of Jim's walk between Oloitokitok -Voi



2.3 CAMPAIGN OBJECTIVE's

The campaign has adopted three main objectives:

1. Raise awareness on the elephants and rhino poaching trends to the public

2. Engage local communities and corporate on how to participate in wildlife conservation programs.

3. Educate local communities on the new Wildlife and Conservation Act, and benefits of the resources to them and as a nation.

2.3.1. Raising awareness on the elephants and rhinos poaching upsurge

As it was quoted by Kenya's 4th President H.E Uhuru Kenyatta that "Poaching and the destruction of our environment has no future in this country. The responsibility to protect our environment belongs not to the Government, but to each and everyone of us".

Former KWS Director Mr. Julius Kipng'etich was quoted saying "that we cannot conserve elephants alone as a nation and instead require every one to play a role on this." Kenya has continued losing it's elephants and rhinos for the last 3 years despite the strong security measures put across by KWS, that has even established an anti-crack unit in mitigating this menace. This situation is believed to have escalated with assumptions that we do not have proper supporting legislation, Government and political good will; adequate trained staff, enough resources and regional political stability. This campaign has taken a different path preaching education to the grass roots as a hypothesis than need to be employed. Education is a process by which people or communities acquire skills, knowledge and attitudes essential and adaptable to the fundamental concerns. This campaign set two hypotheses (1) that our communities play a major role in wildlife conservation (2) that our local communities know who the poachers are. Raising awareness shows that there is inadequate information, measures and practices that can be deployed in mitigating or curbing a growing scenario. This campaign uses this avenue of talking and engaging organized groups of local communities, government officers, schools and faith-based organizations. The campaign informs the people about Kenya's elephants and rhino distribution, population and poaching trends since 1979 to current in Africa and laboring more about Kenya and her neighboring countries.

2.3.2 Engaging local communities and corporate on how to participate in wildlife conservation programs

Kenyan elephants have been observed returning and re-establishing their former areas in Kenya for the last 10 years as security had improved, some of these areas included Northern Kenya and South Rift regions. Over 70% of elephants in Kenya according to KWS are found outside the protected areas mostly pastoralist communities who are progressively practicing agriculture. It is critical if elephants are to be tolerated in landscapes that are shared with human beings, that their effect on economic expenses and loss of property is reduced within the context of rural livelihoods.

Elephants are viewed as the most disreputable species that cause huge damages and cause lifestyle disruptions to local communities in Kenya. This has caused a bad attitude towards wildlife agencies and in particular the elephants. This campaign draws the focus on how to first change the human perception that elephants are bad and instead demonstrate their economic value as well as social value placing their social behaviors as that of human; secondly reaching out for good will in establishing the working relationship between KWS and communities whose relationship is at limbo. Thirdly, appealing to the local communities' opinions on how to participate in the activities that promote wildlife conservation. There have

been a lot of efforts in mitigating the HEC employed by KWS that has not been sustainable for lack of the good will from both from local politicians and communities. Projects such as electric fences never last for a decade, because most of them would be destroyed by communities that are not properly equipped to maintain the fences and trained on how to take measures in reducing HEC.

2.3.3: Educate local communities on the 2013 Wildlife Conservation and Management Act, and benefits of the resources to them and as a nation.

Kenya now adores the second policy that governed the wildlife management in Kenya since the 1970's with the goal to raise and implement the resources, and managing the land whose wildlife and people live on. The first policy document was enacted in 1975 and commonly known as "The Wildlife Policy (Sessional paper No.3 of 1975)" that emphasizes on the need for an integrated approach to wildlife conservation and management in order to minimize the human-wildlife conflict, responsibility of the government for paying the compensation for damages caused by wildlife and the need to identify and implement compatible land use and fair distribution of benefits derived from wildlife from both non-consumptive and consumptive use of wildlife . The 2013 Wildlife and Conservation and Management Act embrace and promote a community based conservation model: engaging and involving local communities as stakeholders in holistic wildlife conservation where they all enjoy tangible conservation benefits.

This campaign recognizes the opportunity in enlightening Kenyans about this document and what the responsibility of every Kenyan in wildlife management is. This Act has been viewed as one of the best policy documents with the best wildlife compensation practices and stiffer penalties for wildlife crimes, additionally the Act recognizes wildlife conservation as a land use if well practiced.

2.4 CAMPAIGN SLOGAN

This campaign put emphasis on its slogan **'Ivory belongs to elephants**' in attempt to educate the world that if you detach ivory from the elephant, then that is a dead animal. The campaign use elephants as a key stone species and flag ship species, with emphasis on other critical wildlife species i.e. Rhinos, Cheetah and Lions to mention just but a few.

2.5 CAMPAIGN FORMATION

This campaign is divided into three forms: (1) Physical walking, talking using public address equipment and playing wildlife praising songs; (2) Community meetings which include, film shows, conservation talks in schools. The grass-root education campaign also incorporates the County Governments, County Commissioners and other conservation agencies there in.

2.6 SOCIAL STRUCTURE

African elephants live in a 'fluid and dynamic social system in which males and females live in separate but overlapping spheres'. Female elephants live in small cohesive groups of close relatives with their immature offspring. Females born into a group remain with the family while the males are ejected on reaching sexual maturity. Young males leave their natal groups at the age of 14 and join up with other family groups or bull groups.

Bull groups are usually smaller than family groups, with a mean size of 2.4 elephants. Bull groups have long been described as loose associations of unrelated animals with weak social bonds, but more recent research suggests that the social structure may be more complex than previously thought. Bull elephants generally travel greater distances than cows, reflecting the different social structure that characterizes each sex. Bulls may travel large distances in search of estrus females, especially during the rains when mating occurs.

Elephant enthusiast Ms Dani Globetrotter aka Mama Tembo and Ranger Emily of Taveta

CHAPTER THREE

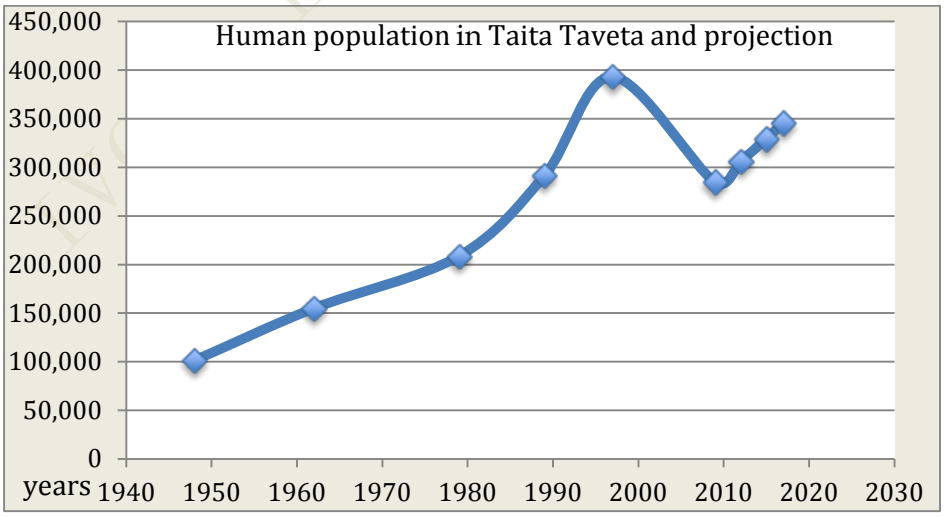
3.0 ENVIRONMENT AND NATURAL RESOURCES

3.1 The Human population of Taita Taveta

Demographic patterns of human population in the whole TCA has been increasing for the last 30 years and the trend shown indicators of increase in 15 years to come as a prediction (*KSNBS 1996*). As of 2009, the Taita Taveta population stands at 284,657 (*KSNBS, 2009*) where females and males were 139,323 and 145,334 respectively. The county population was projected to be 306,205 in 2012 comprising of 149,869 and 159,336 for males. It's projected that in this year 2015 the county population will increase to 329,383 and 345,800.

The Taita Taveta population average growth is 1.6% and believed to be below the national average, estimated at 3% according to (*KNBS, 2009*) however the county human population is projected to increase to close to 346,000 people in 2017. This increase will directly affect basic needs that include food, water and housing, social services, health and education and infrastructure including access roads and markets.

Graph 1: Showing the distribution of human population in Taita Taveta



Source: KNBS 2009 and CIDP 2013-2017)

According to the Taita Taveta County Government (*2013-2017*) it will design and

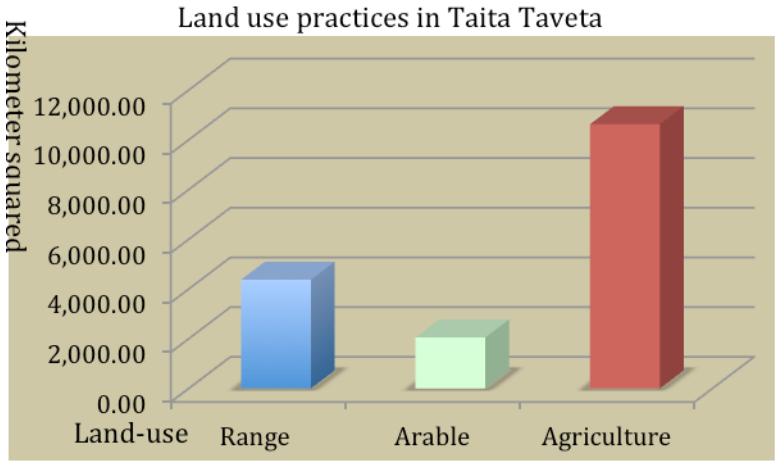
implement approaches addressing these population demands, ensure that in the medium term, a reduction of the population living below the poverty line to the national average of at least 46% is achieved. At the Taita Taveta County an estimate 57.2% of the population is below the poverty line, hence depend on bush meat, charcoal burning and substance farming for their survival.

The majority of these populations live in areas between 1000 and 2000m a.s.l especially in Wundanyi, Tausa and Kasigau sub-counties. These high potential agriculture areas have experienced growth rates leading to the increase in land fragmentation and land shortage.

3.2 Land and land use

The total area in Taita Taveta County is 17,059.1 Km squared. Out of this, agricultural land is estimated at 10,630Kms, with arable land comprising about 2,055Km squared while rangeland is 4,374, 10 respectively.

Graph 2: Showing land-use practice in Taita Taveta



Data source: KNBS- 2013

The two TE and TW cover an area of 10,650km squared, 62% of the total land area. Due to these drastic land use and expansion of human population, land available for household and farming activities has reduced significantly, additionally there are 28 ranches which, combined cover an area of 773,5km squared. Eight of these belong to the Kenya Government, nine to group ranches and 11 are privately owned with an

average size of 2,762 Ha.

3.3 Forestry

Taita Taveta has different types of forests that include Taita Hills, which belongs to the Eastern Arc Forest Mountains of East Africa. Most of the indigenous forest has been encroached by local communities in demand for firewood and agriculture. I.e. Vuria forest in Wundanyi is one of the forests currently under severe threats that include fire in attempt to attract rain (local traditional myths) and livestock grazing. Most of the forests, including Mbololo, Sagalla, Yale, Kasigau and Macha, are currently infested with exotic species, encroachment, livestock grazing, and uncontrolled and intensive charcoal burning.

These forests are categorized as gazetted and non-gazetted forests. Total gazetted forests cover 1,118.21 ha with 613,46 as forest while 563.70ha as bush land. Non-gazetted forests cover 9,165.41 of which 1,452.80ha is forest and 7,107.84 is bush land and currently under threats from human interface. Key issues include but not least

- Encroachment for settlement and land for agriculture
- Demand for firewood
- Proliferation of charcoal burning and illegal logging
- Plantation of exotic trees and threats from invasive species

There has been some interventions from Wildlife Works who operates in most of these forest and promotes carbon-credit trading as a land use that promote sustainable live hood. Laborious patrols, promoting agro-forestry options and creating awareness on the importance of indigenous forests just to mention a few.

Uncontrolled water harvest from Lemongo Spring

Plate2: Jim planting a tree with Sarova Salt link in Tsavo

3.4 Wildlife Conservation and Tsavo elephant population

Tsavo ecosystem has history that goes back to 1960′ when the first population count took place. The ecosystem encompassed the largest single elephant population in Kenya and numerous studies have been carried out there since (*Corfield 1973, Ottichilo,*

1981, McKnight 1996 et al). The results of these different studies provided a large amount of data on the population size of the Tsavo elephant population.

The latest elephant census in 2014 shows that TCA holds significant wildlife populations, including Kenya's largest single elephant population, numbering 11,076 animals with a substantial decrease from 21,753; 2011 census) in the span of three years. The Tsavo ecosystem registers a mortality rate of 4% and a growth of 2 % per annum; a standard that is used to measure the population trend in most of the elephant range in Kenya. According to KWS and DSWT TCA, the most challenging assignment is to (i) condense and mitigate escalating human-elephant conflict that is compelled by poor land-use and (ii) stop the elephant poaching and bush meat illegal harvests.

According to other research conducted in TCA (*IFAW 2013*) the elephant movement and distribution shows evenly distribution outside and inside the park in both wet and dry seasons due to availability of water, pastures and security, which is now compromised, in the entire ecosystem.

Wildlife protection areas form a vital land use type in Taita Taveta, there are key issues so far discovered by various scholars and research as well as project proponents and this grass-root campaign placed priorities on them that include:

- Human wildlife conflict
- Poaching of wildlife
- Poor attitude towards wildlife

3.4.1 Human- Elephant Conflict

Human-Elephant conflict (HEC) is a complex and pervasive problem that occurs throughout the range of the African elephant wherever elephants and people share the same habitat, often competing for the same resources. HEC is recognized by the IUCN Species Survival Commission's African Elephant Specialist Group (AfESG) as a major threat to the long-term survival of the species. Kenya Wildlife Service place HEC as a key strategic objective in the Conservation and Management strategy (*2012- 2020*)

for elephants in Kenya.

The Tsavo NPs boundaries were chosen without regards to the migratory and dispersal of wildlife, especially the elephant (*Law, 1969b*). When the NPs were created in 1948 the human population density was very low, at less than 5 per square km. It is viewed that over the past five decades the number and distribution of people have expanded uninterruptedly and this has had a reflective on the ecology of the TCA and patterns of land use within the area.

Human–Wildlife Conflict or Human-Elephant Conflict has been highlighted in the CMS Part IX and the Act has provided the guidelines on how this should be mitigated with a dispensation of compensation through County Wildlife Complementation Committee now gazetted. One of the responsibilities of the CWCC and the committee member is to evaluate the damage caused by the elephants and other wildlife before making a recommendation for compensation. Farmers MUST report the incident before 48hours to the relevant officers and offices.

Kenya Wildlife Service is dedicated in resolving HEC by involving stakeholders at all levels in mitigating the conflict. It is considered that if elephants are to be tolerated in landscapes that are also occupied by people, that their effect on economic costs and loss of property is reduced within the perspective of rural livelihoods. Human-wildlife conflict is a tall order in TCA and mostly HEC scoring the highest in all the focal conflict areas.

Most HEC incidents in Taita Taveta involve crop-raiding elephants so the presence of agricultural crops may also be significant. In addition, the Tsavo ecosystem is generally dry and elephants require large amounts of water. So HEC may be more rampant in areas that are close to water, elephants in the TCA tend to forage within the NPs during the day and crop raid at night and would break the fences in search of water or farms.

Human-elephant conflict in Taita Taveta maybe escalated due to the existence of insular small-scale farms. Traditionally local communities were using some methods

that would deter or scare elephants in their farms or homes. This grass-roots campaign established that the current generation do not use or are unaware of these traditional methods. In Taveta-Mahadakini, Bosnia and Challa some communities believe that only electric fencing and KWS rangers could prevent elephants from raiding their farms.

Interventions: KWS have set a side some targets in reducing and managing the HEC in most of the high conflict areas, TCA being the first one as follows:

(i) ***Management of HEC informed by sound data,*** by involving other NGO's who mainly work on wildlife issues. KWS plans to integrate and standardize data collection and implement the options.

(ii) ***Secure wildlife corridors in areas of existing or potential HEC by 2021***. In some areas this has been done like in Kitenden in Amboseli where a 10,000ha elephant corridor to Tanzania has been leased from communities with support from IFAW. This can be employed to reduce the conflict and increase wildlife space. Challa, Miasenyi, among others, corridors have been encroached.

(iii) ***Conservation compatible land use in areas of existing HEC***: Wildlife conflict has increased due to lack of space for wildlife that may have been encroached for other uses. Creating conservancies, training communities on governance will reduce HEC significantly. Taita Taveta has many conservancies that require a universal management and enhance clear understanding for their existence. I.e Lumo Conservancy, which was established by Lualenyi, Oza and Mraba communities, is an example. This conservancy's original plan was to reduce HEC considerably by creating more space in Maktau, Msorongo and Bachuma commonly known for high HEC incidences. Lumo is the pillar of other community conservancies in Taita Taveta and it requires urgent attention mostly in regard to livestock grazing and management of the conservancies. Other critical conservancies

include Kipalo which unites two sub-counties: Wundanyi and Voi, holding Mbulia and Kishushe communities. The two communities are at limbo due to the lodge and a clear concept needs to be unveiled, executing the Kasigau conservancy is very pressing. This will not only reduce the HEC but also reduce the upsurge of poaching and bush meat trade along the Kenya/Tanzania border.

(iv) ***Capacity of KWS in HEC resolution and mitigation is urgent***. Education and training are always given the low priority; every decision requires prior information, data or some basic training. Recruiting, training personnel and deploying them in HEC areas will realize this; additionally develop, implement and integrate local communities and other stakeholders in participatory training and discussion in contrast to the previous ways of erecting fences without community concept and thus they cannot own them.

3.4.2 **Poaching of wildlife**

The international trade in ivory, lack of community engagement stimulates elephant poaching at large and education; ineffective security force and lack of commitment have also played a significant role in curbing this menace. The current "Conservation and Management Strategy for Elephant" in Kenya considers minimizing poaching in her strategic objectives, the policy consolidate its impacts in the face of increasing poaching pressure and renewed abundance of firearms through a force modernization programme. The strategy presumed that with the increase in staff training, regional political stability, and government support and political will and enabling legislation (new Wildlife and Management Act) would significantly reduce and curb poaching at large. This campaign identifies one tie very contributory in addressing the root cause of poaching as " Grass-root education initiative" in support of the other assumptions identified by the National strategy. This initiative can be measured by the number of community meetings and schools involved while conducting awareness on wildlife protection and conservation.

3.4.3 Poor attitudes towards wildlife

Several surveys have indicated that most communities have a low opinion towards wildlife mostly due to the damage incurred by wildlife and lack of compensation (*Kasiki 1998*). Encouraging communities to live and share their resources with elephants will take more than education and awareness, it will require tangible benefits, directly linked to the presence of elephants, which will increase the tolerance and stewardship of elephants among communities that live outside the protected areas and with elephants.

Most communities expect a lot from KWS in form of compensation and revenue collected from wildlife, in all the community meetings held along the walk communities would challenge KWS to build school, roads, hospitals and pay school fees from the monies collected from wildlife. There is an upward perception which is now a perpetual attitude from local communities, pupils in schools, teachers and politicians that KWS should be responsible for community development and this has resulted in predicaments and if not addressed wildlife will be viewed as KWS resources.

In the "Conservation and Management Strategy for Elephants in Kenya" strategic objective number 5 is to provide benefits encouraging landowners and local communities to tolerate, protect and accommodate elephants. One of the assumptions is to have communities that remain supportive of wildlife, local and national political good will.

Interventions: An unsustainable tool of mitigating or curbing HEC accelerates and intensifies negative attitudes towards wildlife and the wildlife agencies, both the Elephant Strategy and Conservation and Management Act are committed in changing these vice by (i) increasing income generated from tourism in elephant conservation areas across Kenya by (ii) identifying the sites for tourism development within strategic elephant range i.e. Lumo Conservancy.

3.5 Elements of the spatial pattern of HEC in Taita Taveta

Numerous studies have been done in Taita Taveta, which make it possible to carry out a spatial analysis on the HEC pattern and distribution.

Human-Elephant Conflict takes place wherever humans and elephants meet so the density of these two species plays an important role in determining HEC levels. In Taita Taveta most incidents involve crop-raiding, human disruptions, property damage, deaths and injury. This grass-root campaign walk traversed Southern, West, and central Tsavo east, however relied on the literature information from the previous studies. Human-Elephant conflict is very common in areas such as Rombo, Njukini, Maktau, Msorongo, Bura, Kamtonga, Manoa, Bachuma and Kasigau among other areas.

Another factor that influences the spatial distribution of HEC is the presence of the water sources, most of these places where HEC was recorded high (*Kasich 2000, Ngene 2011)*, were found with presence of community water pans, where most of them were also practicing subsistence farming, heavily settled that attracted elephants thus increasing HEC. Some of these areas are also migratory corridors such as Rombo, Challa and Bachuma-Kasigau of which most of these areas are settled and developed.

3.6 Amboseli- Tsavo Conservation Challenges

Livestock population trend has been increasing in the Amboseli - Tsavo ecosystem, the livestock incursion into the parks is a serious threat to the Tsavo ecosystem's health and negates the ecosystem's ability to support increasing elephant numbers and other wildlife.

The Maasai who are pastoralists live in Amboseli and West of Tsavo National Park while Somali herdsmen intrude the Taita. These communities keep large numbers of livestock and the erratic nature of rainfall in the Tsavo ecosystem leads to scarcity of resources. It is evident that elephant hotspots overlap cattle hotspots signifying sharing of common resources during the dry season (*Ngene et al.*, 2011). Poaching and

bush meat incidences are also associated with livestock incursion in the park. Goats and other small browsers impact negatively on herbaceous vegetation and seedlings of most woody vegetation as they browse intensively while donkeys are used as a transportation means when fetching water and ferrying heavy luggage e.g. charcoal and building materials harvested from the PAs. Dogs are a potential sign of poachers as they are used to track wild game this was evident in Mwaktau and Lumo conservancy during the walk.

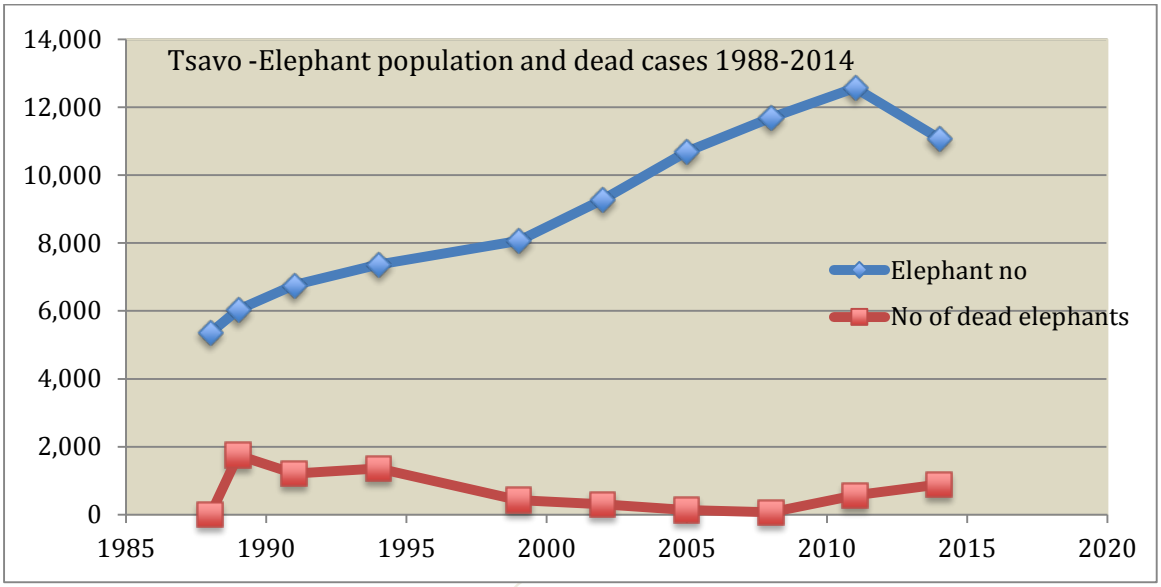
The Tsavo ecosystem is characterized as a disease free zone, this has aggravated the resource–driven conflict between pastoralist and agricultural communities, predominantly in the communal lands between Tsavo West and in areas such as Kasigau, Boguta, Kishushe and Miasenyi. Escalating tension between group ranch and outsiders, which leads to encroachment with a notion that the immigrants are responsible, this was reported in Kimana, Kamutonga in Mwatate and in Kasigau areas.

Both, the Amboseli and Tsavo ecosystem currently underwent an increased human-wildlife conflict driven by human population expansion and into former wildlife areas. Due to this trend many communities feel that they do not benefit from the presence of wildlife and cannot tolerate them on their lands. It was evident that most areas were degraded with indication of bare lands and scarcity of water. The entire ecosystem experiences low rainfall due to unsustainable land use practices that includes charcoal burning, overgrazing and invasions into the parks that results in destroying wildlife habits and sometimes attract poachers. The greatest fundamental cause of the overgrazing problem in Kenya has been government policy, which has led to the continued dwindling of Maasai land and therefore decreasing options of dealing with drought. The Maasai style of grazing was particularly hit in the late 20th century as many of the best drought grazing reserves were encroached and enclosed by commercial farms and national parks, which restricts herders to reduced areas of the worst pastures.

The Tsavo Conservation Area in particular has been experiencing extreme weather deviation due to climate change for the last 3 years or so. Prolonged droughts and

floods, propagated weak and unsustainable environmental practice, have confirmed this.

3.6.1Graph: Showing elephant population and yearly mortality 1988-2014



Data source: KWS Aerial Surveys:

There is a clear indication that the growth increases as mortality rate decrease from the pulled aerial data. If this was predicted in the next aerial census we are likely to have more elephants killed thus increasing the mortality from 4% to may be 5-6 %.

3.7 Community based conservation program

The establishment of community based conservation (CBC) by the international conservation community first introduced in Kenya in mid 80's as a groundbreaking to new approach to conservation in this case. This theory has been widely practiced by NGO's and government oratory throughout the developing countries. It is worth to

note that the future of this largest ecosystem will rely on a shift to relationship amongst all the conservation agencies. This can be a reality and sustainable if the partners can actually agree on equal extent and develop a working incorporated plan.

The existing reports reveal that local communities in Amboseli and in the Tsavo's were not involved during the establishments of the two parks (*Sheldrick 1973*). Most of the communities living in these areas were Watta and Kama who potentially depended on hunting/gathering with few practicing pastoralism. Other tribes that occupied Amboseli and Tsavo were the Maasai, Kama, Orcas, Taita and the Taveta's and they was all pastoralist.

When the government decided to establish parks in this region, these communities were chased away from this land and their voices were never heard and some still hold grudges with conservation viewing it as a "project for the rich" that takes away their land. Most of the conservation challenges are man-made problems that emanated from community dialogues in view of sustainable environment and conservation management. In this era, one of the greatest challenges remains and has become very expensive, is on how to encourage and involve the local communities in managing the resources that surrounds them.

Plate 1: Jim Justus Nyamu in Kimana Market: Plate 2: Team addressing community in Paranga in Kishushe

Establishing a sustainable and management ecosystem plan is viewed as the best options in managing the parks and their environs with communities as stakeholders. Amboseli took an early lead in setting up a holistic ecosystem and management plan "Amboseli Ecosystem". This plan aims at promoting a sustainable development of the

entire ecosystem for the benefit of the present and future generation and awaits gazzetment. This report provokes the establishment of the larger Tsavo ecosystem and integrated management plan to address the periodic conservation and environmental challenges and gaps.

Jim walking with a Dutch tourist who found him along Rombo-Oloitoktok road

CHAPTER FOUR

4.0 IVORY BELONGS TO ELEPHANTS CAMPAIGN WALK " AMBOSELI-TSAVO EDITION

The "Ivory belongs to Elephants" campaign walk started in this ecosystem in Emali. At the start of this edition an elephant killed a man a few kilometers from Emali; communities blocked the Loitoktok – Emali road and demanded that the elephant that caused the killing of the man be eliminated. This demand caused the death of an elephant and several meetings that involved the Kajiado Governor and Member of Parliament to intervene. According to KWS and Big Life Foundation (BLF) elephant poaching has reduced in the last 1 year with only 15 poached, out of 15 elephants poached BLF and KWS recovered ivory from 10 elephants poached or speared mostly along the Kenya border.

The team started the campaign at Emali where both Kajiado and Makueni County Government and National Government representatives were present and vowed to educate local communities and other institutions found within their boundaries. Dr. Wambua in charge of Tourism and Trade in Makueni County flagged off the walk and handed over the team to Kajiado County representatives. Other members of National Government present from Makueni included Madam Sabina Assistant County commissioner as well as Miss Wildlife Makueni County. Kajiado First Lady Mrs Nkandienye received the team at the boundary of Kajiado and Makueni counties; she later walked the team accompanied Kajiado Natural resources representative representing the County Executive secretary.

Jim Nyamu, Dr. Wambua of Makueni and Kajiado First Lady Mrs Jane at Emali

The walk was divided into three sections (i) Emali to Rombo area (ii) Rombo to Mwaktau and (iii) Mwaktau, Wundanyi- Voi and Maungu section. All these sections had different participating organization, schools with different encounters.

4.1 Emali- Loitoktok- Rombo section

This section is what is referred as Amboseli ecosystem that borders Kilimanjaro and TCA conservation areas. The team, comprising ENC, KWS, Big Life Foundation, Born Free, Classic Safaris and Amara Conservation, walked along that route holding community meetings, visiting schools and churches. The team held stopovers at Merrueshi, Mbirikani, Isinet, Lisa, Kimana, Ngong Narok, Loitoktok, Nkama and Rombo trading centers.


Plate 1: Deputy county commissioner Loitoktok: KWS Staff : Plate 2: Jim Nyamu is attended in Amboseli

There were different matters raised by communities that included (a) Escalation of human-wildlife conflict – most of the communities would express their distress on how this particular issue was handled by KWS despite the vast area of operation. This section is characterized by a heterogeneous community practicing different land-use, most of the people here practice agriculture commercially and some on subsistence basis with overlapping pastoralism particularly from Emali to Kimana. It came out clearly from these meeting that there is a negative attitude towards wildlife and KWS in this section despite presence of a number of NGO's working in this area. A man confirmed this who was accidently killed by an elephant in Merrueshi and community went on rampage blocking the busy Loitoktok- Emali road for over 6 hours until KWS eliminated the purported elephant candidate involved in the killing of the man. At Isinet and Loitoktok the team received rigidity and tension emanated from poor management of HEC by KWS in areas such as Itonet, Kiwanjani and Nkama among other areas.

4.1.1 *Elephant and Wildlife Poaching*

The campaign's main focus was to raise awareness on this issue, most communities raised concerned about the proliferation of elephant poaching in the area. There was a perception from most of these communities that poaching is increasing due to inadequate security surveillance from KWS and asked them to employ more scouts who can compliment the surveillance, " *Why don't KWS and the government of Kenya arm Big Life scouts with guns* " from a local leader in Loitoktok. This survey established that Big Life Foundation has employed over 200 local scouts all from Amboseli and

has a wide network system that compliment KWS in policing wildlife in the larger Amboseli supporting group ranches.

4.1.2 Rapid response by KWS on HEC

Kenya Wildlife Service was ranked last from Big Life Foundation in responding to HEC and related conflict. In Kimana and Isinet most communities accused KWS on how they respond to an incident mostly when human beings are attacked by wildlife Vis a vis when an elephant is poached. The Merrueshi incident was the talk of every meeting recounting how KWS and Police handled the case. This particular issue would cause a lot of tension and discomfort to the team remembering how the team was chased in Meru 2014 due to the same issues raised in Mutwati bordering Meru National Park.

4.1.3 List of the schools in the first section between Emali and Rombo

#	Name of the school	County	Members of Wildlife Clubs of Kenya?	No of Pupil
1	Emali Primary School	Makueni	Yes	137
2	Emali Township Sec	Makueni	Yes	48
3	Nairataat Primary School	Makueni	Yes	100
4	St Mathews Academy	Makueni	Yes	88
5	Nduundune Sec	Makueni	Yes	8
6	Mbirikani Girls Secondary	Kajiado	Yes	350
7	Enkijabe Primary	Kajiado	No	150
8	Isinet Primary School	Kajiado	No	430
9	Lemongo Primary School	Kajiado	Yes	78
10	Amboseli Primary School	Kajiado	Yes	50
11	Oldonyo Oibor Primary School	Kajiado	Yes	740
12	DEB- Oloitoktok Primary School	Kajiado	No	300
13	Nkama Primary School	Kajiado	No	850

14	Illasit Primary School	Kajiado	No	400
15	Olkiloriti Primary School	Kajiado	No	200
16	Chief Muturi	Kajiado	Yes	500
17	Ilkisongo Boys High school	Kajiado	Yes	700
18	Kilimajaro Girls	Kajiado	No	170
19	Loitoktok Boys	Kajiado	Yes	450
	Total			**5,749**

Plate 1: Jim Nyamu talking with Lemongo and plate 2: walking with Oldonyo Oibor primary school

This campaign would have reached more schools in Kajiado however depended on the schools that were along the road and areas with high wildlife concentration, out of 13 primary schools Nairataat in Makueni, Nkama in Kajiado, Oldonyo Oibor and Chief Muturi were ranked the best in term of discipline, presentation and clean environment. Out of 6 secondary schools, Mbirikani girls, Loitoktok Boys and Emali Township were again ranked the best on the same grouping. Elephant Neighbors Center recognized all the schools with a Certificate of Appreciation.

The team also targeted local churches and both ENC and KWS representatives would talk to the congregations, the following churches with an estimated population:

4.1.5 List of the churches

Name of the Church	County	Estimated population
Kenya Assembly of God	Kajiado	100
Fountain of Life	Kajiado	90
Free Pentecostal	Kajiado	170
Total		**360**


Jim Nyamu of ENC, and the team addressing church congregation in Kajiado

4.2 **Rombo- Taveta- Mwaktau Section**

The second section of the walk dropped Born Free with ENC, Classic Safari, Amara Conservation and now TCA KWS coming in with a huge support and presence from National Government, DCC, OCPD and Taita Taveta County sub-county representative joining the team. The team was received at Njukini, which is not only the border of Rift Valley with Coast region but also bordering KWS South Conservation and Tsavo Conservation Area.


Deputy county commissioner Taveta from Kajiado County at Njukini receives Jim Nyamu the team leader

Like the first section, the team held meetings in Njukini, Challa, Taveta, Mtakuja and Darajani walking with nineteen schools both primary and secondary schools. Taveta's, Kamba and Pales from Tanzania who predominantly occupy Jipe and Mata areas of the Southern Taveta area comprised this section. Some of the issues raised include:

4.2.1 Human-elephant conflict and other wildlife

This section under TCA Southern Sector bordering Kenya-Tanzania and Amboseli ecosystem, part of the Tsavo West southern part is completely fenced. Human-elephant conflict caused by elephant breaking the fence and some elephants coming from either Tanzania or Amboseli cause huge damage in places such as Njukini, Bosnia, Jipe and Kimorigo areas. In our meeting at Taveta issues of hippopotamus, lions, hyenas and leopards were raised again criticizing KWS: "KWS has left us to be killed by their wildlife," said one man in the meeting. The team labored on first showing and demonstrating that wildlife belongs to all of us and not KWS or State and secondly the fence erected was a collective responsibility in maintaining so as to reduce the conflict. The survey learnt from a meeting at Mata and Mtakuja in Jipe that some communities were destroying the fence and lions, buffaloes and other wildlife would use this place hence causing conflict.

4.2.2 Climate changes

Climate change and the effects were largely felt, generally the area was very dry unlike in Amboseli areas with the presence of invasive species such as "*Prosopis juniperous* or *Mathenge*". Most community leaders seek for more research and long-term solution on how to reduce the spreading of this particular species. In Challa and Njukini community representatives lamented over the loss of livestock due to drought compared to other years never experienced the drought, water scarcity and stream drying up and with little water being mis-used by some people practicing irrigation in some areas. The team encouraged local communities first to create a working relationship with conservation agencies, national and local government, who are addressing this menace at different levels. Through the support of Park Canada, TCA

received a grant to erase this invasive and alien species in both Tsavo West and East.

4.2.3 *Unemployment*

This issue was mentioned in almost every meeting, essentially most of these communities were pastoralist and some would practice subsistence farming while others business, however with the extreme weather conditions most of these activities are not sustainable. This survey learnt that most young people would be attracted to illegal activities such as charcoal burning, bush meat trade and poaching. All these activities were evident in areas such as Bosnia, Njukini and Timbira where charcoal burning and transportation was visible. "Most of our bush meat comes from Taveta before it is transported to other towns "from Taveta OCS. We confirmed this with some exhibits and some photos of young people arrested with bush meat and some had been prosecuted already.

The team also learnt that Chinese City Construction (CCC) was constructing the Mwatate- Taveta road and employed over 200 young men and women from Taveta and the adjacent areas. The team had an opportunity to talk with the CCC team at Timbira construction site and encouraged the young people to be ambassadors while interacting with Chinese.

4.2.4 Wildlife and elephant poaching

Matters arising in this section: The team visited two extraordinary schools Riata and Ribi in Kimorigo where three pupils from class three rescued three young hyenas, two of these hyenas are at the Nairobi Animal Orphanage. The team commended this initiative and encouraged other pupils to practice individual responsibility in wildlife and environmental conservation.


Jim Nyamu the team leader appreciating the school the three boys who rescued the Hyenas

4.2.5 List of the schools from Taveta- Mwaktau section

#	Name of the school	County	Members of Wildlife Clubs of Kenya?	No of Pupil
1	Njukini Primary	Taita Taveta	No	210
2	Chokaa Primary School	Taita Taveta	No	200
3	Bishop John Njenga Sec	Taita Taveta	No	150
4	Mahandakini Primary	Taita Taveta	No	500
5	Challa Primary	Taita Taveta	No	130
6	Nakurruto Primary	Taita Taveta	No	250
7	Malkilorito Primary	Taita Taveta	No	207
8	Mahoo Girls Sec	Taita Taveta	Yes	54
9	Jipe Primary	Taita Taveta	No	200
10	Mata Primary School	Taita Taveta	Yes	150
11	Mata Secondary School	Taita Taveta	No	320
12	Rekeke Primary School	Taita Taveta	Yes	490
13	Riata Primary School	Taita Taveta	No	560
14	Abori Primary School	Taita Taveta	No	250
15	Ziwani Primary School	Taita Taveta	No	300
	Total			**3,971**

The team with the help of KWS- Taveta and Taveta Sub-county identified the above schools and most of them walked with the team from Njukini to Taveta trading center, others were visited such as Riata and Abori where three pupils rescued hyenas and the team paid a courtesy visit and appreciated the pupils. Out of the 13 primary

schools, Nakurruto, Challa and Riata ranked the best while Mata high school and Bishop John Njega were the best high schools their discipline, attitude and clean school environment in that list. At some of these schools i.e. Rekeke, Abori and Jipe, pupils look malnourished that is an indicator of a high poverty level, this would be followed by indiscipline where pupils were reported missing classes and threatening teachers with pangas. This particular sub-county is ranked third in Taita Taveta County (72,787 and a density of 21) with highest population density (*KNBS 2013*) with a projection of 78,296 in 2015 and 82,199 in 2017 respectively.

4.2.6The team also visited some churches in this sections that included:

Name of the Church	**County**	**Estimated population**
St Andres Ngarigashi	Taita Taveta	140
Lutheran Church	Taita Taveta	200
Taveta Catholic Church	Taita Taveta	300
Total		**640**

4.3 Maktau, Wundanyi- Voi and Maungu

This section falls under three sub-counties namely Mwatate, Wundunyi and Voi. This was one of the longest routes and with various challenges that included a few days to cover the stretch, different terrains and extreme weather conditions.

The team comprised of ENC, KWS, Amara Conservation, Wildlife Works, ANAW, Deputy County Commissioners, County Representatives, MCAs, Friends of Conservation and Classic Safaris zigzagged Mwatate, Wundanyi, Kishushe, Dome, Gimba, Maungu, Kasigau, Misenyi and Voi amongst other adjacent centers. The campaign team held very organized community meetings with the help of DCC and KWS community divisions as well as schools and churches in Kishushe and Miasenyi areas.

During this period, the team observed many things that were happening in different areas, environmental degradation scored the highest in this section. Most of these areas, for instance Kamutonga, Wundanyi, Kishushe and Kasigau experience firstly environmental degradation, soil erosion, charcoal burning; secondly bush meat

activities in areas such as Bura, Msorongo, Kishushe, Meri-Kubwa and in Kasigau with charcoal being transported using the motorcycle. There were concerns raised by the communities that includes:

4.3.1 *The future of Lumo wildlife sanctuary*

Lumo Wildlife Sanctuary, which was established in 2001 when three group ranches namely Lualenyi, Mramba and Oza agreed to set aside 40,000 ha of their land for wildlife conservation. The sanctuary was squeezed between Tsavo East and West National Parks and Taita Game Sanctuary forming a dispersal area for elephants and other species of animals and a migration corridor for the elephants amongst others.

This grass-root campaign learnt that the conservancy continues to experience subsistence poaching, bush fires, environmental degradation due to livestock influx. Lumo Conservancy accommodates Lion Bluff's Lodge and with the said challenges the future of the conservancy is at peril and requires urgent interventions that touches on governance.

The team engaged local chiefs, and group ranch leaders, National Government representatives and educated them on the wildlife conservation and management

4.3.2Matters raised in the community committees

(a) In most of the meetings held, communities expressed their annoyance and attributed this to KWS for permissiveness and poor responses when called to remove the elephants from community farms.

(b) Communities are ready to embrace the new Wildlife Conservation and Management Act upon which KWS will strategically and effectively improve their proficiency.

(c) Communities accept that elephant poaching and bush meat trade was getting out of control. In Nkama three community elders blamed their young people

who are involved in these activities and they pleaded for more sensitization from churches and even through local community leaders.

(d) In most of the meetings, community leaders would attribute poaching to rural migrants who work in cahoots with local people.

4.3.3 List of the schools visited from Mwakitau- Wundanyi- Voi – Maungu Section

#	Name of the school	County	Members of Wildlife Clubs of Kenya	No of Pupil
1	Maktau Primary	Taita Taveta	No	461
2	Maktau Secondary	Taita Taveta	Yes	400
3	Msorongo Primary	Taita Taveta	No	330
4	Mnengwa Primary School	Taita Taveta	No	280
5	Paranga Primary	Taita Taveta	No	232
6	St John Mwema Secondary	Taita Taveta	No	170
7	Godoma Primary School	Taita Taveta	No	294
8	Kombolio Sec School	Taita Taveta	No	140
9	Mwanjila Polytechnic	Taita Taveta	No	260
10	Kitivo Primary School	Taita Taveta	No	262
11	St Paul Elites Academy	Taita Taveta	No	200
12	Maili Kumi Primary School	Taita Taveta	No	**320**
13	Mzwanenyi Primary School	Taita Taveta	No	382
14	Mzwanenyi Secondary School	Taita Taveta	No	173
15	Mwatunge Primary School	Taita Taveta	No	545
16	Manoa Sec School	Taita Taveta	No	85
17	Mwachabo Primary Achool	Taita Taveta	No	600
18	Mwandisha Primary School	Taita Taveta	No	560
19	Kenyatta Secondary School	Taita Taveta	Yes	100
20	Kipusi Primary School	Taita Taveta	No	190
21	Dembwa Primary School	Taita Taveta	Yes	350
22	Josa Primary School	Taita Taveta	Yes	200
23	Mlilo Primary School	Taita Taveta	No	180

24	Mbela Sec school	Taita Taveta	Yes	160
25	Ngongondinyi Primary	Taita Taveta	No	326
26	David Kayanda Secodary	Taita Taveta	No	200
27	Mbulia Primary School	Taita Taveta	No	120
28	Ghazi Polytechnic	Taita Taveta	No	60
29	Ore Primary School	Taita Taveta	No	140
30	Mlundinyi Primary School	Taita Taveta	No	205
31	John Mark Mwanjumwa Sec	Taita Taveta	No	78
32	Ndome primary School	Taita Taveta	No	280
33	Kirindinyi Primary School	Taita Taveta	No	230
34	Mkwachunyi Primary School	Taita Taveta	No	100
35	Gimba Primary School	Taita Taveta	No	160
36	Kalambe Primary School	Taita Taveta	No	93
37	Moi Seondary School Kasigau	Taita Taveta	Yes	300
38	Rukanga Primary School	Taita Taveta	No	389
39	Jora Primary School	Taita Taveta	No	300
40	Bungule Primary School	Taita Taveta	Yes	270
41	Bungule Polytechnic	Taita Taveta	No	76
42	Kasigau Girls Secondary	Taita Taveta	Yes	102
43	Mwangea Boys School	Taita Taveta	No	40
44	Voi Girls Secondary School	Taita Taveta	Yes	30
45	Marasi Primary School	Taita Taveta	No	569
46	St Joseph Girls Maungu	Taita Taveta	Yes	236
47	Itinyi Primary School	Taita Taveta	No	280
48	Marungu Secondary	Taita Taveta	No	150
49	Marungu Primary School	Taita Taveta	No	415
50	Mgalani Primary School	Kwale	No	500
51	Jaffery Primary school	Kwale	No	480
52	Mackinon Road Secondary School	Kwale	No	350
53	Mwanyambo Primary school	Taita Taveta	Yes	70
54	Mwamunga Primary school	Taita Taveta	Yes	65
	Total			**13,488**

Plate 1. Emily of Wildlife Works & Jacob of Amara and on Plate 2: Jim, KWS and OCPD ready to walk with school pupils.

Most of these schools, both high schools and secondary, were average discipline wise. However 12 schools out of 54 had registered with Wildlife Clubs of Kenya. The team discovered that Wildlife Clubs of Kenya representative offices were very far in Mombasa and Nairobi and this could have caused this huge disparity compared to Kajiado and other areas where this campaign had passed.

This was one of the largest sections traversing three sub-counties, namely Mwatate, Wundanyi and Voi that border Kwale County. These three sub-counties vary in human population with Voi leading with 48,926 with a projection of 52,629 in 2015 and 55,252 in 2017 respectively. Wundanyi is less populated with 4,493 with a projection of 4,833 and 5,074 separately (*KNBS, 2013*).

CHAPTER FIVE

5.0 GENERAL DISCUSSION

This report discovered that the general areas of Amboseli-Tsavo Ecosystem experience land-use and land tenure change; the two counties are characterized by large and unutilized rangeland.

Elephants follow the old migration routes when moving across Taveta and would remember the water points and farms. They would return using the same locations when crops are ripe, such areas include Njukini where local communities reported and KWS Warden in charge of Southern Sector further confirmed this. This report verified this from (*Douglas-Hamilton 1998)* collared elephants, which would cross Tanzania from Tsavo West mostly during dry season.

The study has established that elephant poaching in the TCA occur in all the seasons during the year. Additionally elephant poaching hotspots in both Amboseli and Tsavo are the Kenya –Tanzania border and in TCA these hotspots are in the Tsavo West Southern sector and in the North; these areas are characterized by high human-wildlife conflicts and poor economic opportunities for the local communities.

Elephants are frequently killed in these locations with poisoned arrows, spears and guns. It appears that more endeavor to solve human-elephant conflicts in the entire ecosystem would lead to increased team work between local communities, NGOs who are working in those areas, and KWS to stop elephant poaching.

The aggregate effect of the revenue, water and economic opportunity has produced the greatest threats to the future and survival of both Amboseli and Tsavo ecosystems. For instance when water is not available to quench thirst and prevent sickness, education becomes a luxury that cannot be spared hence the illiteracy level and exposure to poaching is high across these two ecosystems.

The campaign learnt that elephants are heavily poached in the central, Southern and Northern parts of the Tsavo Conservation Area. These areas are in Tsavo West and looking at the previous studies (*Maingi et al 2012*), which indicate that, a higher

concentration of overall poaching mainly happening in central and Northern parts of the park. One of the interventions to this challenge is by establishing three KWS Platoon bases: Jipe, Sanctuary and IPZ that covers Taveta, Ziwani and Kenya – Tanzania border, Kajaro "Mukururo" in Chyulu areas and Mtito Andei areas in the North.

The TCA is currently threated by pollution that comes from illegal mining and now road and Standard Gauge Rail constructions. The wildlife habitats and the health of wildlife are in jeopardy since water systems have been either polluted or broken down. Any effect on the quality of the water consumed by wildlife has adverse effects on the wildlife population dynamics therein. Mining and road construction by Chinese is concentrated inside and around the Southern part of Tsavo West National Park. Mining leaves behind gaping holes that are potential sites for poachers and may attract invasive species as a result of disturbed environment.

6.0 RECOMMENDATION

Informal settlements signified by bomas and Manyattas indicate that some of the problems faced by conservation managers in the Tsavo Ecosystem are not from within the immediate area. These temporary structures closely related to livestock numbers have been known to increase during droughts. The negative impact of bomas and Manyattas cannot be overemphasized. Clearing and burning of patches to put up these temporary structures is haphazard and leaves behind fragmented habitats which may not be suitable for wildlife in the long-term. Permanent structures indicate areas where the land use practices are also to endure for a long time.

The loss of control over park revenue in most of the areas where communities are not seeing the conservation benefits, thus a large portion of the communities' potential income, will not only hurt the development infrastructure in the area. This report recommends for a mid term review of both the parks' revenue sharing mechanism to avoid a situation where communities would start to demand for more explanation.

This campaign emphasizes on creating awareness among the public on the importance

of the Wildlife Conservation and Management Act, how to report the incidences, procedures and how different the act is from the older act. The campaign considered and recommends market places, schools, churches and chiefs meetings as the best venues for this exercise.

This campaign will enhance, collaborate, develop and design a conservation education outreach program based on the local communities' social stratification. The grass-root education program will bring together other organizations in the region for an integrated education program.

Strength of the walk: There is an urgent need to establish and to enhance the community wildlife conservation areas in the group ranches and in private ranches to safeguard wildlife corridors: This will reduce the human-elephant conflict and rehabilitate and maintain wildlife barriers.

Jim Nyamu & his team addressing crowd at Taveta customs market

7.0 LITERARURE CITED

African Elephant Database (*1995).* IUCN, Gland, Switzerland's 225pp

Amboseli Ecosystem Management Plan. (*2008-2018*) " KWS protected areas planning framework.

Barnes, R.W (*1996.)* The conflict between humans & elephants in the central African forest.

Bernard Ngoru et al (*2013*). Enhancing elephant security in Tsavo conservation area, Southern Kenya " *A proposal submitted to KWS* "

Campbell, D, Lusch, D. Smucker T,Wangui E (2003). Root causes of land use changes in the Loitoktok Area, Kajiado District. Land use change impacts and Dynamics (LICID) Project Working Paper 19. International Livestock Research Institute, Nairobi, Kenya p.37

CITIES (*2009).* How CITIES works. In Convention on International Trade in Endangered Species of Wild Fauna and Flora'.

Corfield T.F (1973). Elephant mortality in Tsavo National Park, East African Wildlife journals, **11**,339-368.

Evanson Kariuki (*2012*). Report of the proceedings of the second bush meat symposium for Kenya held at the Kenya wildlife service, *26th April 2012*

Faculty of Prescott University (2006). A case study for Indigenous Knowledge –Based Conservation; Amboseli

Hamilton –Douglas .I. (*1998*). Tracking African elephant " *Loxodonta africana*" with global positing system GPS radio collars *pachyderms*, **25**, 81-92

Hamilton-Douglas. I. (*1995*). African elephants population trends and their causes. *Oryx*, **21**, 11-24

IFAW (*2011*). Tsavo Challenges, Solutions and hopes

IFAW (2013). Maasai community secures corridor for Amboseli elephants.

John K. Maingi (*2012*). Spatiotemporal patterns of elephant poaching in

southeastern Kenya, *Wildlife Research paper published by CSIRO*

John Kioko et al (*2013*) Elephant numbers and distribution in the Tsavo-Amboseli ecosystem, *southwestern Kenya. Pachyderm number 40*

KWS (*2012-2021*). Conservation and Management Strategy for the Elephant in Kenya

Laws, R.M (*1969b*). The Tsavo Research project journal of reproductive fertility supplement **6,**495-531

Mbau, J. Syombua (*2013*). Land-use and land cover changes and their implications for human-wildlife conflicts in the semi-arid rangelands of southern Kenya. " *Journal of Geography and Regional Planning* "

Mc Knight, B.L (*1996*). The impact of environmental and poaching pressures on elephant's demography, reproductive patterns and social organization in National Park, Kenya.

Kathleen H. Fitzgerald (*2013*). Community payment for ecosystem services in the Amboseli ecosystem; leasing land for live hoods and wildlife " *AWF Technical paper series*"

Kenya Gazette Supplement No. 181 (Acts No. 47). The Wildlife Conservation and Management Act, (*2013*)

Unpublished PhD thesis- Oxford University

Mukeka, J.M (*2010*). ' Analyzing the Distribution of the African Elephant (*Loxodonta africana*) in Tsavo, Kenya,' (Miami University; Ocford, OH,)

NEMA (*2005*). State of Environment report

Ngene Shadrack ET at (2011). Total aerial census of elephants and other large mammals in the Tsavi-Mkomazi ecosystem.

Ottichilo W.K (*1981*). Population studies of elephants in Tsavo ecosystem, Kenya 1975-1980" *unpublished Msc thesis*, University of Nairobi

Republic of Kenya (*2011)* Kenya National Bureau of Statistics (KNBS). Kenya population and housing and census, Nairobi, Kenya.

Republic of Kenya (*2011*). Kenya National Bureau of Statistics (KNBS). Taita Taveta District long rains assessment report 1st August -5th August 2011.

Robert J.Smith & Samuel M. Kasiki 2002) A spatial analysis of Human-elephant conflict in Tsavo ecosystem in Kenya

Sheldrick D.W (1965). Elephant problem- Tsavo National Park (East) warden's report- Tsavo Research Station

Taita Taveta District plan (2009-2013). Environment Action Plan

Wijngaarden, W. (1985). Elephant, Trees, grazers; Relationship between climate, soil, vegetation and large herbivores in semi-arid ecosystem in Tsavo –Kenya: ITC publication no 4.

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